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A Study of Students’ Perceptions Toward Web-based Business Letters

Mee-Wha Baek (Ajou University)


This study investigates students’ evaluation of the newly developed web-site as well as their perceptions toward web-based business letter writing instruction over the whole period of an experiment. A total of four surveys were carried out after each letter writing task by 40 university students. To compensate for the limitation of survey research associated with student perceptions, open-ended questions, and in-depth interviews were also conducted. In addition, this study examined the possibility of interrelation between the students’ perceptions of the web-site and their writing scores. The result revealed that the students perceived the web-based writing activities to be effective and valuable for enhancing their writing skills. However, peer feedback was considered as the least helpful activities. The overall mean scores of students’ perceptions gradually increased. Lower-level students perceived the web-based writing instruction to be more useful than higher-level students. The students’ responses to the open-ended questions were also analyzed. Based on these findings, some pedagogical implication was made on the development of future CALL materials and application to web-based writing instruction.

I. INTRODUCTION

The field of teaching writing in an L2 context has been greatly affected with the invention of the computer and using the Internet in the last few decades. Numerous research has explored effective methods for supporting or accessing students’ writing through computers (Chapelle, 2001) and reported abundant positive effects of technology on writing ability in L2 classroom (Chuo, 2007; Ferris & Hedgecock, 2005; Pennington,
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2004). However, no researcher guarantees that students’ writing skills will improve dramatically through technology as well as which activities using computers help to improve their writing skills.

One of the most promising areas of intersection between technology and L2 composition can be found in research on human–computer interaction, which was examined ways that computer users interact with technology. Human–computer interaction covers a variety of issues, such as how the use of technology can be affected by learner differences in language ability and how the attitudes of users toward the technology and their degree of understanding it affect their use of technology (Bloch, 2008).

These studies are significant for obtaining feedback about what has happened when a newly developed web-site is introduced and how the functions of the site can be modified. Investigating student perceptions toward language learning experiences using technology provides a good foundation for future CALL material design (Levy & Stockwell, 2006). Learners’ perspectives including their preferences and how they view specific teaching materials and reference tools should be reflected in the development of CALL materials (Goodfellow, 1999). Therefore, the examination of student reactions and perceptions through experience related to the newly designed web-site is obviously necessary.

A number of empirical studies have proved that students had an overall positive attitude towards learning in a computer-assisted language learning environment (Chuo, 2007; Felix, 2001). In addition, research has revealed that students perceived web-based instruction as effective for their language skills in general (Osuna & Meskill, 1998) and for the development of specific language skills such as writing.

Researchers, however, have questioned the weaknesses of perceptions research conducted at one point in time. As Levy and Stockwell (2006) pointed out, it can only provide a snapshot of attitudes and perceptions without any indication of the stability or reliability of these views. Although numerous studies on student perceptions toward learning experiences using technology have shown the value of repeated data collection procedures (Leahy, 2001; Green & Youngs, 2001; Sengupta, 1999; Taylor & Gitsaki, 2003), little research observed changes in learner perceptions over the whole period of an experiment. Accordingly, the purpose of this study is to investigate the evaluation of the newly developed web-site used in this study as well as whether the perspectives of web-based writing instruction changed over time at regular intervals in order to provide reliable views. A total of four surveys were carried out after each letter writing task. To compensate for the limitation of survey research associated with student perceptions, other methods of data collection such as open-ended questions, and in-depth interviews were
also undertaken. This study also examined the possibility of any interrelation between students’ perceptions of the web-site and their writing scores.

II. LITERATURE REVIEW

1. Web-based Instruction in a Composition Classroom

Input, output, and interaction are widely regarded as three vital elements for second language acquisition. The input theory rests on the idea that learning occurs primarily through exposure to language input in the form of written or spoken texts and language descriptions. Moreover, the likelihood of learners’ acquiring linguistic input increases if their attention is drawn to salient linguistic features (Robinson, 1995; Schmidt, 1990; Skehan, 1998). One way that learners can improve their understanding of a language is “input enhancement” (Smith, 1993). Glossing and annotation were to enhance language input.

The interaction theory emphasizes that input alone was not sufficient for language acquisition, and interaction and learner output were necessary as well (Long, 1996). The web-site for this study was designed to provide multiple interaction channels: between learners and the technological medium and among learners themselves. Swain further developed Long’s interaction theory in her comprehensible output hypothesis (Swain, 1985; Swain & Lapkin, 1995). The students produced four different kinds of business letters before and after instructions.

From the beginning of this century, research seeking to improve L2 students’ writing abilities through technology has reported the beneficial effects of teaching writing in a computer context over writing in a conventional classroom (Chuo, 2007; Huh & Kang, 2006; Kim, 2000; Pennington, 2004; Song, 2006). Writing in a computer context is considered more beneficial than writing in a conventional classroom in terms of its ‘automation, flexibility, and cognitive demands’ (Pennington, 2004, p. 289). Studies on how computer-based writing affects the writing process have focused on examining issues of planning, revision, and student–student collaboration. Pennington (2004, pp. 290–291) observed that there was a “seemless, recursive planning–drafting–revising” process in a computer-assisted writing class, and these effects were further applied to L2 writers because of “the potential to reduce stress and memory load that particularly challenges those composing in an L2” (Ferris & Hedgecock, 2005, p. 348). Regarding revision, empirical studies have found that students showed improved or better revision behaviors
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when they use computers (Phinney & Khouri, 1993) and they made meaning level changes (Pennington, 1993).

In addition, teachers have evaluated web-based language activities (Aida, 1995; Mak & Mak, 1995; Shetzer, 1995; St. John, 1995; Chuo, 2007). In doing so, they have claimed greater benefits than disadvantages, citing the provision of rich, authentic, and current information, exposure to colorful visual elements, enhanced flexibility of individual learning pace, reinforced learning of the subject matter, heightened motivation, and increased interest. Instant feedback and easy access to online reference tools help produce better work (Chapelle, 2003).

Despite the benefits associated with technology-based instruction, certain drawbacks were also been reported. Disadvantages included frustration from slow or failed access, and lack of mastery of technology on the part of the teacher or students (Chuo, 2007). These findings offer insights on making decisions about instructional design, especially with respect to the use of specific instructional features of this study.

2. The Significance of Business Letter Writing

The rise of globalization, international tourism, scientific exchange, and other business or job related activities have created a greater need for functional interaction in English for occupational (Warschauer, 2000) as well as individual purposes. Despite these growing needs for developing communicative skills in English, a large number of Korean students have not had sufficient experiences and training writing skills for professional purposes. This trend poses a challenge to Korean EFL college students as prospective employees and consumers who are expected to be proficient in English. Learning to write in English for EFL learners requires both ‘information about composing skills’ and ‘comprehensible access to specific types of linguistic knowledge’ (Milton, 1998).

As certain genres are heavily influenced by social contexts in which the particular discourse community is regulated (Hyland, 2003; Swales, 1990), acquiring genre knowledge including both rhetorical functions and linguistic features gives Korean learners an understanding of whether their texts reach the community’s purposes, values, and expectations (Paltridge, 2000). Research has been claimed that genres are useful for learning and teaching composition because those who become familiar with common genres develop shortcuts to successfully processing and producing written texts (Johns, 2003). If a student has prior knowledge or experience, it may be easier to write texts within the same genre. Thus, acquiring genre knowledge with explicit attention provides students with an opportunity to develop concrete production skills beyond the context in
which such learning occurs (Johns, 2003).

Regarding genre pedagogy, learning is best accomplished through explicit awareness of language rather than through experiments and explorations (Hyland, 2003). In addition, writing is learned rather than taught, and the teacher’s best methods are flexibility and support (Hyland, 2003). Although the relationship between learning and technology are still discussed today (Bloch, 2008), considering the massive educational needs of EFL learners for genre writing, conventional instruction alone cannot support the necessary information in a timely, consistent or individualized manner. In this context, employing technology in EFL genre writing is beneficial almost every aspect of the learning and writing process by increasing the accessibility of materials and resouces, making planning and editing easier and more convenient, and allowing for faster feedback.

3. Features of the Web-based Business Letter Writing Instruction

Further efforts have revealed the advantages of specific technological features built into programs by collecting tracking data based on students’ reactions to CALL materials. These studies provide a general view of effective ways to develop CALL materials and extend our understanding of individual SLA principles. Several technological features applied to designing the web-site for this study have followed the empirical results of other studies.

Regarding input enhancement, De Ridder (2000, 2002, 2003) found that input enhancement without elaboration such as gloss, had no effect on vocabulary learning. She concluded that indiscriminate clicking does not facilitate student learning. Collentine (2000) tracked students’ use of various components to determine which components contributed to students’ performance. He determined that certain components such as video viewing were less beneficial for learning than other components such as enhanced input supported by corrective feedback in exercises. The results demonstrated that functional saliency including elaboration of word meanings and grammatical features with multimedia annotations had an impact on learning. For glossing, Miyasako (2002) compared the effectiveness of L1 and L2 glosses based on two different proficiency levels. He found that L2 glosses tended to be more effective for high proficiency level learners, whereas L1 glosses were more effective for low-level learners. According to the results of theses studies, the materials designed for this study mostly used salient input enhancement with L1 glosses.

Heift (2003) explored the concept of output hypothesis testing by using three different response formats. She used multiple choice, drag-and-drop, and type-the-answer formats
in exercises designed to help students learn German word order. The results revealed that the drag-and-drop and type-the-answer formats had a significant impact on student learning over the multiple choice formats. However, the analysis of her tracking data showed that students made errors in the drag-and-drop format four times more than multiple choice or typing formats. The students easily examined language structures in the drag and drop format without having additional time to retype entire sentences. Since the type the answer format requires multiple grammatical structures and correct spelling, it may distract students from the task. This study applied all three different response formats considering relevancy and expected required time to complete each task. Accordingly, this study purports to collect students’ evaluation of the newly developed web-site as well as whether the perspectives of web-based writing instruction changed over time at regular intervals in order to reflect in the future development of CALL materials. The specific research questions were formulated as follows:

a. What are the students’ perceptions toward web-based business letter writing instruction and how do the participant evaluations change over the experiment period?

b. What are the students’ evaluation after using the web-site via open-ended questions?

c. Is there a correlation between students’ perceptions of the web-site and their writing performance?

Ⅲ. METHODOLOGY

1. Participants

A total of 40 students at a university in Gyeong-gi Province participated during the fall semester in 2008. They were 27 sophomores, 12 juniors and one freshman taking a required general English course that focused on reading and writing skills. Most of them had taken a general English course each semester since freshman. According to the diagnosis test\(^1\), the means for the test were 16.62 out of 50. The students majored in theology (N=15), media and communication art (N=7), business administration (N=6), music (N=5), police and social welfare (N=4), information technology (N=2), and design

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\(^1\) **TEPS 600 Questions**, Language Education Institute in Seoul University, Educhosun, 2004
(N=1). There were 19 male students and 21 female students. Although forty students participated for business letter writing tasks, the analyzed data for close-ended questionnaire was limited because not every student completed the questionnaire: hotel reservation (N=23), complaint (N=25), cover letter (N=25), and sales promotion (N=24). Due to the same reason, the data for open-ended questionnaire was also limited: hotel reservation (N=22), complaint (N=28), cover letter (N=27) and sales promotion (N=7).

2. Course Description

The main experiment was conducted during the fall of 2008. Students received half semester long instruction for nine weeks. This group participated in writing activities in two one hour sessions every week in a school computer lab. They were asked to complete four business letter writing tasks on a web-site (http://www.bzwriting.co.kr) conducted for this study. The order of the tasks was as follows: a hotel reservation letter, a complaint letter, a cover letter, and a sales promotion letter in order. The web-site was only open during class hours, so the students were able to access the tasks during designated times.

3. Procedure of the Main Study

![Figure 1] Procedure of the Main Study
The procedure of the main study was pre-test writing, instruction and practices, post-test writing, peer feedback, revision, and perception questionnaire. The order of the letters was considered the students’ English proficiency levels and L2 writing experiences. Letters with simple moves and language patterns were completed before the other two less formulaic letters (cover letter, and sales promotion letter).

4. Materials

1) Post-attitudinal Assessment Questionnaire

To examine perceptions toward web-based writing experiences, the questionnaire was administered at the end of each letter writing task. The questionnaire was given in Korean on the last page of each letter writing activity on the web-site. It consisted of two parts: 22 close-ended and 9 open-ended questions. There were five sections for the close-ended questions: the overall effectiveness of web-based business letter writing (items 1–4), the effectiveness of language activities using the web-site (items 5–9), effectiveness of using technology on English language writing instruction items (10–13), peer feedback (items 14–17), and the overall evaluation of the web-site (items 18–22). A six-point Likert-type rating scale was used. Next, the students were asked to write their opinions for the nine open-ended questions in Korean. These listed pros and cons, difficulties, and suggestions about the web-site. The items in the questionnaire were adapted from Cha (2006) and Kim (2008). Cha (2006) acknowledged herself that the questionnaire she used was adapted from Leki (1990) and Zhang (1995) and Schultz’s (2000) attitude questionnaire.

2) In-depth Interviews

For an in-depth interview, a semi-structured interview was completed after the experiment to gather more detailed information on perceptions towards business writing activities. Semi-structured interviews included specific, well-defined questions determined in advance, while at the same time allowed for elaboration of responses and on subsidiary questions (Sudman & Bradburn, 1982). Three students were interviewed by the instructor at the end of the semester. Eight questions were prepared including what the advantages and disadvantages of using computers in English writing were, their general opinion about business letter writing on the web, the differences between traditional classes and computer-based classes related to writing activities, the difficulties using computers for writing, which functions on the web-site were most helpful and were most frequently
used during the class, which activities were most useful, and the overall evaluation of the web-site in terms of font, design, colors, and functions.

3) Web-site (http://www.bzwriting.co.kr) of the main study

The step-by-step exercises were designed for learners to make them aware of the rhetorical structures and language patterns for business letters. The use of a web menu driven format allows information to be easily accessed by allowing learners to move from the general view of the discourse structure of each letter to a very specific view of the language of an individual sentence. The exercises helped students work on each element individually and then combined two or more elements to allow them to produce longer sentences or paragraphs. Controlled guided independent writing practice was applied. The writing instruction was followed by Dudley-Evans and St. John’s synthesis approach (1998) for genre writing:

![Instruction Approach Diagram]

Glosses on the site were mostly given in L1 according to Miyasako’s (2002) finding that L1 glosses were superior to L2 glosses for lower proficiency learners. Key words and important language structures were visually enhanced (color, underlining, and bold face) on most pages. De Ridder (2000, 2002, 2003) showed that input enhancement without some
kind of elaboration had no effect on vocabulary learning. Thus, there was an effort to make salient adding glosses (usually in L1) within enhanced words and structures in this work. Instant feedback was given to the wrong answers.

According to Heift’s (2003) exploration of the effectiveness of response formats, the web-site used the three answer formats considering relevancy and required time to
complete a task.

5. Data Analysis

After completing each letter writing task, the students were asked to respond using a Likert-type scale ranging from six to one. One indicated strong disagreement, while six indicated strong agreement for the 22 close-ended items. Each participant was asked to respond to the same four questionnaires in total during the experiment. The questionnaire was divided into five sections and the mean scores of the questionnaire were compared and analyzed. To supply the whole picture of the perceptions and changes, the means of total 22 items were compared by each letter. The summary of each open-ended question and how they changed was also explained. An Independent t-test was applied to find out the relationship between the students’ perceptions and their writing performance scores.
IV. FINDINGS AND DISCUSSION

1. Perceptions of Web-based Writing Instruction by Close-ended Questionnaire

1) Total Evaluation about the Web-based Business Letter Writing Instruction

The mean scores of the students’ perceptions toward the web-based writing instruction were generally increased during the experiment (Table 1). The students thought the TEWI (Technology-Enhanced Writing Instruction) was generally effective, and the activities were useful. Regarding using technology and the web-site was valuable. The mean scores of the peer feedback were the lowest. The open-ended questionnaire that the students responded to revealed that the peer feedback was not very helpful because of their limited proficiency.

[Table 1] Total Evaluation of the Writing Instruction

<table>
<thead>
<tr>
<th></th>
<th>Hotel reservation (N=23)</th>
<th>Complaint (N=25)</th>
<th>Cover letter (N=25)</th>
<th>Sales promotion (N=24)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Overall effectiveness</td>
<td>4.13</td>
<td>.91</td>
<td>4.58</td>
<td>.91</td>
</tr>
<tr>
<td>Effectiveness of using activity</td>
<td>4.67</td>
<td>.85</td>
<td>4.63</td>
<td>.72</td>
</tr>
<tr>
<td>Effectiveness of using technology</td>
<td>4.92</td>
<td>.57</td>
<td>4.75</td>
<td>.70</td>
</tr>
<tr>
<td>Peer feedback</td>
<td>4.27</td>
<td>.90</td>
<td>4.68</td>
<td>.93</td>
</tr>
<tr>
<td>Opinion about the web-site</td>
<td>4.49</td>
<td>.77</td>
<td>4.66</td>
<td>.87</td>
</tr>
<tr>
<td>Total</td>
<td>4.51</td>
<td>.68</td>
<td>4.66</td>
<td>.74</td>
</tr>
</tbody>
</table>
2) Overall Effectiveness for Web-based Business Letter Writing Instruction

There were 4 items in the questionnaire regarding the overall effectiveness of web-based business letter writing, as presented in Table 2. The results showed that most students considered web-based writing was useful than traditional writing methods (M=4.13-4.70). Furthermore, the students perceived web-based writing experiences increased their writing abilities (M=4.13-4.58), interest (M=4.13-4.42), and confidence (M=4.13-4.54) in writing four letters.

<table>
<thead>
<tr>
<th>Questionnaire items</th>
<th>Hotel reservation</th>
<th>Complaint</th>
<th>Cover letter</th>
<th>Sales promotion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The computer-based business letter writing was more useful than the paper-and-pencil based writing.</td>
<td>4.13</td>
<td>4.68</td>
<td>4.48</td>
<td>4.71</td>
</tr>
<tr>
<td>2. The computer-based business letter writing helped me to improve my overall English writing skills.</td>
<td>4.13</td>
<td>4.72</td>
<td>4.48</td>
<td>4.75</td>
</tr>
<tr>
<td>3. The computer-based business letter writing helped me to increased my interest in studying English.</td>
<td>4.13</td>
<td>4.48</td>
<td>4.52</td>
<td>4.63</td>
</tr>
<tr>
<td>4. The computer-based business letter writing helped me to gain confidence in my writing skills.</td>
<td>4.13</td>
<td>4.44</td>
<td>4.52</td>
<td>4.75</td>
</tr>
</tbody>
</table>

Regarding changes in perceptions during the experiment, no definite patterns were found as presented in Figure 7. The scores increased on the second letter writing task compared to the first. However, they declined slightly on the third letter task, and then rose again on the fourth letter. The results demonstrated that students might have been familiar with the activities using computers on the second letter writing assignment than the first one. Cover letter writing proved harder and longer than the first two letters, so students may have felt their computer experience would be less helpful than for the first two letters. On the fourth letter, they seemed to be accustomed to the harder work again. The responses related to increased interest and confidence (items 3 and 4) showed that students considered technology enhanced writing to be helpful over the entire period.
3) The Effectiveness of the Language Activities

There were 5 items in the questionnaire regarding the effectiveness of language exercises on business letter writing as presented in Table 3. The results showed that most of the students considered language exercises to be helpful. The effectiveness of the activities titled 'useful expressions' and 'language focus' increased over the course of the experiment.

The students’ reaction to sample letters, reordering activities, and fill in the blank exercises was inconclusive. The sample letters for hotel reservations and complaints were

![Table 3] Effectiveness of the Language Activities

<table>
<thead>
<tr>
<th>Questionnaire Items</th>
<th>Hotel reservation</th>
<th>Complaint</th>
<th>Cover letter</th>
<th>Sales promotion</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Sample letters were helpful to write a business letter.</td>
<td>4.74</td>
<td>4.88</td>
<td>4.84</td>
<td>4.63</td>
</tr>
<tr>
<td>6. Reordering and matching activities were helpful to write a business letter.</td>
<td>4.70</td>
<td>4.60</td>
<td>4.80</td>
<td>4.83</td>
</tr>
<tr>
<td>7. Useful expressions were helpful to write a business letter.</td>
<td>4.65</td>
<td>4.60</td>
<td>4.72</td>
<td>4.79</td>
</tr>
<tr>
<td>8. Language focus was helpful to write a business letter.</td>
<td>4.61</td>
<td>4.64</td>
<td>4.72</td>
<td>4.79</td>
</tr>
<tr>
<td>9. Fill in the blank was helpful to write a business letter.</td>
<td>4.70</td>
<td>4.44</td>
<td>4.76</td>
<td>4.75</td>
</tr>
<tr>
<td>TOTAL</td>
<td>M(SD)</td>
<td>4.67(.85)</td>
<td>4.63(.72)</td>
<td>4.76(.88)</td>
</tr>
</tbody>
</table>
more helpful than those for the cover letters and sales promotion letters. These results revealed that the sample letters of formulaic genres were more easily applicable and relevant to writing tasks whereas the writing of less formulaic genres such as cover letters and sales promotion letters was viewed as being less pertinent to the work. The point regarding the fill in the blank activity for item 9 was lower than those of the other letters because one participant marked the lowest possible point for the item. He later said that he hardly caught up the writing activities and none of the fill in the blank activities were helpful to him.

4) The Effectiveness of Technology on English Language Instruction

The effectiveness of language exercises using technology was demonstrated in Table 4. The items showing the use of online dictionaries, L2 glosses, and salient input were useful to the students’ on the hotel reservation task. However, the scores in this category declined in later tasks (M= 4.92→ 4.75→ 4.74). The later writing tasks were harder than the earlier ones, so the students’ perceived the activities were not helpful to complete the later writing tasks. Even though a lot of language expressions were supplied, the students’ felt the activity was not very helpful to choose the words they needed. However, the scores of the item 13 started from the lowest, but gradually increased on the later writing tasks.
### Effectiveness of Using Technology on Writing Instruction

<table>
<thead>
<tr>
<th>Questionnaire Items</th>
<th>Hotel reservation</th>
<th>Complaint</th>
<th>Cover letter</th>
<th>Sales promotion</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Online dictionary was helpful to write a business letter.</td>
<td>5.09</td>
<td>4.76</td>
<td>4.80</td>
<td>4.88</td>
</tr>
<tr>
<td>11. Glosses in Korean were helpful to write a business letter.</td>
<td>5.26</td>
<td>5.04</td>
<td>4.96</td>
<td>4.88</td>
</tr>
<tr>
<td>12. Different colors on important parts were helpful to write a business letter.</td>
<td>5.22</td>
<td>4.80</td>
<td>4.80</td>
<td>4.75</td>
</tr>
<tr>
<td>13. Plenty of language expressions were helpful for me to choose the words I need.</td>
<td>4.13</td>
<td>4.40</td>
<td>4.40</td>
<td>4.46</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>M(SD)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.92(.57)</td>
<td>4.75(.70)</td>
<td>4.74(.79)</td>
<td>4.74(.74)</td>
</tr>
</tbody>
</table>

#### 5) The Effectiveness of Peer Feedback

The students viewed peer feedback less favorably compared to other portions of the survey. The mean showed fairly lower than other activities (M=4.27) except on the writing complaint task as seen in Figure 10. These results could be interpreted by the analysis of their answers to the open-ended questions. Few participants (N=1) considered peer feedback a valuable activity and another participant felt that it was a distraction. This may be due to differences pertaining to the completion of tasks as certain students waited until the other members in their groups finished their first drafts. Most of the students felt their inability to identify mistakes and to suggest better ways of revising writing work was a significant drawback, thereby contributing to the perceptions that peer
feedback was not helpful.

### Table 5: Effectiveness of Peer Feedback

<table>
<thead>
<tr>
<th>Questionnaire Items</th>
<th>Hotel reservation</th>
<th>Complaint</th>
<th>Cover letter</th>
<th>Sales promotion</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. Peer comments were useful to improve the organization.</td>
<td>4.22</td>
<td>4.80</td>
<td>4.24</td>
<td>4.42</td>
</tr>
<tr>
<td>15. Peer comments were useful to improve the contents.</td>
<td>4.26</td>
<td>4.76</td>
<td>4.56</td>
<td>4.50</td>
</tr>
<tr>
<td>16. Peer comments were useful to improve the grammar.</td>
<td>4.26</td>
<td>4.68</td>
<td>4.28</td>
<td>4.37</td>
</tr>
<tr>
<td>17. Peer comments were useful to revise my letters.</td>
<td>4.35</td>
<td>4.48</td>
<td>4.48</td>
<td>4.42</td>
</tr>
<tr>
<td>TOTAL</td>
<td>M(SD)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.27(.90)</td>
<td>4.68(.93)</td>
<td>4.39(.94)</td>
<td>4.43(.76)</td>
</tr>
</tbody>
</table>

### Figure 10: Effectiveness of Peer Feedback

6) The Overall Evaluation of the Web-site

For the web-site used in this study, the overall mean of the students’ evaluation was increased over the experiment period (M=4.49 =>4.68 =>4.70 =>4.70). Among the five items, the highest mean score was produced for item 20, ‘The design of the web-site looked neat and was clearly salient.’ Item 18 ‘I will use this site when I write business letters in the future,’ gained the second highest mean score. The item 19 ‘The web-site was easy to use’ was the lowest mean score especially at the beginning probably because there was a confusion to use and operate the web-site. The instructor was not familiar
with how each function was programmed even though the explanation was given from the web programmer (Table 6).

<table>
<thead>
<tr>
<th>Questionnaire Items</th>
<th>Hotel Reservation</th>
<th>Complaint</th>
<th>Cover letter</th>
<th>Sales promotion</th>
</tr>
</thead>
<tbody>
<tr>
<td>18. I will use this site when I write business letters in the future.</td>
<td>4.65</td>
<td>4.68</td>
<td>4.72</td>
<td>4.67</td>
</tr>
<tr>
<td>19. The web-site was easy to use.</td>
<td>4.09</td>
<td>4.72</td>
<td>4.60</td>
<td>4.62</td>
</tr>
<tr>
<td>20. The design of the web-site looked neat, and was clearly salient.</td>
<td>4.61</td>
<td>4.68</td>
<td>4.72</td>
<td>4.75</td>
</tr>
<tr>
<td>21. The layout of the site was well designed.</td>
<td>4.57</td>
<td>4.48</td>
<td>4.88</td>
<td>4.67</td>
</tr>
<tr>
<td>22. The web-site supplied many opportunities to learn English.</td>
<td>4.52</td>
<td>4.76</td>
<td>4.56</td>
<td>4.79</td>
</tr>
<tr>
<td>TOTAL</td>
<td>M(SD)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.49(.77)</td>
<td>4.68(.87)</td>
<td>4.70(.93)</td>
<td>4.70(.85)</td>
</tr>
</tbody>
</table>

2. Perceptions of Web-based Writing Instruction by Open-ended Questionnaire

The majority of qualitative data came from open-ended questions, and formal, semi-structured interviews that were held at the end of the experiment. The second part of the questionnaire had nine open-ended questions that established respondents’ views regarding the benefits and shortcomings of the program they had completed, the role the program played in language learning, and suggestions or evaluations of the web-site used in the study. Although students responded every item, this analysis includes the summary
of a few items such as benefits, drawbacks, difficulties, and suggestions. The items were also categorized as learner-related, course-related, and web-site function-related elements. The students responded to the open-ended questions in Korean and their answers were translated by the researcher. The number in the parenthesis indicates the number of students who responded to the items. The interview results were also included to explain the results of the analysis of the open-ended questions.

1) **Benefits of the Web-based Business Letter Writing Instruction**

The students believed the class was interesting and new, so they concentrated more than traditional classes. They felt the program was practical and realistic as well as more convenient and efficient. They also felt that they improved their typing English skills. Regarding the web-site, they liked the well-organized layout most and the online dictionary function. They felt the web-site was convenient in terms of ease of use, editing, and reviewing (Table 7). Some students felt the writing using computers is faster than the traditional classes. Since the web-site was available only during the class time, not many students felt the web site was easy to approach. Peer feedback did not seem to be appealed for them. This was the same responses as the informants from the interview.

<table>
<thead>
<tr>
<th>[Table 7] Benefits of the Web-based Business Letter Writing Instruction</th>
<th>Responses</th>
<th>Task 1</th>
<th>Task 2</th>
<th>Task 3</th>
<th>Task 4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learner</td>
<td>get more interested</td>
<td>1</td>
<td>3</td>
<td>6</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>new experiences</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>better concentrated than traditional class</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course</td>
<td>very practical &amp; useful (realistic)</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>more convenient than paper and pencil</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>improve typing speed</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>more efficient (save time)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Web-site function</td>
<td>well-organized layout (easy to see &amp; learn)</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>easy to find resources (words)</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>faster than paper</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>easy to revise</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>be able to review easily</td>
<td></td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>easy to approach</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>peer feedback</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

Task1: Hotel Reservation (N=22); Task2: Complaint (N=28); Task3: Cover Letter (N=27); Task4: Sales Promotion (N=7)

2) These are the same from Table 7 to Table 10.
Based on the analysis of the interviews, the business letter writing course was considered to be practical and useful for the students. The course was beneficial in terms of learning the rhetorical patterns and usage of relevant vocabulary.

2) Drawbacks of the Web-based Business Letter Writing Instruction

The negative aspects of the class were summarized in Table 8. Some students pointed out that their inability to type quickly and to memorize words without handwriting them were drawbacks to this instruction. Some complained that it required longer time than paper and pencil class and that they were distracted by the availability of the Internet.

<table>
<thead>
<tr>
<th>Responses</th>
<th>Task 1</th>
<th>Task 2</th>
<th>Task 3</th>
<th>Task 4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learner</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hard to memorize (without handwriting)</td>
<td>2</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>slow at typing English</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>takes longer than handwriting</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>distracted by the availability of Internet</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>hardly keep concentrating on the work</td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>suffer from a headache</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Course</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>time limitation</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>neglecting individual differences</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>hard to catch up (too fast)</td>
<td>2</td>
<td>2</td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>need more detailed explanation</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>cannot use the site except for class hours</td>
<td>1</td>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Web-site function</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>cannot revise after clicking Next button</td>
<td>8</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>system errors</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>nothing</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>not saved until clicking Next button</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>computers not working properly</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>using scroll bar (limitation of one page)</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>more complicated than books</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

For the course work, they felt the time was too limited and short to follow the activities. Since this course was not a homogeneous class in terms of proficiency level in English and their majors in the university varied, some students felt that the class progressed slow while others complained it was too fast to follow. Even though the instructor gave detailed explanations during the whole process, one participant continually complained the need for more explanation. Regarding the web-site function, many students
pointed out that it was one of the most inconvenient functions not to revise after moving on to a forwarding page and not to save until clicking next button. Even though the instructor gave the information several times, some students were so curious about forwarding pages that they clicked Next button before they completed the activities on the previous page.

3) Difficulties of the Web-based Business Letter Writing Instruction

The students felt the class was difficult because of their limited grammar, vocabulary, and comprehension abilities. These complaints were mostly shown on later tasks such as the cover letter and sales promotion letter tasks because these two tasks were much harder than the first two. Most of the students felt it was too difficult to catch up, noting slow typing speeds in English and a quick progression of the material.

<table>
<thead>
<tr>
<th>[Table 9] Difficulties of the Web-based Business Letter Writing Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Responses</strong></td>
</tr>
<tr>
<td>Learner</td>
</tr>
<tr>
<td>hard to compose in English</td>
</tr>
<tr>
<td>lack of grammar competency</td>
</tr>
<tr>
<td>hard to understand contents</td>
</tr>
<tr>
<td>unfamiliar vocabulary and structures</td>
</tr>
<tr>
<td>Course</td>
</tr>
<tr>
<td>typing English</td>
</tr>
<tr>
<td>too fast (hard to catch up)</td>
</tr>
<tr>
<td>no feedback from instructor on grammar errors</td>
</tr>
<tr>
<td>need more explanation from instructor</td>
</tr>
<tr>
<td>Web-site function</td>
</tr>
<tr>
<td>system errors</td>
</tr>
<tr>
<td>cannot revise after clicking Next button</td>
</tr>
<tr>
<td>hard to pass the exercises where to write</td>
</tr>
<tr>
<td>lack of instructor’s skill to operate</td>
</tr>
<tr>
<td>more complicated than books</td>
</tr>
<tr>
<td>cannot copy and paste</td>
</tr>
<tr>
<td>cannot use dictionary during tests</td>
</tr>
<tr>
<td>nothing</td>
</tr>
</tbody>
</table>

Regarding the web-site function, the first problematic aspect was related to system errors. At the beginning of the experiment, since the instructor as well as the students did not know how the site was designed for the activities, mistakes were unavoidable. The exercises where the students had to write the answer in a box were hard to pass because one had to write the answer exactly as it was intended to be. In some cases, the students
were trapped because the computer did not recognize correct answers after wrong answers were corrected. In that case the page needed to be closed and reset. The second problematic aspect the students pointed out was again that the exercises could not be revised after the next button was clicked. Several students made mistakes clicking the next button even though they had more to do to complete the tasks thoroughly. When this happened, resetting the students work was necessary. The students were accustomed to the system shortly, and the number of ‘nothing’ was getting increased (Table 9).

4) Suggestions of the Web-based Business Letter Writing Instruction

The request that most students gave was for more time. As mentioned, the time was insufficient for completing four writing tasks. Mostly the students asked for more practice on grammar and writing exercises. Short sentence exercises were preferred over longer texts. Because of the reliability of the study, the web-site was open during class time only. Several students asked to use the web-site to review after classes.

For the web-site, the students provided thoughtful commentary such as turning sample letter pages into pop-up windows and adding warnings before clicking the final next

<table>
<thead>
<tr>
<th>Table 10</th>
<th>Suggestions of the Web-based Business Letter Writing Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responses</td>
<td>Task 1</td>
</tr>
<tr>
<td>more time (too fast)</td>
<td>4</td>
</tr>
<tr>
<td>more instructor’s explanation</td>
<td>1</td>
</tr>
<tr>
<td>more language expressions</td>
<td>1</td>
</tr>
<tr>
<td>allow to review after class time</td>
<td>3</td>
</tr>
<tr>
<td>more exercises to write a letter</td>
<td>1</td>
</tr>
<tr>
<td>more grammar exercises</td>
<td>2</td>
</tr>
<tr>
<td>more practice on short sentences</td>
<td>1</td>
</tr>
<tr>
<td>to learn other types of business letter</td>
<td>1</td>
</tr>
<tr>
<td>need physical materials (handout)</td>
<td>2</td>
</tr>
<tr>
<td>instructor’s feedback</td>
<td>1</td>
</tr>
<tr>
<td>computer error free environment</td>
<td>2</td>
</tr>
<tr>
<td>allow to revise after clicking Next button</td>
<td>4</td>
</tr>
<tr>
<td>need to alterate the answers to exercises</td>
<td>3</td>
</tr>
<tr>
<td>turn sample letter pages into pop-up windows</td>
<td>1</td>
</tr>
<tr>
<td>need warning when clicking Next button</td>
<td>1</td>
</tr>
<tr>
<td>need L1 translation for sample letters</td>
<td>1</td>
</tr>
<tr>
<td>need guideline before starting activities</td>
<td>1</td>
</tr>
<tr>
<td>typing activities rather than click activities</td>
<td>1</td>
</tr>
<tr>
<td>nothing</td>
<td>6</td>
</tr>
</tbody>
</table>
button. These ideas gave web designers insight into how the website should be planned. Other suggestions mentioned that typing would be better rather than clicking for the exercises, L1 translation glossing for the sample letters, and guideline information gave the material developers new insight into what the learners need and want (Table 10). Based on the analysis of the interviews, the informants also gave opinions about further classroom management such as flexible time allotment, increased peer feedback, and a more relaxed study environment. Therefore, educators should consider these types of needs to effectively employ appropriate teaching tools.

3. The Relationship between Perceptions and Writing Performance

To investigate the relationship between the students' evaluations of web-based business letter writing tasks and their writing performance, an Independent t-test was applied. The mean scores reflected the students' perceptions, and the two groups were divided by their analytic evaluation scores of the pre-test writing tasks for each letter. Although no statistical significance was found for the four types of the letters, one interesting finding was observed. The perceptions scores for the low proficiency levels on each letter were slightly higher than those of the high-level groups. For the four types of letters, the mean scores of the low-levels ranged from 4.67 to 4.81 while the mean scores of the high-levels ranged from 4.56 to 4.65. The low-level students perceived the technology-enhanced writing activities were helpful than the high-level students (Table 11).

<table>
<thead>
<tr>
<th>Task</th>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hotel reservation</td>
<td>High</td>
<td>9</td>
<td>4.56</td>
<td>.69</td>
<td>-.43</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>11</td>
<td>4.69</td>
<td>.62</td>
<td></td>
</tr>
<tr>
<td>Complaint</td>
<td>High</td>
<td>14</td>
<td>4.65</td>
<td>.78</td>
<td>-.56</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>10</td>
<td>4.81</td>
<td>.60</td>
<td></td>
</tr>
<tr>
<td>Cover letter</td>
<td>High</td>
<td>12</td>
<td>4.58</td>
<td>.83</td>
<td>-.26</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>13</td>
<td>4.67</td>
<td>.86</td>
<td></td>
</tr>
<tr>
<td>Sales promotion</td>
<td>High</td>
<td>13</td>
<td>4.61</td>
<td>.85</td>
<td>-.62</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>10</td>
<td>4.80</td>
<td>.47</td>
<td></td>
</tr>
</tbody>
</table>

V. CONCLUSION

From the analysis of 22 quantitative items, the mean scores of the students'
perceptions toward web-based business letter writing instruction were generally increased during the experiment. The students thought the web-based business letter writing instruction was generally effective, and the activities were useful. The web-site was valuable for the development of their writing skills. These results are congruent with those of the previous research (Chuo, 2007; Felix, 2001; Osuna & Meskill, 1998; Frizler, 1995). The mean scores of the peer feedback were the lowest. The open-ended questionnaire that the students responded to reveal that the peer feedback was not very helpful because of their limited proficiency.

According to the responses obtained from the 9 open-ended questions, the students found the course to be useful and interesting and that the activities helped them improve their writing skills in English. The request that most students gave was for more time. Students need sufficient time to develop language skills as well as to be familiar with using the technology. Mostly, the students asked for more practice on grammar and writing exercises. Short sentence writing exercises were preferred over longer texts.

Regarding the web-site, the students provided attentive commentary such as turning sample letter pages into pop-up windows and adding warnings before clicking the final next button. These ideas gave web designers insight into how the web-site should be planned. Other suggestions mentioned that typing would be better rather than clicking for the exercises because typing activities was a little more helpful to remember key expressions than simply clicking. If there were L1 translation glossing for the sample letters, they could save more time from searching for the meaning of words. Even though the instructor was with them during the entire class hours, the students preferred extra guideline information for activities on the web-site. These feedback gave the material developers perspectives regarding what the learners need and want.

According to the investigation the relationship between the students’ evaluations of web-based business letter writing tasks and writing performance, no statistical significance was found for the four types of the letters. However, the perceptions scores for the low proficiency levels on each letter were slightly higher than those of the high-level groups.

This study showed that web-based business letter writing activities are effective and valuable. The mean scores of the students’ perceptions were generally increased during the experiment. The analysis of the students’ responses to the questionnaire and the interview provided significant implications. A possible implication can be drawn that Korean EFL learners may need to practice with supplementary physical materials even in the context where a certain computer based tool is supplied. Since developing writing
Competence in English takes considerable amount of effort and time, the students felt the need to study with textbooks and handouts which they were familiar. More flexible time allotment is necessary for EFL writing classes so students can study in a more relaxed and unpressured environment.

Meanwhile, although some students pointed out the collaboration between classmates was not very helpful on their writing revision, other students suggested for more group members for peer feedback activities. This collaboration writing on the web-site changed the traditional role of the student writer: from writers to readers simultaneously in writing classrooms. Notably, despite the potential benefits of using computers or any kinds of technology, computer technology is not capable of being a valuable teaching aid unless there were integrating pedagogically appropriate tasks for the relevant learners. Students' proficiency level of English can be a significant factor in their ability to provide peer feedback. Many students asked for a more authoritative feedback by the instructor. Therefore, teacher intervention seems to be necessary for enhancing students' language learning especially on writing outcome since some corrections students made are not always correct and relevant in terms of lexically or syntactically.

There were a couple of limitations for this study. Due to the small sample size of the students, the results of this study may not be generalized into a larger population. Furthermore, since the interview were held after winter break, some students were not available such reasons as their military services or transferring to another college. The selection of the informants were skewed by deciding whoever were available or volunteered.

REFERENCES


Huh, M. H., & Kang, S. H. (2006). The effects of email communication upon the acquisition


APPENDIX

1. Perception Questionnaire (Close-ended Questions)

<table>
<thead>
<tr>
<th>Questionnaire Items</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The computer-based business letter writing was more useful than paper-and-pencil based writing.</td>
<td></td>
<td></td>
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<tr>
<td>2. The computer-based business letter writing helped me to improve my overall English writing skills.</td>
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<td></td>
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<tr>
<td>3. The computer-based business letter writing helped me to increase my interest in studying English.</td>
<td></td>
<td></td>
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<tr>
<td>4. The computer-based business letter writing helped me to gain confidence in my writing skills.</td>
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<tr>
<td>5. Sample letters were helpful to write a business letter.</td>
<td></td>
<td></td>
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<tr>
<td>6. Reordering and matching activities were helpful to write a business letter.</td>
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<tr>
<td>7. Useful expressions were helpful to write a business letter.</td>
<td></td>
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<tr>
<td>8. Language focus was helpful to write a business letter.</td>
<td></td>
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<tr>
<td>9. Fill in the blank was helpful to write a business letter.</td>
<td></td>
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<tr>
<td>10. Dictionary was helpful to write a business letter.</td>
<td></td>
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<tr>
<td>11. Glosses in Korean were helpful to write a business letter.</td>
<td></td>
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</tr>
<tr>
<td>12. Different colors on important parts were helpful to write a business letter.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Lots of language expressions were helpful for me to choose the words I need.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Peer comments were useful to improve the organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Peer comments were useful to improve the contents.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Peer comments were useful to improve the grammar.</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>17. Peer comments were useful to revise my letters.</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>18. I will use this site when I write business letters in the future.</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. The web site was easy to use.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. The design of the web site looked neat, and was clearly salient.</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>21. The layout of the site was well designed.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. The web site supplied many opportunities to learn English.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6(StA): Strongly Agree, 5(Agr): Agree, 4(SIA): Slightly Agree, 3(SID): Slightly Disagree 2(Dis): Disagree, 1(StD): Strongly Disagree
2. Perception Questionnaire (Open-ended Questions)

1. What are the positive aspects of computer-based business letter writing?
2. What are the weak points of the computer-based business letter writing?
3. What are the most interesting aspects of the computer-based business letter writing?
4. What are the difficulties of the computer-based business letter writing?
5. What are the useful aspects of the computer-based business letter writing?
6. What are the most contributions of the computer-based business letter writing?
7. What are the distractions of the computer-based business letter writing?
8. What are the suggestions for content of the computer-based business letter writing?
9. Do you have any advice for the course and the web-site?

Key words: web-based L2 business writing, learner perceptions
Application levels: secondary education, adult education

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In response to the challenge of introducing computer technology into classroom settings, TESOL programs have offered CALL courses to prepare preservice or inservice teachers to use technology in their teaching. The purpose of the study is to examine how Korean English teachers come to have a better understanding of multiple roles of CALL in a graduate CALL course. The qualitative case study investigates English teachers’ changing perspectives on CALL in a CALL course which combines theory and practice. This study thus features teacher discourse from 6 teacher participants over a 16-week semester. Communication in the class consisted of in-class oral reports, web-based blackboard discussion, and online chat. All classroom interaction was gathered and analyzed for the purpose of examining teachers’ emerging understandings of CALL and the role it can play in their teaching and learning. Changes in teachers’ perceptions of CALL are presented as a set of three conceptual continua – that is, a shift from machine to users, a shift from control to empowerment, and a shift from product to process. The participants’ evolving attitudes about CALL illuminate the salient aspects of their CALL preparation, followed by implications with a particular focus on the design of CALL teacher preparation.

* This work was supported by the research grant of Cheongju University in 2011.
I. INTRODUCTION

The research focus in the CALL literature has shifted from whether we should use technological affordances for language education to how and what purposes technology should be employed (Beatty, 2003). A notable marker of recent CALL research is the growing interest in CALL teacher preparation. The attraction to this emerging research area can be traced to an important factor that is nicely captured in Philip Hubbard’s (2008) stark observation that “The future of CALL is closely tied to the future of language teacher education because language teachers are the pivotal players: they select tools to support their teaching and determine what CALL applications language learners are exposed to and how learners use them” (p. 176). This factor points to a compelling need to examine language teachers’ perspectives on CALL in their CALL preparation class. In addition, the wide range of technology-enhanced environment underscores the role of L2 teachers for the purpose of successful implementation of computer technology into the language classroom. As language teachers come to use computer technology in the classroom, “they need to know why they do and what they do” (Hubbard & Levy, 2006, p. 11). Indeed, technological development has come to challenge language teachers to integrate its affordances into their language teaching (Egbert & Petrie, 2005). As Hubbard (2008) argued, however, the success of computer-enhanced language classroom often rests on the role of language teacher. That is, the uses of computers in the language classroom are varied based on the teachers’ perceptions and expectations of computers. The role of language teacher in this new environment is different from that required in the face-to-face language classroom. The teacher’s role and influence become important in managing the smooth flow of online interactions. Also language teachers should support students to optimize technology use.

Interest in language teacher technology education is not entirely new. In recent work, the close connection between CALL classes in teacher education programs and in-service use of technology by teachers in their classes has been highlighted (Slaouti & Motteram, 2006). Burston (2003) also underscores the consideration of language teachers as well as language learners in investigating the relationship of CALL to language learning. Collectively, many of these studies relied on surveys or interviews with students either participating in CALL preparation or as a follow-up debriefing. Much of this research suggests that there is a lack of CALL teacher preparation and limited contextualization. The current study alternatively tries to use discourse produced by English teachers throughout a CALL course in order to keep track of teachers’ evolving perceptions about
CALL as they come to have a fuller understanding of CALL in theory and practice.

Given that the benefits of technology-enhanced language learning often rest on the background and creativity of the language teacher, how teachers as CALL learners develop conceptual shifts in a CALL class is an especially compelling issue. There has been little discussion about the EFL teachers’ perceptions about the role of technology in their teaching. This issue eventually sheds light on the importance of teacher education in CALL when technology is clearly a presence in the classroom. Thus, this paper is an attempt to do a more in-depth examination on English teachers’ perceptions not only at the very beginning and also end of the first course exposing teachers to CALL oriented skills and knowledge. This paper specifically addresses the following questions: what does teacher discourse about CALL reveal English teachers’ perceptions about CALL? Does their discourse reflect any change in their understandings?

II. LITERATURE REVIEW

CALL teacher preparation in ESL/EFL graduate programs has been viewed as lacking in both quantity and quality (Oxford & Jung, 2007). In a survey study, Butler-Pascoe (1997) reported responses from 150 TESOL MA programs on their integration of technology. She found that only 18% offered a CALL course. In the survey study of pre-service teacher technology education at college levels, Han (2001) found that only 36.5% of English Education departments in Korea offered a CALL teacher preparation course, indicating that English Education departments need to provide pre-service language teachers with diverse courses of professional technology competence. Kessler (2006), in an online survey of 240 English teachers in the U.S. and Canada, found that more than half had not any instructional training with computer technology as part of their coursework. In addition, his participants felt that their TESOL program had not been effective in preparing them to teach with technology. Kessler (2007) also reported that teachers who had graduated from MA language teacher programs felt their informal CALL preparation to be more effective than formal training of CALL, suggesting that there was a lack of attention to CALL–based teacher education.

Yet there have been continuing attempts to integrate CALL teacher preparation into language teacher education programs (e.g., Davies, 2003; Desjardins & Peters, 2007; Jones & Youngs, 2006; Kamhi-Stein, 2000; Slaouti & Motteram, 2006). These attempts are important because they can offer a better picture of how technology-enhanced courses
influence future or current L2 teachers in terms of the use of computer technology.

First of all, CALL courses serve to help L2 teachers raise their confidence in using technology and have positive attitudes toward technology. With the responses of ESL teacher candidates to post-technology-integrated course surveys, Chisholm and Wetzel (1998) found that the course allowed the ESL teacher candidates to raise confidence levels in employing technology for their future curricular instruction. Similarly, Peters (2006), in his study of pre-service language teachers’ technological competencies in a teacher education program, reported that the teachers’ competencies were enhanced while taking a technology course.

In addition, Hoven (2007) attempted to develop a CALL course, reflecting on students’ feedback from previous courses, thereby helping practising language teachers become familiar with web-based tools such as WebQuest, Blog, and Wiki. As a result, his effort fostered student teachers’ competencies in employing the technological tools in their future classes. Kamhi-Stein (2000) used a web-based bulletin board in a TESOL methods course in a graduate program as a means of providing pre-service teachers with an opportunity to build their knowledge about CMC modes by learning through them. The findings revealed that the pre-service L2 teachers perceived the CMC mode to be useful for peer collaboration, leading to their positive attitude toward CMC technology.

Lee and Lee (2009) investigated 680 elementary and secondary school teachers’ perspectives on online teacher training that is not part of graduate schools. The teachers attended online teacher training programs in online education centers across the nation. Interestingly, the results showed that 99.6% out of the participants responded positively toward the future participation in the program again. Kim (2010), in his study of teacher trainees’ responses in blended TESOL program, analyzed questionnaire and interviews from 40 trainees in a TESOL program at a university of Korea. Based on the data analysis, his suggestion is that blended TESOL curricula that reflects the idea of theory-online and practice-offline should be developed in the Korean context.

The increasing interest in technology instruction for language teachers and teacher candidates has resulted in a variety of approaches to CALL teacher education. Specifically Hubbard (2008) provided a comprehensive overview of approaches to CALL teacher education, involving breath-first, depth-first, and programmatically integrated orientation to CALL. A Breath-first approach is represented by the survey course in which instructor can introduce a broad range of CALL alternatives, placing CALL into perspective as a whole. The course should be about technology in language education and help students to acquire both technical and pedagogical skills. With respect to a depth-first approach,
technology courses are useful for in-service training over a relatively short period, focusing on a single application that can motivate the teacher to practice independently. In an integrated approach to CALL, on the other hand, the use of technology is seen in varied places during the teacher candidate’s coursework. That is, technology-enhanced language teaching would appear in all situations where the use of technology is relevant.

In addition, the learning processes in CALL preparation is important for successful technology education. According to Hubbard (2008), these learning processes include situated learning (Egbert, 2006), reflective learning (Slaouti & Motteram, 2006), autonomous self-directed learning (Robb, 2006) and communities of practice (Hanson-Smith, 2006). Situated learning suggests providing links to the actual language classroom. For the situated learning perspective, learning to teach occurs in the authentic contexts in which the knowledge is actually used. Pivotal to reflective learning is the role of reconstructive processes such as metacognition and reflection on apprenticeship while self-directed learning is, in some sense, applicable to any educational problem. Through a community of practice, the possibility of teacher education is beyond the single class structure. For example, Hanson-Smith (2006) showed the development of communities of practice in CALL among teachers around the world, citing free 6-week “Electronic Village Online” workshops.

In sum, the review of the earlier studies indicates that technology coursework can change teachers’ attitudes toward and confidence with technology, and can also provide them with skills that they did not previously obtain.

One limitation of these important studies is that much of the focus in CALL-related teacher preparation has been derived in a top-down manner: CALL professionals have reflected on their own use of CALL, their observations of CALL practice, and the needs of practitioners in the future. Thus far there has been little teacher discourse-based inquiry in a locally situated context (here a required CALL course). In addition, previous studies on CALL teacher education failed to offer English teachers’ ongoing perspectives on technology in a CALL class over the whole semester. Research of this kind provides a more process-oriented view of English teacher learning in CALL and such a view is essential if we wish to develop a truly comprehensive picture of CALL teacher education.
III. METHOD

1. The Course

This case study was conducted in a CALL graduate course at a university in the midwestern Korea. The researcher taught Multimedia and English Education class for the second semester of 2010. The class offered by a TESOL graduate program was designed to help English teachers as students to implement diverse CALL tools into their classroom. The course ran 3 hours, once a week, and it was built around a situated learning approach. In this approach, learning to teach involves helping students for the purpose of “transform[ing] their knowledge into professional activity” (Feiman-Nemser & Remillard, 1995, p. 15), meaning that CALL teacher education must be like the contexts in which such language instruction takes place. In a course focusing on technology use, the context can be one mediating force as local perceptions about CALL, institutional infrastructures, and learner experience all exert an influence. In this sense, this course incorporated two different CALL contexts – that is, web-based telecollaborative exchanges (Appendix B) and online chat. The telecollaborative partnership under study involved web-based communication (here Blackboard) between two separate graduate courses: the Multimedia and English Education course in Korea and a pre-service teacher education course in the U.S. Participants from Korea were given individual IDs in order to have access to the Blackboard system. They joined the three sessions from home. The topics of the sessions corresponded to general themes covered in the teacher education course. The instructional goal of the telecollaborative exchanges was to provide opportunities for performance and practice in meaningful interactions.

Students were introduced to CALL theory and practices as they also learned various skills relevant to the use of CALL. Warschauer and Kern’s (2000) *Network Based Language Teaching* served as the main textbook for the course, but additional readings from various CALL journals and edited volumes were used to supplement the textbook. Students had access to electronic texts (i.e., journal articles) and other online resources at web-based course management system. Each class meeting involved oral reports of students centered around two interrelated articles for the course. After the oral reports, the class moved to a computer lab in order to have hands-on experience with particular CALL tools that were introduced in the articles, and engage in a 50-minute online forum from a synchronous tool, Skype1) (see Figure 1) that supported the course. These English-medium online forums resulted in a large portion of the data for this study.

1) http://www.skype.com
enabling students to lead online discussions and guide the initial coverage of topics, teacher bias was reduced. In addition, students were required to participate in three telecollaborative exchanges with graduate students at a university in the U.S.

2. Participants

Participants in the study were 6 Korean English teachers who had taken the same graduate-level CALL course at the fall semester of 2010 and who were currently teaching. At the time of data collection, three of the participants were teaching at middle schools and the rest of them were teaching at high schools. At the time of data collection, 2 were graduate students in the second semester of a first-year MA TESOL program, 2 were graduate students in the fourth semester of second-year MA TESOL program, and 2 were doctoral students from the College of Education with research interest in CALL teaching. Participants ranged from more experienced (more than 5 years’ teaching experience) to less experienced (5 or fewer years of experience) teachers, and most of participants were interested in the topic with respect to teaching methods and future research agenda. As regards motivations for joining the course, they cited career advancement, enthusiasm based on recent experience of technology use, or expectations of a role for technology with which they are not yet familiar. Table 1 shows relevant personal information about the participants.
3. Data Collection and Analysis

Data collection was carried out over a 16-week period. To allow data to be triangulated, multiple collection methods were adopted (Marshall & Rossman, 1995). The collected data include field notes, electronically saved chat texts, recorded class interactions from in-class oral communication, students’ self-reflective reports (Appendix C), and survey information that included the participants’ personal profiles. Field notes that was written right after each class provided insights regarding the overall nature and interactions of the class, which was not described in participants’ reports and online chats. By an extension of Chapelle’s (1990) proposal for discourse analysis of student and computer interaction, this study rests on documentation of all spoken and written interaction among teachers in a CALL course. The whole classroom interaction was audio recorded in order to capture the main points of discussions as well as the discreet asides and subtleties of communication. Different sources of data (i.e., student’s in-class oral reports, telecollaborative written exchanges, online chat, and spontaneous in-class
communication) were all recorded over the course of 16 weeks. In-class oral communication was transcribed and translated for the purposes of future analysis and writing up findings and chat texts were readily available because they were posted on the class blackboard system by one of the participants as formatted files.

This case study adopted a qualitative coding method, which means that themes and codes were emerged as the analysis proceeded (Strauss & Corbin, 1990). Guided by constant comparative method, data analysis was an ongoing process: the analysis began soon after the first class session. The primary focus was put on utterances that projected initial perceptions, changing perceptions between the beginning and end of semester, and final perceptions. Thus, the first major step in data analysis was to do a close reading of the first transcripts and chat texts. The next step was to read and code all of the transcripts and chat texts in relation to teachers’ attitudes for CALL preparation for more themes. The following step was to refine broader themes for coding, with the aim of identifying what codes were reflecting a change in their understandings of CALL in the course. A final step of analysis that formed the structure of findings in this study was to compare the themes across individual cases. This method of analysis is referred to as the “horizontal slicing” of data (Barton & Hamilton, 1998, p. 70). Doing so not only allowed the researcher to identify recurring themes shared by participants, it also served to identify variations, which is important in demonstrating the different ways of perceiving technological affordances among them. To establish the credibility of the study, the researcher collected data from multiple data sources including field notes, electronically saved chat texts, recorded class interactions from in-class oral communication, and students’ self-reflective reports. Also the researcher checked with the participants to ensure her tentative interpretations, which served as member checks. Throughout the process of data analysis, the researcher often returned to the published literature to evaluate and deepen her interpretation.

IV. FINDINGS AND DISCUSSION

1. Starting Points: CALL as a Misfit in Learning Languages

Talk and concepts concerning technologies and their uses in instruction varied among these language teachers. At the first week of the course, the teachers were asked to evaluate their own technology-related skills. Teachers in the course tended to identify themselves as either experienced or inexperienced with respect to technology use.
Irrespective of their digital literacy, nearly all of the teachers displayed their lack of critical awareness of CALL associated with language teaching. Most of teachers recognized partial benefit of self-directed CALL use mainly for drill-and-practice activities. That is, the initial observation involved an awareness of CALL as an unknown field that needs further exploration. In addition, some teachers expressed their skepticism about the efficacy of computer technology in language teaching. As Yoon-su commented, “Like you said, even though technology has developed a lot, it seems to be hard to use any electronics for communicating freely. And even at home or in school, we can use computers, there are certain restrictions. So I wonder whether there is real effectiveness of computer for learning languages.” (First chat, September 10, 2010)

In spite of the insufficient awareness, some of them expressed a perspective of the essential role of CALL in the language teaching environment. As Min-ho started early in the class, “As an online rater of English speaking, I’ve participated in the National English Proficiency Test hosted by the Ministry of Education. I am really interested in computer-based assessment as an educational tool, particularly focusing on English speaking and writing.” (Translated from Korean, September 3, 2010)

2. Changing Perspectives on CALL

It was found that teachers in the course developed a greater appreciation for CALL over the 16–week period. In the following, I present my findings on the basis of three key changes that were emerged from the talk and writing of the participants.

1) Shift from machine to users

First of all, agency shift represented one distinctive point. Initially, most of teachers saw computer technology as being the locus of agency in the instructional process. However, the week ten discourse was replete with references to computers as contexts as well as tools, with all agency for teaching and learning residing in both teachers and students.

The conceptual shift for agency began with the locus of learning residing with the machine. At the outset of technologies adaptation process, teachers like Sungwoo were somewhat mystified by what technology was actually “doing.” The concept of machine agency was particularly salient in the following instances:

Moreover, motivation is a contagious area from technology. If you invent some advanced technology that can motivate students to study, you would become a
billionaire. (Sungwoo, September 10, 2010)

Technology has been changing everything in the classroom. (Yoon-su, September 17, 2010)

Good movies give us some insight about their culture. (Min-ho, September, 17, 2010)

These comments dwelt on technology itself as exhibiting a power on learning. As illustrated by Sungwoo’s and Yoon-su’s comments, computer technology itself did take over the responsibility for raising learners’ motivation for their study, and the rationale for doing so was attributed to the computer’s capacity to directly impact on the classroom (“changing everything in the classroom”). With respect to learning outcomes, teachers often used language that attributes to the machine: “The software really worked in encouraging my students to listen and write.” (Hyun-mi, September 10, 2010)

This is consistent with a previous study reporting that even experienced teachers who were not so proficient in technology attributed the “doing” and “learning” to the machine, not to themselves nor to their students (Meskill & Swan, 1999). By contrast, teachers’ discourse in week fifteen is devoid of machine agency. Instead, agency was consistently expressed and referred to as residing in users, that is, students and teachers:

Technologies only can play a role of an assisting tool in learning and teaching. That means technologies don’t stand on their own. We are making good use of this technology in a good way, right? (Sungwoo, December 10, 2010)

For both articles, the most important thing in learning is the person, not the method. (Hyunmi, December 10, 2010)

I think the effectiveness depends on the teacher and his/her effort to make a useful (teaching) materials for the students. (Sujin, December 10, 2010)

They came to recognize the merit of the tool/medium conceptions\(^2\) of technologies. Instead of simply talking about what machines were actually supposed to “do” to affect learning, their discourse reflected a conceptual locus of learning as being inherent in users. This discourse suggest that the concept for agency widely extended to teachers and learners, meaning that computers were viewed as tools or environments.

2) For more details, see Kern (2006).
2) Shift from control to empowerment

Much of the discussion reflected teacher control in the creation, use, and management of CALL, but as the course made a progress, their discourse shifted toward learner agency and autonomy.

For the teachers, classroom management appeared as a major concern as well as an obstacle to their primary responsibility – that is, enacting their lesson plan. Their focus was often placed more on controlling students rather than on the language development of their students. In the initial observation, some teachers tended to control over the whole learning process. Teachers who were using technology were subject to the typical classroom behavioral and organizational tensions. These aspects were evident in the teacher discourse. As can be seen by Sungwoo’s comment at the end of the second week:

In the class with more than 25 students, the teacher can’t control the class. Behind the computer screen, we have no idea about what they are doing. Students can do whatever they want to do. They simply try to escape the moment when teacher walk around them. Right after that moment, they can surf the Internet to search for any kind of information or play online games, etc. (Translated from Korean, September 10, 2010)

In line with teacher control, self-reference was also evidenced in repeated allusions to self-initiated actions teachers took without incorporating learner actions. At first, teachers often took adversarial positions toward computers within their self-referenced thinking, undertaking, and reflecting:

Several years ago, I did perform the same thing with other teachers. But not the first time, everybody didn’t respond to me anymore. So I stopped doing that. Well ... it would be great. But the problem is we don’t have enough time and facilities like computers. In order to do this, we need to log on at the same time. (Hyunmi, September 17, 2010)

Such preoccupation with managing learner behavior appeared to take priority over attending to students’ learning process. This kind of view of teaching is generally explicit in novice teacher’s comments regarding technologies which get cast as being in primary relationship with teachers and their plans, not the learners and their learning (Kagan, 1992).

It is important to note that participants developed a greater appreciation for learner
autonomy through CALL-related articles, they came to accept a contextualized sense of control. While self-referential language used to discuss teaching was prevalent in their initial talk, it was less salient in the later part of their talk. Instead, language about learning/meaning construction with students was recognized. For example, early in the semester, Min-ho shared his computer use, mainly focusing on himself as teacher not on student learning: “Actually, I always use computers in my class, however that’s only for giving information such as text, visual materials, not for interacting with students.”

In week ten, Min-ho commented as follows:

I always use BNC when I make examples of my grammar class, but that’s not the way we learned today, the direct access of corpora by the students. ... Also by exploring corpora, students can learn that learning lexical items always involves learning grammar. (Fifth chat, November 5, 2010)

Interestingly, the above Min-ho’s talk indicates the diffusion of roles and authority by deviating from exclusively self-referential language. In contrast to the prior tendency for classroom control that was replete in their discussion, teacher discourse involved learners’ opportunities to enhance the language and literacy potential of working with computers. These teachers came to allow and support students in sharing ownership of the computer and the processes they undertake in consorting with it. They framed their responses to the assigned readings in terms of learners, not themselves, as evidenced by the following comments:

Students can learn the language context where the word and expressions can be used when they use the concordancer and dictionary examples. (Youngmi, November 5, 2010)

But as you saw the sample from the second homepage the professor introduced today, we can have the diagrams of structure for the students’ better understanding. Then, it can not be much difficult for students to use in the class. (Hyun-mi, November 5, 2010)

I agree with you. The most hot issue in language learning is communicative competence. So providing language learners with good context where they can use English is meaningful as an English learning program. (Min-ho, November 19, 2010)

Right. There are a lot of errors in Google. So I think we have to be careful and advanced learners can get some advantages from Google rather than beginners. (Sungwoo, November 12, 2010)
While initial teacher discourse included mainly “I statements” in relation to computers, weeks ten to twelve discourse demonstrated that “I statements” were used to display teacher actions as more integral to learning activity rather than primary to learning.

3) Shift from product to process

The participants experienced a conceptual change in terms of approaches to CALL – that is, a shift from a product-oriented approach to a process-oriented approach. The difference in instructional emphasis was noted between initial discussions and discussions at the end of semester.

Initially what appeared to be important was what gets done (i.e., anticipated product) as students are exposed to computer-enhanced environment for language learning. Early in the class, teachers’ discussion focused mostly on the linguistic competence of students who participated in CALL programs. They emphasized their need for students to produce accurate linguistic output rather than be engaged in social processes whereby communicative competence in a certain community is developing in an ongoing fashion. Some initial comments addressed a purely structural approach to CALL:

Korean students are only making their own community for fun. That means it is not effective to make a group or community for learning languages. (Yoon-su, September 17, 2010)

So talking about incorporating this kind of program into our class is inappropriate because it is just another type of context in which we can use the language we have learned. (Min-ho, September 17, 2010)

English is just another important subject that students have to study to get high grades. That’s why most highschoolers and teachers don’t enjoy the learning process. (Youngmi, October 1, 2010)

I think the activity supported by CD-ROMS worked well. (Hyunmi, October 1, 2010)

At the end of semester, what becomes emphasized in tasks was viewed as the learning that becomes engaged in – the learning process. Reflecting on their experience using computer-mediated communication (i.e., telecollaboration and online chat) as students in a CALL course, they identified the progressive ways in which certain learning communities that cross national boundaries are evolving during use of computer networks. In addition, a topic on language socialization in Web-based communication brought about
a focus on ways that such communication could be used more effectively for the language classroom.

Although they initially focused on the tutor role of computers that can provide instruction and corrective feedback that are mainly associated with anticipated product, a growing emphasis has been put on the medium role of computers for interpersonal communication and community participation that primarily concern becoming process. Comments from Sujin, Hyunmi, and Min-ho provide a clear illustration:

I was very interested how new approach of network-based language teaching can be incorporated into the typical Korean English class. We teachers should make a conscious effort to combine the tech environment with academic purpose. (Sujin, November 26, 2010)

I don’t think the online discussion was great itself. Rather the process in which we could ask and answer to the given topics or questions was really great. It gave me a lesson and an important moment of whether I can use it for my students or not. (Hyunmi, November 26, 2010)

I like the idea of using CALL to complement pattern drills, focusing on more communicative experiences. (Min-ho, December 3, 2010)

In addition, a stark shift was the growing interest in affective aspects of language learning that is more valued in the realm of process-oriented approach. Due to, in part, the recent trends toward social constructivist frameworks and, in part, their experiences of telecollaborative partnerships with students in the U.S., some teachers were turning to a broader conception of language learning that insisted on its affective layering:

The telecollaborative exchanges can offer opportunity to use English to achieve communicative goals and enhance students’ confidence in using English. The increased contact with English language through the Blackboard discussion would foster EFL students’ ability to predict and confirm expectations, thereby increasing their self-efficacy for learning English. (Self-reflective report, Hyunmi, December 20, 2010)

The whole process helped me to use English and it was very motivational. This kind of anxiety was very positive for me because the idea motivated me to write English journal more frequently. While I write my idea in English, I felt my confidence in English writing enhanced. As an English teacher, I don’t have enough opportunities to use my English as a tool for delivering my idea especially in written language.
V. Limitations and Implications

The purpose of this study is to investigate how language teachers come to have a better understanding of multiple roles of CALL in a required CALL course. Data showed that the participants in the course developed a greater appreciation for CALL as well as increased recognition of its significance in language teaching in their educational fields. The majority of altered perspectives seemed to result from “situated technology experiences” including synchronous chat discussion and hands-on activities (e.g., sentence structure analysis by corpus, telecollaborative exchanges with NS graduate students in the U.S., and navigating through 3-D virtual worlds, here Second Life). Online discussions often resulted in participants speculating about their own teaching environments or anticipated future environments as they explored the potential for CALL in relation to the assigned weekly readings.

Although these findings are limited due to the small number of participating teachers, the findings under the current study support the general conclusions from the previous literature closely enough to suggest trends that should be noted. This study is in line with previous studies (e.g., Egbert, 2006; Kamhi-Stein, 2000) in that technologically experienced teachers tend to focus more on student empowerment than teacher instruction and student management. Whether teachers see technology as a tool in either a teacher-centeredness or a learner-centeredness, the benefits of CALL are mostly connected with student-centered teaching. Understanding the perceptual and discoursal changes of newly practicing CALL teachers is a critical starting point in developing the instructional materials and guidance that can support a fuller understanding of the power and potential of CALL as the medium. Also study of classroom processes integrated with technology can be informed by these perceptual changes. Further, based on language teachers’ ongoing shifts in thoughts and action, teacher trainers and school administrative communities can reconsider the current processes in relation to the curricular design and development of CALL teacher education. Initially the participants in the class tended to view CALL as a kind of supplement rather than an organized environment that is instrumental to English teaching and learning. Without critically evaluating CALL within the context of SLA, teachers would continuously keep technology-oriented preconceptions. Therefore, teacher education in CALL need to be firmly grounded in sound pedagogical
practices rather than the simple provision of specific forms of technology. Furthermore, responding to the different goals of language teachers and the realities of school settings is a big challenge for future CALL course development.

In addition, the participants in the study were all at one time graduate students who chose to take the course because they already had an interest in technology. This may not be the case with most English teachers in the field. And yet these findings are useful because these participants, at least, are expected to be the ones who will infuse technology into their classes. Clearly more such perceptual shifts exist and many more can emerge as the nature of TESOL curricular evolves along with the technology under use.

Finally, future research needs to address how the perceptual change of language teachers plays its role in actual teaching practices integrated with technology. Also teachers’ development with respect to their needs shift should be further discussed in order to design more relevant and authentic CALL preparation curriculum.

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APPENDICES

1. Appendix A: Reading and Discussion List

Week 1 9/3: General Discussion and Orientation to the Course
Week 2 9/10: Historical Overview of CALL


Week 3 9/17: Asynchronous CMC and Language Education


Week 4 9/24: Korean Thanksgiving day
Week 5 10/1: Synchronous CMC and Language Education


Week 6 10/8: CALL & Culture


Week 7 10/15: Task Design in CALL


Week 8 10/22: Intercultural Communication and Language Education
Giving a virtual voice to the silent language of culture: The Cultura Project Language Learning & Technology Vol. 5


Week 9 10/29: Computer–based Second Language Assessment


Week 10 11/5: Corpus and Second Language Learning


Corpus search tools used:

tregex: a powerful tool for searching syntactically analyzed corpora
TIGERSearch: another tool for searching syntactically analyzed corpora, with graphical display of search results

Week 11 11/12: Software Evaluation


Week 12 11/19: Virtual Life: On-line gaming


Examples of gaming and virtual environments:

Penn State Virtual Worlds website on Second Life: http://ets.tlt.psu.edu/virtualworlds/?page_id=6
Video clip on Second Life from a biz/corporate perspective: http://www.youtube.com/watch?v=synxFmQJ_0A

Week 13 11/26: Second Language Socialization and Internet

Steven L. Thorne, Rebecca W. Black, & Julie M. Sykes (2009). Second Language Use, Socialization, and Learning in Internet Interest Communities and Online Gaming. Modern Language Journal, 93(0)

Week 14 12/3: CALL & Distance education


Week 15 12/10: Critical Perspectives on Technology and Language


Week 16: 12/17 Wrap-up

2. Appendix B: Overview of Telecollaborative Exchanges

<table>
<thead>
<tr>
<th>Session</th>
<th>Period</th>
<th>Topic</th>
<th>Grouping</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>September 21 at 7am - September 23 at 2pm</td>
<td>Teacher education: Motivation and goal orientation</td>
<td>Group 1: 8 members including Sujin &amp; Sungwoo  Group 2: 7 members including Yoon-su &amp; Min-ho  Group 3: 8 members including Youngmi &amp; Instructor of CALL course  Group 4: 7 members including Hyunmi</td>
</tr>
<tr>
<td>2nd</td>
<td>October 19 at 10pm - October 21 at noon</td>
<td>A constructive view: Learner characteristics and strategic learning</td>
<td>Group 1: 8 members including Sujin &amp; Hyunmi  Group 2: 8 members including Sungwoo &amp; Instructor of CALL course  Group 3: 7 members including Youngmi  Group 4: 7 members including Min-ho</td>
</tr>
</tbody>
</table>
3. Appendix C: Self-Reflective Report

For this first section, you are to write your global reflections on your experiences of the asynchronous Blackboard discussions and synchronous chat discussions. I am interested in your comparison of the two online written discussions, in your reflection on a) linguistic, b) motivational, c) affective, d) socio-cultural, and e) cognitive factors that you noticed as influencing your learning in the Blackboard discussion as opposed to online chat discussion. Also I want you to share your idea about how these types of online venues can be incorporated into English language teaching. I would expect to see some reference to the ideas we are reading about and discussing in class as you describe your own reaction to engaging in these kinds of online discussions. (about 4–5 pages in length)

Key words: CALL teacher learning, classroom discourse, teacher perceptions
Application Levels: higher education

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With growing interest in test tasks to define language ability, numerous task effects have been examined in second language speaking assessment, especially in semi-direct tests. Due to the nature of semi-direct tests, where real interaction is missing, tasks play a crucial role in eliciting examinee language for evaluation. However, task effects have rarely been investigated separately for different proficiency levels based on both statistical and qualitative analyses. To this end, the current study examined the effects of independent and integrated speaking tasks on the test performance at two proficiency levels of examinees. Twelve examinees (six intermediate and six advanced) responded to five speaking tasks (two independent and three integrated) in a computer-delivered, semi-direct speaking test. A many-facet Rasch measurement analysis of examinee scores on five scoring criteria found that the two groups of examinees did not have the same level of difficulty with independent and integrated tasks. The following qualitative analysis of actual responses showed that both intermediate and advanced examinees were influenced by listening texts of integrated tasks, but for different reasons and at varying degrees. The findings contribute to a better understanding of task effects that vary across different speaking levels.

1. INTRODUCTION

Speaking ability has been defined in terms of its diverse components derived from theoretical models of communicative language ability for most speaking tests (Brindley,
It has been argued, however, that tasks (e.g., contexts and situational factors) as well as the constructs of speaking ability need to be considered together when making inferences about examinees’ speaking ability because the two interact during communication (Bachman, 2002; Brown, Hudson, Norris, & Bonk, 2002; Chapelle, 1998). The role of tasks becomes even more important in determining examinees’ speaking ability in a semi-direct test setting. In semi-direct speaking tests, often delivered by computer, examinees produce verbal language in response to an imaginary interlocutor or without an interlocutor. That is, the interactive nature of speaking does not exist even though the tasks simulate real-life language use situations. Therefore, tasks that provide information about the examinee role and context play a crucial role in semi-direct assessments.

In spite of their importance, speaking tasks in semi-direct tests have rarely been investigated. A few studies have examined the effects of independent and integrated speaking tasks on test performance (e.g., Brown, Iwashita, & McNamara, 2005; Lee, 2006). However, most previous studies have analyzed examinee performance quantitatively without further qualitative analysis of actual responses. Since a listening or reading text is necessarily provided as input in integrated tasks, qualitative analysis of actual performance data may reveal a deeper understanding about task effects. Moreover, task effects have not been investigated separately in previous research for examinee groups with different speaking abilities. Although its focus was not on different levels of examinees, a study conducted by H. J. Kim (2011) found that listening input in integrated tasks influenced the test performance of three groups of examinees (beginner, intermediate, and advanced) with varying degrees. Evidence suggested that integrated listening texts especially hindered lower-level examinees’ performance. As a follow-up to H. J. Kim’s (2011) prior study, the current study examined the scores and actual responses of the intermediate and advanced examinees who participated in the prior study.

The present study aimed to investigate the effects of two different task types (independent and integrated) on second language (L2) learners’ performance in a computer-delivered semi-direct speaking assessment. It addressed the following two research questions: (1) To what extent do the two groups of examinees (i.e., intermediate and advanced) differ in their perceptions of independent and integrated task difficulty? and (2) To what extent do the listening texts of the integrated tasks affect the test performance of the two groups of examinees (i.e., intermediate and advanced)?
II. LITERATURE REVIEW

1. Semi-Direct Speaking Tests

In response to questions about Lado’s (1961) skills-and-elements approach, there was a practical need to assess examinees’ actual oral performance in L2 testing, so early testers (e.g., Clark, 1975; Jones, 1979, 1985) advocated using direct tests to evaluate examinees’ speaking ability. Clark (1975), one of the early advocates of the integration of a performance component in language testing, defined a direct speaking test as an assessment which provides “a very close facsimile or ‘work sample’ of the real-life language situations in question, with respect to both the setting and operation of the tests and the linguistic areas and content which they embody” (p. 11). Direct tests of speaking ability started with the development of the Oral Proficiency Interview (OPI) by the Foreign Service Institute (FSI) and were widely used in the 1970s and 1980s (Malabonga, Kenyon, & Carpenter, 2005). They pursued both a real-life approach and interactional/ability approach, as defined by Bachman (1990), for the authenticity of the test. That is, they considered both language use contexts as well as language and interaction to ensure authentic test tasks. However, in spite of their weaker authenticity, semi-direct speaking tests have been used more widely due to their practicality, especially in large-scale speaking tests (e.g., TOEFL iBT speaking), as substitutes for direct tests. In semi-direct tests, visual or aural stimuli are presented to engage examinees in oral communication (Clark, 1988).

Although semi-direct speaking tests require examinees to actually produce oral language as direct tests do, testing contexts of the two test types are quite different. In semi-direct tests, the interactive nature of speaking is absent. In other words, features presented in real-life communication or direct speaking tests are not available in semi-direct tests, such as interaction with interlocutors, paralinguistic features, and feedback. As a result, examinees’ oral language derived from semi-direct tests may be quite different from direct tests. Due to the different nature of semi-direct tests from real-life language use situations, the validity of semi-direct tests has long been investigated (e.g., Clark, 1988; Shohamy, 1994). Moreover, various conditions of semi-direct tests (e.g., planning time and task topics) have been manipulated to elicit the best language sample from examinees, and their impact on examinees’ test performance has been examined. One such condition that has been continuously studied is planning time in semi-direct testing situations, because real-life strategies that speakers use to create planning time, such as hesitation, pauses, reformulation, self-corrections, and
repetition, are not available in semi-direct testing situations (Elder, Iwashita, & McNamara, 2002; Malabonga, Kenyon, & Carpenter, 2005; Wigglesworth, 1997). Other variables that have been manipulated and examined in semi-direct tests include task topic (e.g., male-oriented versus female-oriented) and intended audience (e.g., male versus female) (Farris, 1995; Lumley & O'Sullivan, 2005).

Many of the previous studies mentioned above considered examinees' proficiency levels while examining the effects of manipulated variables on examinees' test performance. They also analyzed test performance from both quantitative and qualitative perspectives. Semi-direct test tasks, however, have not yet been adequately examined, in spite of their important role in setting the context of language use. Therefore, there is great need for a systematic investigation of test tasks (e.g., difficulty and type) to elicit examinees' speaking performance and ultimately their speaking ability.

2. Effects of Independent and Integrated Tasks on Test Performance

Independent and integrated tasks have been used in L2 performance assessment to elicit language samples from examinees. Independent tasks aim to measure only one skill at a time (e.g., speaking skills) and avoid integration of other skills (e.g., listening or reading input). Examinees are not provided with any input to complete independent tasks; instead, they utilize their personal experience or background knowledge to respond to the tasks (Lee, 2006). In contrast, integrated tasks require examinees to integrate different language skills to complete a task. For example, examinees first listen to an academic lecture and then summarize it orally and thus demonstrate their understanding of the lecture. Examinees can benefit from this type of input since integrated tasks provide examinees with response content to reduce the effects of the task topics. However, integration of multiple skills can threaten the validity of the test scores if the examinees do not fully understand the given input (H. Kim, 2009).

Numerous empirical studies on the effects of different task types on examinees' test performance have been conducted in L2 performance assessment. In the context of writing assessment, for example, researchers have debated whether integration of listening and/or reading texts into writing tasks facilitate or impede examinees' writing test performance. Overall, integrated writing tasks have been favored over stand-alone writing tasks, especially in academic writing assessments (e.g., TOEFL and IELTS), because of their relatively higher authenticity, greater diversity, more positive washback effects on teaching and learning, and better control of differences in examinees' background knowledge (Cumming, Grant, Mulcahy-Ernt, & Powers, 2004; Hamp-Lyons & Kroll, 1997; Read, 1990;
Rosenfeld, Leung, & Oltman, 2001; Weir, 1993). The utility of integrated tasks, however, may threaten the validity of test scores due to examinees’ extensive use of source materials for writing and different levels of reading or listening ability (Lewkowicz, 1994; Watanabe, 2001). To this end, two types of writing tasks have been compared from various perspectives to provide validity evidence of using integrated tasks. For example, Brown, Hilgers, and Marsella (1991) compared examinees’ test scores on two different tasks (i.e., independent and integrated tasks). Similarly, Lewkowicz (1994) compared two groups of examinees’ writing test scores (i.e., with the reading texts versus without the reading texts). While both studies analyzing examinees’ test performance found no statistical differences, Cumming et al. (2005) revealed that examinees’ written discourse features in the independent tasks qualitatively differed from those in the integrated tasks (i.e., reading-to-write and listening-to-write tasks) with respect to lexical complexity, syntactic complexity, rhetoric features, and pragmatic qualities. While validation of integrated tasks has been consistently investigated in writing assessments, it appears that examinees’ test performance needs to be examined both statistically and qualitatively to provide a more comprehensive understanding of integrated writing tasks and accurately infer the writing ability of examinees.

In contrast to the writing assessment context, different task types have rarely been examined in the context of speaking assessment. One empirical study performed by Lee (2006) examined whether it would be reasonable to report a composite score of three speaking subsections (i.e., six listening-speaking, two reading-speaking, and five independent speaking tasks) of the new TOEFL (Educational Testing Service, 2006). Since the scores from the three sections were found to be highly correlated through generalizability theory, Lee (2006) concluded that the three task types measured a common construct: speaking ability. That is, examinees’ test scores among different task types did not differ quantitatively. Similar results were also reported in Brown et al. (2005) who examined the extent to which examinees’ discourse features differed across two task types (i.e., independent and integrated tasks) with respect to linguistic resources, phonology, fluency, and content. They found no distinctive differences in examinees’ response features across the two task types. Based on their statistical analysis, both Lee (2006) and Brown et al. (2005) claimed that examinees did not exhibit different performances on the independent and integrated tasks: however, they did not further examine the examinees’ responses qualitatively. Moreover, they did not investigate the effects of input (e.g., listening or reading texts) on speaking performance separately. Listening ability may also come into play in addition to speaking ability in integrated tasks, as evidenced in H. Kim
Investigating Effects of Tasks on Examinee Performance in a Computer-Delivered Speaking Test (2009), where examinees’ scores on two integrated tasks that included lengthy listening input were significantly correlated. The impact of integrated speaking tasks remains unexplored, especially with regard to specific characteristics of tasks (e.g., length or difficulty of the input). The current study aims to close this gap by investigating the effects of listening input on L2 speaker performance in integrated tasks.

III. METHODOLOGY

1. Participants

There were two groups of participants in the current study: examinees and raters. Both groups represent the same participants who participated in H. J. Kim’s (2011) previous study, from which the present research is derived.

1) Examinees

Six intermediate (Intermediate 1 to 6) and six advanced examinees (Advanced 1 to 6) were selected from a pool of incoming students who had taken the English speaking placement test since 2008 at an adult English as a Second Language (ESL) program located in New York City, USA. The six beginner examinees who participated in the previous study were not included in the current study because lower-level students could hardly speak during the speaking placement test due to their limited speaking ability. Due to the extremely limited spoken responses elicited from the beginner participants, only intermediate and advanced examinees were included as the participants in the current study. The procedure for selecting the 12 examinees is presented below under “data collection procedures.”

The majority of the examinees in both groups (intermediate and advanced) were female (i.e., 10 out of 12). All examinees were in their 20s or 30s, except one advanced examinee who was 18 years old. The two groups showed substantial differences in the length of time they had studied English, ranging from 2 years to 14 years. They also differed somewhat in terms of their language backgrounds. All of the intermediate participants spoke native Asian languages (i.e., Korean, Japanese, and Thai) while most of the advanced examinees reported speaking European languages (i.e., Danish, Swedish, Italian, and Polish) as their first language.
2) Raters

The three expert raters from the previous study were also included as rater participants in the current study. Only expert raters, excluding the developing and novice raters, were included because they showed the most reliable, stable scoring behaviors across the three rating sessions in the previous study (H. J. Kim, 2011). In other words, they used the given analytic rating scales consistently and accurately from both statistical and qualitative perspectives, without being affected by different examinee ability levels, tasks, or rating scales.

All three raters had extensive experience teaching and rating L2 speaking assessments. Specifically, they had had at least five years of teaching experience in an adult ESL program similar to the program of the current study, working with students of all proficiency levels. Moreover, these raters had taught classes for four to six semesters in the program being examined in the current study. As for experience in rating L2 speaking performance, the three raters had gained experience in this area throughout their teaching, often by means of placement and achievement tests. Therefore, at the time of data collection, they had already been using analytic scoring rubrics extensively. They were familiar with making a series of score decisions for separate components of speaking ability. They were also very accustomed to the speaking placement test used for the current study, as they had scored its recorded oral responses multiple times. However, none of the raters had scored any large-scale proficiency tests (e.g., the speaking section of the TOEFL iBT). In addition, despite their extensive rating experience, the rater training offered by the ESL programs they had worked for was not very rigorous. All three expert raters were recent graduates of the M.A. TESOL and Applied Linguistics programs at a university located in New York City, USA.

2. Instruments

The instruments included (1) a speaking test, which has been used in the ESL program of the current study to evaluate incoming students’ speaking ability as part of the placement test, and (2) an analytic scoring rubric used to evaluate the examinee participants’ responses.
1) Speaking Placement Test

The speaking test aims to measure the degree to which examinees can speak appropriately and effectively in response to different language use situations at the time of their entrance into the program. The test includes two independent tasks and three integrated tasks (listening–speaking tasks). In other words, examinees draw on their prior experience or background knowledge to answer two independent tasks while they respond to three integrated tasks integrating a short or long listening text provided as input. A brief summary of the five tasks is presented in Table 1.

<table>
<thead>
<tr>
<th>Task</th>
<th>Setting</th>
<th>Purpose</th>
<th>Task Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Customer’s office</td>
<td>Complaining about a catering service</td>
<td>Independent</td>
</tr>
<tr>
<td>2</td>
<td>Professor’s office</td>
<td>Refusing a suggestion from a teacher</td>
<td>Integrated</td>
</tr>
<tr>
<td>3</td>
<td>Cafe</td>
<td>Narrating a story based on a sequence of pictures</td>
<td>Independent</td>
</tr>
<tr>
<td>4</td>
<td>Home</td>
<td>Summarizing a radio commentary</td>
<td>Integrated</td>
</tr>
<tr>
<td>5</td>
<td>Student lounge</td>
<td>Summarizing a lecture</td>
<td>Integrated</td>
</tr>
</tbody>
</table>

The test is a computer-delivered, semi-direct test. That is, examinees do not interact with an interlocutor. Instead, all instructions, prompts, and listening texts have been pre-recorded for each task and delivered by computer. Each task provides 20 to 60 seconds for preparation and 45 to 60 seconds for the response. The five tasks and instructions for each task are provided in Appendix 1.

2) Analytic Scoring Rubric

An analytic scoring rubric was used to score the 12 examinees’ responses to the five tasks. The rubric represents the five dimensions of speaking ability derived from Purpura’s (2004) definition of language knowledge. The five components of speaking ability include control of grammatical forms, phonological control, meaningfulness, control of conversational structure, and control of pragmatic meanings (only for Tasks 1 and 2). “Control of grammatical forms” measures the degree to which examinees can use accurate, diverse, and complex grammatical forms (lexical, morphosyntactic, and cohesive forms). Under the “phonological control” component, examinees’ use of segmental (consonant and vowel articulation) and prosodic features (e.g., stress, intonation, and tempo) are evaluated. In addition, the clarity and elaboration of the response are considered for the “meaningfulness” component while the overall structure and coherence
of the response are evaluated for “control of conversational structure.” Lastly, “control of pragmatic meanings” measures the appropriateness of the response in relation to the given task context (For a detailed operational definition of each component, refer to H. J. Kim, 2011). Each of the five components has six points, ranging from 0 to 5. The six-point scales and corresponding descriptors are presented in Appendix 2.

3. Data Collection Procedures

Neither the examinees’ performance data nor the raters’ analytic ratings were collected for the current study. Instead, part of the data was selected from the previous study (H. J. Kim, 2011) for follow-up research. This section briefly describes the data collection procedures used in the previous study and provides the rationale for selecting certain parts of the original data for the present study.

1) Examinee Data Collection

The 12 examinees (six intermediate and six advanced students) were selected from the database of all incoming students who had taken the speaking placement test since 2008 at the ESL program of the current study. Among 700 incoming students whose speaking test data were available, six beginner, six intermediate, and six advanced examinees were selected based on stratified random sampling (Wiersma & Jurs, 2005). In other words, 700 students were first classified into three groups of speaking ability (beginner, intermediate, and advanced) based on their speaking test scores, which had been assigned by two raters (i.e., teachers of the program) at the time of the placement test. The students who belonged to the bottom one-third of the distribution of speaking test scores were assigned to the beginner group, the students in the middle one-third of the distribution were assigned to the intermediate group, and those in the top one-third of the distribution were assigned to the advanced group. Six students from each group were then randomly selected to represent the three levels of speaking ability. The students were classified into the three levels based on their relative performance to others (i.e., rank order of their test scores), instead of based on certain characteristics of each ability group. This was done because a student’s language ability (including speaking ability) is determined in relation to other students’ placement test scores in the ESL program of the present study. In order to represent the three speaking ability levels of the program, relative standing was considered for grouping.

As mentioned above, however, only six intermediate and six advanced examinees were included as the examinee participants of the current study. The six selected beginner
examinees were excluded because they hardly spoke during the placement test due to their limited speaking ability. The final 12 selected examinees’ oral responses to the five tasks, which had been recorded in the previous administrations, were obtained and transcribed for analysis.

2) Rater Data Collection

The three raters scored the 12 selected examinees’ recorded responses across three rating sessions, separated by a one-month interval. Before each rating session, the raters were individually trained. More specifically, the tasks and scoring criteria were briefly introduced, and the raters practiced scoring a few sample responses across the five scoring criteria. Their rating scores were also discussed with the researcher in order to ensure that they had appropriate understanding and interpretation of the given scoring criteria. In addition to the repeated rater training between the rating sessions, individual feedback was provided for each rater before the second and third rating sessions to help the raters improve their scoring behavior (e.g., internal consistency and interaction effects) from the previous rating session. Due to this individual feedback component of the rater training, the raters were individually trained for each rating session instead of being trained as a group. The raters scored two intermediate and two advanced examinees’ responses in each rating session using the same analytic scoring rubric. (Rating scores assigned to the beginner examinees and the raters’ verbal report data, which were collected in the previous study, were not included as part of the rater data in the present study.)

Three novice and three developing raters had scored the 12 examinees in the previous study. However, their rating scores were sometimes unreliable and their understanding of the scoring criteria was often inaccurate. Therefore, only the three expert raters were included as rater participants in the current study. Overall, the three expert raters exhibited stable and reliable rating patterns across the three rating sessions. Moreover, they had almost no problem understanding and interpreting the scoring criteria. (For detailed statistical and qualitative analyses of rater behavior in each rating session, refer to H. J. Kim, 2011.)

4. Analysis

The raters’ analytic ratings, which were assigned to the performance of the 12 examinees on the five tasks, were first statistically analyzed in order to examine how the two groups (intermediate and advanced) of examinees differed in their perceptions of the
relative difficulty of the five tasks (research question 1). The examinees’ actual responses to the integrated tasks were then further analyzed qualitatively to find evidence of potential effects of the listening texts on examinee performance (research question 2).

1) Statistical Procedures

In order to examine task difficulty within each of the two examinee groups (intermediate and advanced) and compare the difficulty level between the two groups, separate task means were first calculated for each examinee group based on the averages of the examinees’ raw scores across the five rating scales. Since the six examinees within each group were assigned four (for Tasks 3, 4, and 5) to five (for Tasks 1 and 2) analytic rating scale scores by the three raters, a total of 792 scores were available for analysis (3 raters × [(12 examinees × 3 tasks × 4 analytic rating scores) + (12 examinees × 2 tasks × 5 analytic rating scores)] = 792). In addition to the task means, inter-rater reliability was also estimated to determine the degree to which the three raters assigned similar ratings to the examinee responses. Since there were more than two raters, the Intraclass Correlation Coefficient (ICC) was used to compute inter-rater reliability.

Following the preliminary analysis, the raters’ analytic ratings were further analyzed using many-facet Rasch measurement (MFRM) to determine the relative difficulty of the five tasks, controlling for effects of other factors involved in the testing (e.g., rater severity and difficulty of analytic scoring criteria). A four-facet partial credit model, which included examinee, rater, task, and rating scale, was analyzed using the FACETS program version 3.66.3 (Linacre, 2010). The difficulty of each task was estimated on a logit scale, which is an equal interval scale that enables estimated measures to be compared within and across facets. Differences in task difficulty were further examined using a chi-square test and strata value to test their statistical significance. A separate model for each examinee group was analyzed to compare the two groups’ perceptions of task difficulty.

2) Qualitative Data Analysis Procedures

In addition to the statistical analysis of the examinees’ analytic rating scores, their actual responses were qualitatively analyzed to investigate the effects of the listening texts included as input for the integrated tasks (Tasks 2, 4, and 5) on examinee performance. The recorded examinee responses were first transcribed and examined in terms of the examinees’ understanding (or misunderstanding) of (1) the instructions and/or prompt and (2) the listening text itself. Correct understanding of the instructions and

1) Hesitations (e.g., umm and uh) and pauses were not included in the transcription.
Investigating Effects of Tasks on Examinee Performance in a Computer-Delivered Speaking Test

prompts was questioned to check whether the examinees appropriately understood the setting and directions of a task (e.g., refusal of a suggestion). More fundamentally, the qualitative analysis of examinee performance intended to examine the degree to which the examinees could understand the listening text and use the information for their oral responses (i.e., a teacher’s suggestion for Task 2, problems of electric cars for Task 4, and characteristics of the Barbizon School for Task 5). For this purpose, the extent to which the examinees appropriately used the information of the listening texts for their responses was investigated. Any misunderstood, irrelevant or missing content of the listening text was regarded as evidence of the effects of the listening input on test performance.

IV. FINDINGS AND DISCUSSION

1. Quantitative Findings and Discussion

In order to investigate the relative difficulty of the five tasks, task means were preliminarily calculated for each of the intermediate and advanced examinee groups. The maximum possible mean score was 5 and the minimum was 0 since the scales ranged from 0 to 5 across the five analytic scoring criteria. As shown in Table 2, the advanced group of examinees’ mean scores (ranging from 4.34 to 4.50) were higher than the intermediate group’s mean scores (ranging from 2.50 to 2.98) across all five tasks. The task means of the two groups revealed a somewhat opposite pattern of task difficulty. For example, Task 5 (summarizing a lecture) appeared to be the most difficult for the intermediate examinees while it was the easiest for the advanced examinees. Task 2 (refusing a suggestion from a teacher) which was the second easiest task for the intermediate group was the most difficult for the advanced group. Therefore, analytic ratings needed to be scrutinized further, beyond the descriptive statistics, to determine the relative difficulty of the five tasks in each examinee group.

<table>
<thead>
<tr>
<th>Task</th>
<th>Intermediate</th>
<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Complaining about a catering service)</td>
<td>2.98</td>
<td>4.47</td>
</tr>
<tr>
<td>2 (Refusing a suggestion from a teacher)</td>
<td>2.89</td>
<td>4.34</td>
</tr>
<tr>
<td>3 (Narrating a story based on a sequence of pictures)</td>
<td>2.76</td>
<td>4.40</td>
</tr>
<tr>
<td>4 (Summarizing a radio commentary)</td>
<td>2.74</td>
<td>4.46</td>
</tr>
<tr>
<td>5 (Summarizing a lecture)</td>
<td>2.50</td>
<td>4.50</td>
</tr>
</tbody>
</table>
In addition to the task means, inter-rater reliability was preliminarily calculated using the ICC. The ICC of the three raters was 0.85. The value was not very high, indicating only a moderate degree of agreement among the three raters in their ratings.

A series of analyses of a four-facet MFRM model provided more precise information about task difficulty for each examinee group. The model analyzed all four facets (examinee, rater, task, and rating scale); however, discussion of the MFRM analysis is limited to the task facet, which is the focus of the current study. Table 3 first presents the difficulty measures in logits for the intermediate examinee group. The five tasks are presented in descending order of difficulty measure.

<table>
<thead>
<tr>
<th>Task</th>
<th>Measure (in logits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 (Summarizing a lecture)</td>
<td>0.66</td>
</tr>
<tr>
<td>4 (Summarizing a radio commentary)</td>
<td>0.05</td>
</tr>
<tr>
<td>3 (Narrating a story based on a sequence of pictures)</td>
<td>-0.02</td>
</tr>
<tr>
<td>2 (Refusing a suggestion from a teacher)</td>
<td>-0.24</td>
</tr>
<tr>
<td>1 (Complaining about a catering service)</td>
<td>-0.45</td>
</tr>
<tr>
<td><strong>Mean</strong></td>
<td><strong>0.00</strong></td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td><strong>0.38</strong></td>
</tr>
</tbody>
</table>

The task difficulty measures obtained from the analysis of the intermediate examinees' scores ranged from -0.45 logits for Task 1 to 0.66 logits for Task 5, showing a 1.11 logit spread. That is, Task 5 was the most difficult for the intermediate examinees to obtain high ratings, while Task 1 was the easiest among the five tasks. Overall, the integrated tasks, especially with a lengthy listening text (Tasks 4 and 5), were more difficult than the independent tasks for this group of examinees. Task 2 was the only exception of this pattern, which was an integrated task with a short listening text. It appears that the integration of a short listening text was not cognitively more demanding than the independent tasks for the intermediate examinees. However, as the listening text became longer, and especially in the case of the text including academic content (Task 5), the integrated tasks were more difficult than the independent tasks.

The result of the chi-square test provided further information about differences in task difficulty. The chi-square statistic ($\chi^2_{(4)} = 21.7, p < 0.001$) indicated that the difference in
task difficulty measures (i.e., 1.11 logit spread) was statistically significant. In other words, the tasks were not at the same level of difficulty. The reported strata value of 2.77 also suggested that the five tasks were separated into approximately three distinct levels of difficulty. The reliability of 0.77 moderately supported the reported strata value.

Another four-facet partial credit model was analyzed to examine the difficulties of the five tasks for the advanced examinee group. The MFRM analysis of the advanced examinees’ rating scores revealed a different pattern of task difficulty from the intermediate examinees’ rating scores. Table 4 presents the difficulty measures of the five tasks in descending order, as estimated from the advanced group analysis.

<table>
<thead>
<tr>
<th>Task</th>
<th>Measure (in logits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 (Refusing a suggestion from a teacher)</td>
<td>0.15</td>
</tr>
<tr>
<td>3 (Narrating a story based on a sequence of pictures)</td>
<td>0.14</td>
</tr>
<tr>
<td>4 (Summarizing a radio commentary)</td>
<td>-0.02</td>
</tr>
<tr>
<td>1 (Complaining about a catering service)</td>
<td>-0.14</td>
</tr>
<tr>
<td>5 (Summarizing a lecture)</td>
<td>-0.14</td>
</tr>
<tr>
<td>Mean</td>
<td>0.00</td>
</tr>
<tr>
<td>SD</td>
<td>0.13</td>
</tr>
</tbody>
</table>

Strata: 0.33 Reliability: 0.00
Model, Fixed (all same) chi-square: 2.6 d.f.: 4
Significance (probability): 0.63

The task difficulty measures perceived by the advanced examinees ranged from -0.14 (Tasks 1 and 5) to 0.15 logits (Task 2), showing a 0.29 logit spread. For this group of examinees, Task 2 was harder to obtain high ratings while Tasks 1 and 5 were easier compared to the other three tasks. It appears that the task type (independent or integrated) did not necessarily affect the advanced examinees’ performance, because the rank order of task difficulty measures did not cluster around independent (Tasks 1 and 3) or integrated tasks (Tasks 2, 4, 5). Moreover, both the most difficult and easiest tasks were the integrated tasks. Quite different from the results of the intermediate group analysis, the integrated task with a short listening text (Task 2) was the most difficult while the integrated task with a lengthy academic listening text was the easiest (Task 5). However, the differences in difficulties of the five tasks did not appear to be large, as evidenced by the relatively small logit spread (0.29) and standard deviation of task difficulty measures (0.13). The chi-square statistic ($\chi^2(4) = 2.6$, $p = 0.63$) further showed
that the 0.29 logit spread was not statistically significant at a significant level of 0.05, which means that the five tasks did not differ in difficulty. The strata value of 0.33 supports the result of the chi-square test. That is, the five tasks were not separated into distinctive levels of difficulty since the strata value was less than 1. Moreover, the reliability of the strata value, which was close to 0, suggests that such a distinction is meaningless. Therefore, the five tasks were not distinguishable in terms of their difficulty.

To sum up, the two groups of examinees showed different patterns of task difficulty. For both groups of examinees, the rank order of task difficulty found in the analysis of examinees’ raw scores (Table 2) was almost identical to that obtained from the MFRM analyses (Tables 3 and 4). More specifically, the intermediate group perceived two integrated tasks with a lengthy listening text (Tasks 4 and 5) as the most difficult. Interestingly, these two tasks were relatively easier for the advanced group, although the differences in difficulty were neither large nor meaningful in the analysis of the advanced examinees’ scores. It appears from the statistical analysis that task types only influenced the intermediate examinees’ performance. To find further evidence of the effects of the short and lengthy listening texts on examinee performance, the actual examinee responses to the three integrated tasks were qualitatively analyzed and the findings are presented in the next section.

2. Qualitative Findings and Discussion

The 12 examinees’ (six intermediate and six advanced) transcribed responses to three integrated tasks (Tasks 2, 4 and 5) were analyzed to examine the degree of their understanding of the listening instructions/prompts and input text. The examinees’ responses were evaluated in terms of five different dimensions of speaking ability for analytic scoring (control of grammatical forms, phonological control, meaningfulness, control of conversational structure, and control of pragmatic meanings). However, the qualitative analysis of the current study focused only on the meaningfulness component (i.e., delivery of literal and intended meanings as required by the task), since the study aimed to investigate the effects of the listening text on the performance of the two groups of examinees.

First, the six intermediate examinees’ responses to the three integrated tasks (Tasks 2, 4, and 5) were analyzed. Overall, the results of the statistical analysis of task difficulty were supported by the qualitative analysis of these examinees’ responses. As revealed in the previous MFRM analysis, where the two tasks with a lengthy listening text (Tasks 4 and 5) were more difficult than the task with a short listening text (Task 2) for the
intermediate examinees, the majority of intermediate examinees showed better performance on Task 2 (refusing a suggestion from a teacher) than the other two integrated tasks. Three examinees out of six had no problem understanding the directions of the task and listening text. That is, they tried to refuse the teacher’s suggestion as the task intended and expressed their intention to take an advanced class, contrary to the teacher’s suggestion. The following excerpt, for example, provides evidence of one examinee’s appropriate understanding of the instructions and listening text.

I think it’s not a good idea because, because of, because I can’t accept your suggestion that I take intermediate class again because I think, I believe, that I learned a lot, a lot in intermediate class before and I don’t want to take another intermediate class anymore. So and besides I, I’m confidence that I can, I can go through in advanced class in English. So I want to take advanced class rather than intermediate class. What do you think about it? (Intermediate 3)

This intermediate examinee’s response was very direct and rather impolite, but she certainly conveyed her meaning successfully by saying that she could not accept the suggestion and wanted to take an advanced class. She also added her reasons (e.g., confidence) for her argument, as the task instructed.

In contrast to the three intermediate examinees who had no problem with Task 2, the other three intermediate examinees showed a lack of understanding of the instructions and listening text. One examinee correctly understood the instructions, but she could not fully understand the listening text. That is, she did try to refuse something in her response, but her response was not appropriate in terms of content (i.e., what to refuse). The following quote represents part of her response to Task 2.

I'm sorry because I don't want do this because the,,this course is hard for me. And differ.,difficult for me. So can I recommend another course? (Intermediate 4)

The other two intermediate examinees appeared to have difficulty understanding both the instructions and text. They accepted the teacher’s suggestion instead of refusing it (e.g., “I think that's fine for me.”). One of them even directly said in his response that he could not understand the teacher’s message properly (e.g., “I couldn’t understand fu.,fully your message. So when do you recommend the intermediate class?”). To sum up, the short listening text in Task 2 appeared to have affected the intermediate examinees’ performances to varying degrees.
Effects of the lengthy listening text seemed to be much greater on the intermediate examinees’ performance on Tasks 4 and 5. Most of the examinees understood the instructions and tried to summarize the radio commentary (Task 4) and lecture (Task 5) as intended. However, their summary was almost always incomplete or sometimes irrelevant to the listening text. Although the five intermediate examinees out of six could pinpoint the two main problems of electric cars (Task 4), all of them failed to elaborate on the two problems using the ideas provided in the listening text, as evidenced in the following quote.

The electric car is very comf..uncomfortable because electric car recharging electric cars recharging battery very difficult. Recharging battery wait three..about three hours. And it is impossible tra..go trip so far because it use it's like pick up the children or going to supermarket. (Intermediate 4)

This intermediate examinee seemed to understand the two problems of electric cars (limited span and recharging of the battery) and tried to elaborate on them by mentioning the three-hour recharging time and limited use of electric cars for only short trips. However, she could not successfully include more details from the listening text for her summary, such as lack of charging stations and use of the battery for the air conditioner or radio. While the effects of the listening text appeared to vary among the examinees, all six intermediate examinees showed a similar degree of understanding of the text and response pattern.

The analysis of the intermediate examinees’ responses to Task 5 showed much weaker understanding of the listening text than their understanding of Task 4. None of the examinees could even pinpoint the two main characteristics of the Barbizon School. Two out of the six intermediate examinees mentioned only one characteristic: landscapes as the theme of the paintings. In the following excerpt, an intermediate examinee talked about landscape painting as one of the main characteristics of the school. However, she could not describe the other characteristic (landscape as an independent genre) or an example painting by Rousseau, as instructed in the task.

In that class, the teacher talked about Barbizon French artist. So they like, they like to draw landscape and nature at the countryside. And that’s the new artistic world, so not reality world. (Intermediate 1)

The above excerpt was incomplete due to the missing characteristic and example.
Furthermore, it provides further evidence of the examinee’s lack of understanding of the lecture because she misunderstood part of the listening text (i.e., not reality world). Three other examinees only talked about the example painting, which was mentioned during the lecture and shown on screen. The last examinee talked about something totally irrelevant to the lecture. Therefore, it was evident that the lengthy academic text was too difficult to understand and summarize for the intermediate examinees.

In summary, the intermediate examinees performed better in terms of the meaningfulness component when the integrated listening text was shorter (Task 2), although the influence of the listening text appeared to vary among the examinees. When the length of the listening text increased, individual differences in understanding of the text weakened. Overall, the intermediate examinees revealed their lack of understanding of the lengthy academic lecture (Task 5), and this directly influenced their test performance.

The six advanced examinees’ responses to the three integrated tasks were also analyzed. All of the advanced examinees had no problem understanding the instructions/prompts of the three tasks. They were well aware of the settings and directions of the tasks. Moreover, it seems that they had no difficulty understanding the listening texts for all three tasks. More specifically, for Task 2 (refusing a suggestion from a teacher), there was no evidence in the advanced examinees’ responses that they misunderstood any of the teacher’s suggestion (i.e., take an intermediate class once again). They successfully refused the teacher’s suggestion, even with appropriate and elaborated reasons. The excerpt below illustrates an advanced examinee’s correct understanding of the listening text.

Yeah. Thank you very much for the calling yesterday, Professor Smith. Yeah, I think that it would be better for me to take intermediate course, but I really like to take advanced course because I have a strong background. In Japan, I major English and also I used English in my office for about years, for three or four years. And also in this semester I’m going to take only this English course. So I can focus on studying English. Could you think about my suggestion to take advanced course? (Advanced 2)

As illustrated by the above example, the advanced examinees successfully performed the task in response to the given listening text. Not only did they do well in Task 2 with the short listening input, but they also had no problem understanding the listening text in Task 4 (summarizing a radio commentary). Quite different from the intermediate examinees, five out of the six advanced examinees correctly pinpointed the two main problems with electric cars (limited span and recharging of the battery). Moreover, they
included two pieces of subsidiary information in their summaries, which were provided in the radio commentary for each of the two main problems. The following quote exemplifies this.

Yes, you did, Jim, but please let me tell you something. First. I actually heard a radio commentary about the new electric cars and this is what they said. They said that everyone has such a high expectation about their electric cars just like you. But the battery turn out to be a failure. The battery is very limited and it’s not possible to make any long trips. And even if you turn the air conditioner or the radio on, the battery will run out even faster. This is a big problem with the electric cars. Then maybe you think that you can recharge, recharge the battery. Well, let me tell you. The stations for that is not, it’s a few stations for this. And it takes almost three hours to recharge the battery. So I maybe think you should reconsider buying an electric car even though it’s environmental and friendly. Maybe it’s not the right decision for you. (Advanced 4)

The advanced examinee in the above example added all of the information of the listening text, even using the same words or phrases that the text included. She mentioned both “use of electric cars for only short trips” and “use of the battery for the air conditioner or radio” in relation to the first main problem, the limited span of the battery. She also included “lack of charging stations” and “three-hour recharging time” as part of the second problem, recharging of the battery. As shown in this examinee’s response, most of the advanced examinees correctly understood the integrated listening text and successfully summarized it. The one examinee whose response was not as complete as the other advanced examinees included only one supporting example from the text for each of the two main problems, instead of two for each. However, the examples included in his summary were content appropriate; therefore, there was no evidence of misunderstanding of the listening text.

While the advanced examinees mostly replicated the radio commentary in their summaries for Task 4, their performance on another summary task, Task 5 (summarizing a lecture), was less complete. Four of the six examinees included the two main characteristics of the Barbizon School (landscapes as the theme of the paintings and landscape as an independent genre) and the example shown on screen (“The Forest in Winter at Sunset” by Rousseau), as the task indicated. However, the other two advanced examinees mentioned only the first main characteristic and the example painting, excluding the second characteristic, as exemplified below.
We learned about a group of artist French artists, Barbizon. They painted landscapes. They tried to escape from their revolutionary Paris at that time and try to find, you know, comfort in the nature. They wanted to paint a true life pictures, be true, be true representer of countryside. Very famous, the best known painter of that time was Rousseau. He was a member of this, this group and everybody had their own characteristic. And in Rousseau’s picture the one we saw was really sad and dark. It was just you can feel pain in the picture, but it was still the nature, so that’s great. (Advanced 5)

In the excerpt above, the examinee summarized the first characteristic of the Barbizon School well, including the theme (nature), background (revolutionary Paris), and typical feature of the Barbizon School (true representation). She briefly mentioned Rousseau and his painting. Although the two examinees failed to include both characteristics, they summarized the first characteristics and the example painting with no difficulty as seen in the response above. Therefore, it does not appear that they were incapable of fully summarizing the listening text due to their lack of understanding of the text.

In summary, the advanced examinees do not appear to be influenced by the listening text integrated in the speaking task. There was no evidence in their responses that they misunderstood any of the three listening texts. In particular, their responses in the summary tasks (Tasks 4 and 5), which almost always included relevant information without missing points, provided further evidence of their correct understanding of the listening input. In the earlier MFRM analysis, the advanced examinees showed greater difficulty in Task 2 than in Tasks 4 and 5, although differences in task difficulty were not found to be statistically meaningful. The advanced examinees may have shown less difficulty in the two summary tasks because they did not need to come up with any new ideas. Since they had no problem understanding the listening input, they just needed to summarize what they had heard. In contrast, they were required to include their own ideas to support their refusal in Task 2. They also needed to think about the interpersonal relationship between a student and teacher while coming up with their answers. Therefore, Task 2 may have been more cognitively demanding for the advanced examinees.

V. CONCLUSION

Through the MFRM analysis of the examinees’ analytic rating scores on the five speaking tasks, the difficulties of the five tasks were first statistically measured in order
to examine whether each of the intermediate and advanced examinee groups showed differences in task difficulty between the independent and integrated tasks. The intermediate examinees showed meaningful (i.e., statistically significant) differences in difficulty among the five tasks. In general, they had more difficulty with the integrated tasks with a lengthy listening text (Tasks 4 and 5) than the other integrated task and the two independent tasks. The qualitative analysis of their actual performance on the three integrated tasks revealed that the difficulty they experienced with the two integrated tasks (Tasks 4 and 5) was closely related to their lack of understanding of the listening text. This was evidenced in their responses, which included misunderstanding of the text content and information which was irrelevant to the given text. In addition, certain points of the listening text were occasionally absent in their summaries. These differences in the degree of effects of listening texts support the findings of the previous study (H. Kim, 2009) where the effects of listening ability on the integrated tasks with a short listening text were not as great as those with a lengthy listening text.

The advanced examinees showed a very different pattern of task difficulty from the intermediate examinees. They did not necessarily have more difficulty with the integrated or independent tasks. Although they perceived Task 2 (refusing a suggestion from a teacher) as the most difficult and Tasks 1 (complaining about a catering service) and 5 (summarizing a lecture) as the easiest tasks, the estimated difficulty measures were not statistically significant, suggesting that the five tasks were not distinguishable for the advanced examinees in terms of difficulty. The qualitative analysis of their performance on the three integrated tasks confirmed the results from the statistical analysis. Since they had no difficulty understanding both the short and lengthy listening texts, the integrated tasks were not necessarily difficult for them. This result supports Watanabe’s (2001) argument that integrated tasks can be advantageous to examinees if they can process the given input. The possible reason for the relative difficulty found in Task 2 may be attributed to the task characteristics, which required the examinees to integrate their own ideas into the given text situation, even considering pragmatics.

Although not included in the analysis of the current study, the analysis of the rating scale facet supports the findings of the current study. The MFRM analysis of the five analytic rating scales revealed that the advanced examinees perceived “control of pragmatic meanings” as the most difficult to receive high ratings and “meaningfulness” as the easiest. This finding somewhat corresponds to the relative difficulties that the advanced examinees experienced. On the other hand, “meaningfulness” was the most difficult for the intermediate examinees. This also supports the results of the analysis of
the current study, in which the intermediate examinees could not appropriately summarize the tasks due to their lack of listening ability.

The analysis of the examinees’ analytic scores and their actual performance data imply that there is a need for careful consideration of integrated tasks, which are often used for academic and general purpose speaking tests to elicit language samples from diverse language use situations. Previous studies on speaking assessment have investigated whether task types (independent and integrated) have different effects on test performance (Brown et al., 2005; Lee, 2006). However, as Watanabe (2001) argued, the task type alone may not be sufficient to explain student performance. The present study supports this argument as well. Examinees at different levels of speaking ability perceived the relative difficulty of independent and integrated tasks differently. Moreover, among the integrated tasks, the two groups of examinees exhibited differences in task difficulty for different reasons, including length, topic, and context of the integrated listening text. Therefore, more detailed task characteristics should be considered to investigate task effects.

In addition, since the intermediate examinees especially displayed difficulty understanding of the listening text, influence of listening texts on their speaking performance cannot be ignored. If such influence is not considered in defining the construct of the test, it will be impossible to know whether the examinees’ test scores appropriately represent their speaking ability, as H. Kim (2009) argued. In particular, in a semi-direct speaking assessment context, where a listening or reading text is often provided to replace an interlocutor, ability inferred from the test (e.g., speaking ability only or speaking ability and listening ability) should be defined and precisely described in advance, taking both traits and task characteristics into account (Bachman, 2002; Chapelle, 1998).

Although the current study attempted to examine the examinees’ performance from both statistical and qualitative perspectives, the focus of the analysis was limited only to the integrated tasks and the meaningfulness component. However, as briefly discussed above, different groups of examinees displayed differences in difficulty of the rating scales from the MFRM analysis. Therefore, further comprehensive qualitative analyses of different dimensions of speaking ability in both independent and integrated tasks would provide a better understanding of task effects. Furthermore, the current study, which was follow-up research to H. J. Kim’s (2011) previous study, included only six examinees from the previous study. As a result, the sample size was insufficient to generalize the findings to the whole population of the program or other ESL programs. Systematic sampling of a large number of participants would help elicit more reliable and generalizable task effects.
on the performance of examinees in different ability groups.

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1. Speaking Placement Test

Task 1. Catering service
In this task, you need to complain about something. Imagine you have ordered food from Party Planner’s Inc. for your boss’s birthday party. But there was not enough food and it was delivered late. You spent a week planning the party, but it was ruined because of the food. You were extremely upset that it happened. Call the caterer to complain about it. You have 20 seconds to plan.

Prompt (Audio)
[phone ringing] (Answering Machine) Hi! You’ve reached Party Planner’s Inc. We’re sorry, but we’re not available to take your call right now. Please leave a detailed message after the beep, and we’ll get back to you as soon as possible. [Beep]
Test-Taker: (45 sec response time)

Task 2. Class schedule
In this task, you need to refuse a suggestion. Imagine you want to take an English course at a local university. You have to meet with a teacher to discuss the course you should take. Now, listen to a telephone message from the teacher.

Hi. This is Professor Smith, calling from Community English Program. I wanna apologize for canceling my office hours today at the last minute. I hope you didn’t wait too long. I’m definitely coming in tomorrow. If that’s OK, tomorrow, we can discuss your class schedule for next semester. For now, I want you to think about taking an intermediate level class. I know you said you already took intermediate classes in your last school, but I think it’s a good idea to take them again here. You’re probably thinking this is a waste of time and money, but I’m sure you will find them helpful. And you need to have a solid background. I’m afraid that if you take an advanced class, you could find out later that it’s too hard. Then, it’ll be too late to change your schedule. So, think about an intermediate, OK? We’ll talk more tomorrow when you come in. Bye now.

(Q) Politely tell your teacher that you don’t like this suggestion, and explain why. You have 30 seconds to plan.

Prompt (Audio)
Professor: Hi. Come on in. So, have you thought about my suggestion to start with the intermediate class? What do you think?
Test-taker: (45 sec response time)

Task 3. Fly in soup
In this task, you need to tell the story in the pictures. Look at the pictures (Pictures are shown on the screen). Imagine this happened yesterday while you were having dinner at the next table. Tell your friend what you saw. You have 60 seconds to plan your response.
Prompt (Video)

Your friend: So, what happened last night at the restaurant?
Test-taker: (60 sec response time)

Task 4. Electric cars
In this task, you will be asked to summarize a radio commentary for a friend. Imagine your friend, Jim, is thinking about buying an electric car. Now, listen to the radio commentary.

(Host of the radio commentary) Today, we’re talking about electric cars. As you’re well aware, the conventional cars we drive everyday use a lot of gasoline. You know, how the price of gasoline is going up and more importantly, there’s the issue of global warming. These cars release harmful pollutants, like carbon monoxide. So, in reaction to this, engineers have been working on cars that run on electric batteries, so let’s hear about the current state of the technology. We have a pre-recorded commentary by Ben Smith from General Autos.

Well, despite high expectations, the first generation of electric cars turned out to be a complete failure. Why? The first problem is the battery. I mean, current battery technology is still very limited. So electric cars can only travel a short distance before its battery needs recharging. What this means is you can’t make long trips without worrying about the battery running out. They’re only good for short trips like going to the supermarket or picking up the kids from school. And when you turn the air conditioner or the radio on, the battery is used up even quicker.

Then, you might say, we can just recharge the battery when it’s used up. Well, there’s a serious problem with recharging, too. To recharge a battery, we need an electric outlet, right? But there aren’t many charging stations, which means the driver might get stuck without being able to find a charging station nearby. Well, it gets even more frustrating. Even if you can find a station, it takes up to 3 hours to fully recharge a battery. It’s way too long. Well, with these many limitations, does it make sense that anyone would want to buy an electric car, even if it is environmentally friendly?
(Q) Summarize what you heard on the radio for Jim. Be sure to include two main problems with electric cars. You have 30 seconds to plan.

Prompt (Video)

Jim: Did I tell you I'm thinking about buying an electric car?
Test-taker: (60 sec response time)

Task 5. Barbizon school
In this task, you will be asked to summarize a lecture for a classmate. Imagine your classmate, Jennifer, missed today's lecture about the Barbizon school. Now, listen to the lecture.

Today, we'll talk about a group of artists, called the Barbizon School. The Barbizon School is a group of French artists, who lived in the French town, Barbizon, and who developed the genre of landscape painting. So, what are their characteristics?

The Barbizon painters tried to find comfort in nature. I mean, they moved away from all the commotion and disruption happening then, revolutionary Paris, and sought solace in nature. And nature was the main theme of their paintings. They painted landscapes and scenes of rural life as true to life as possible. And they rejected the idea of manipulating or beautifying nature. Instead, they tried to achieve a true representation of the countryside. OK?

Second, in addition to the efforts to paint nature as realistically as possible, they also tried to establish landscape as an independent, legitimate genre in France. Traditionally, landscape painting wasn't appreciated as a separate genre, but only considered as a background. But Barbizon artists reacted against this convention of classical landscape, and painted landscape for its own sake. With their huge success and recognition, the painters of the Barbizon school established landscape and themes of country life as vital subjects for French artists.

Now, let's look at an example, a painting by Rousseau. This one is called "The Forest in Winter at Sunset". [Show the painting on screen]. It shows the ancient forest near the village of Barbizon. Rousseau is the best known member of the group. Each Barbizon painter had his own style and specific interests, and Rousseau's vision was melancholic and sad. Can you feel the depressing mood of the painting? At the top, a tangle of tree limbs, and birds flying into the cloudy, dark, sunset sky. After the sun sets, the forest will be freezing cold. Rousseau worked on this painting off-and-on for twenty years. He considered this his most important painting and refused to sell it during his lifetime.

(Q) Summarize the lecture for Jennifer. Be sure to include two main characteristics of the school and the example shown. You have 30 seconds to plan.

Prompt (Video)

Jennifer: So, what was the lecture about? What did I miss?
Test-taker: (60 sec response time)
2. Analytic Scoring Rubric

<table>
<thead>
<tr>
<th>Control of grammatical form</th>
<th>Phonological control</th>
<th>Meaningfulness</th>
<th>Control of conversational structure</th>
<th>Control of pragmatic meanings (Only for Tasks 1 &amp; 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• To what extent does an examinee use correct, diverse (often required by the task), and appropriate (when required by the task) grammatical forms?</td>
<td>• To what extent can an examinee convey literal and intended meanings of an utterance as required by the task?</td>
<td>• To what extent does a conversational structure of the response follow norms, preferences, and expectations of the cultural context?</td>
<td>• Sociolinguistic appropriateness i.e., What is appropriate to say to this person?</td>
<td></td>
</tr>
<tr>
<td>• Lexical, morphological, &amp; cohesive forms e.g., morphological irregularities, formation, form, co-occurrence, articulation, propositional, syntactic structure, simple, compound and complex, sentences, modal, voice, modality, logical connectives, cohesive devices</td>
<td>• Semantic features i.e., word &amp; constituent relationships</td>
<td>• Openings/closures (mainly for Tasks 1 &amp; 2)</td>
<td>• Sociocultural appropriateness i.e., What is appropriate to say to this person in this context?</td>
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<tr>
<td>• Prosodic features i.e., stress, rhythm, intonation, volume, tempo</td>
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<td>• Psychological appropriateness i.e., What effective stance or tone (emotional, deference, sincerity, among others) is appropriate to use?</td>
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| Application levels: tertiary education |

Key words: semi-direct speaking placement test, computer-delivered speaking assessment, task type, independent tasks, integrated tasks

Application levels: tertiary education

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This study explored the potential educational effectiveness of a new convergence medium, Internet Protocol Television (IPTV). For the study, teachers ($n=76$) used IPTV and the content developed by EBSe to test the educational effectiveness of the system for 1 to 7 months with their students ($n=2,262$). Teacher and student surveys were conducted to obtain the results. Descriptive statistics were employed to measure primary data, such as the use patterns of the teachers, user satisfaction, and preferred content clips. Furthermore, an ANOVA and t-test were also analyzed to determine the relationships between factors, particularly to discover the correlations between the IPTV companies and the perceived effectiveness of using IPTV in the classroom. The study found that the teachers and students were satisfied with the use of IPTV in the English classroom. Satisfaction levels varied depending on the company. Despite general satisfaction, the study also revealed the presence of several problems yet to be resolved. The relevance of the study is primarily that it provides insight into the use of IPTV in the educational setting. In addition, this study provides information useful to the development of future directions of educational IPTV content.

1. INTRODUCTION

In recent years, a number of new plans, policies, models, methods, and technologies have been experimented with to support student learning in Korea. Among the subjects, English has always been a buzzword to educators, policy makers, and many others involved in this field. One of the reasons is that the demand for English language skills
has increased dramatically during last two decades. In addition, the traditional English classroom in the public school cannot meet students’ and parents’ expectations, and in turn, many of them are relying on private English lessons. The high cost of learning English, together with the somewhat overheated fervor for learning English, has engendered gaps between haves and have-nots. A number of trials have been conducted by the government, educators, and schools to help students effectively learn English without any cost.

Educational use of Internet Protocol Television (IPTV) - represents one of these efforts. In 2009, the Ministry of Education, Science, and Technology (MEST) envisioned IPTV as a potentially promising educational tool and began to supply IPTV and its networks to schools. Previous research, even though there is not much yet, expected that interactivity, high quality multimedia, and individualized system of IPTV can support English learning. Although the hardware and systems were supplied to the selected schools for testing, the initiative was, unfortunately, undertaken too quickly, and the schools and teachers were not ready to effectively use the new tool in the classroom. Above all, there was not enough educational content tailored to classroom uses. The majority of the content available on IPTV was transferred from already existent video content. Because high-quality content is essential to the success of any new technology in the classroom, EBSe developed content for elementary school English instruction based on the current national curriculum.

The EBSe IPTV content was provided to 12 elementary schools across the country through three different IPTV companies that offered different menus, designs, functions, and other technical support for the IPTV content. Therefore, the first purpose of the present study was to investigate the effectiveness of IPTV, the hardware, and the network systems. This included examining the menus, designs, interactivity, and technical limitations across the companies. The second purpose was to discover the use patterns of the teachers, including the frequency and duration of use of IPTV in the classroom. The third purpose of the study was to explore the effectiveness of the IPTV content as perceived by the teachers and students. Finally, the study looked into whether technical aspects influenced the perceived effectiveness of the contents.
II. LITERATURE REVIEW

1. IPTV: Definitions and Features

IPTV, a newly emerging medium, is a convergence of broadcasting media and digital media. As it is still in its infancy, researchers and practitioners have just begun to define the new media. The International e-Business Association (2009) defines it as a new medium that provides streaming broadcasting content, including high-quality real-time broadcasts, videos on demand, and TV content, on TV through an IPTV-based network. Similarly, the International Telecommunication Association (2006) describes IPTV as an IP-based multimedia service containing TV, video, audio, text, graphic, and data, that guarantees a high level of quality, security, interface, and credibility. According to Shin (2008), IPTV is an Internet-based service that can preserve the user experience of TV and, at the same time, utilize the diverse services of digital media. Leem, Kim, and Han (2010) emphasize the convergent characteristic of IPTV: a convergence of diverse information services, of broadcasting networks and communication networks, and of TV and ICT.

As a convergent medium, IPTV has idiosyncratic features. According to Leem, Kim, and Han (2010), the characteristics of digital media are generally defined as temporality, unidirectionality, immediacy, and communicability, whereas the characteristics of TV broadcasting are storability, mobility, changeability, separability, and replicability. Thus, IPTV, a convergent medium of digital and TV broadcasting media, has the characteristics of both media, which in turn can overcome the limitations of either. In early 2000, Kennard (2000) predicted IPTV as a) an Internet-based, high quality broadcasting service; b) an interactive personal TV available with two-way interactions and customized services; and c) an intelligent, programmable TV, supporting individual users’ preferences, needs, styles, and demands, searching the program that the users want, analyzing their preferences and archiving them in a database.

The most prominent feature of IPTV is a large archive of high-resolution video content. The high-quality video capabilities of IPTV can provide more realistic and life-like images. Sung, Leem, and Kim (2010) point out that the bidirectional feature of IPTV leads to multi-channel and multi-menu features. Based on these features, IPTV enhances interactivity, customized and personalized service, intelligent searches, and user participation. In short, IPTV promises a more convenient, user-friendly, and high quality service to its users.
2. IPTV in Education

Because of its short history, there is a paucity of research on IPTV used in education. Previous studies view IPTV as a promising tool in education. Compared to traditional TV broadcasting, which is a unidirectional, producer-centered, and fixed service, IPTV offers an innovative service to its users. According to Hong (2009), the most innovative change in IPTV is that users can change and move content depending on their needs, which will ultimately help teachers prepare teaching materials. In addition, realistic visuals, intelligent searching, personalized service, and mobility of IPTV content all have great potential to improve learner motivation and flow during learning (Kim, 2009; Lee, 2009). The bidirectional feature of IPTV can promote interactions among the teachers and students. Additionally, as the content in IPTV can be easily updated and modified, IPTV can potentially always offer updated content to learners. As such, IPTV can offer many educational benefits to its users at home and in the classroom.

However, the educational benefits of IPTV listed above still remain theoretical and have not yet been tested or proven in a real classroom setting. The biggest problem is that there is not enough IPTV content tailored to classroom situations. Because the hardware was implemented in educational settings before the content was developed, most of the current content of IPTV used in classrooms was not originally developed for educational purposes: rather, it is adapted from a variety of TV and digital sources, such as documentary programs, news, and TV lecture programs. Furthermore, as this content is mostly TV-based video clips, it cannot offer users the idiosyncratic benefits of IPTV, such as changeability and interactivity, or educational benefits, such as contextualization of content and customized materials. In short, most of the current content is not appropriate for the classroom environment or the national curriculum in Korea. This fact, according to Leem, Kim, and Han (2010), may impede further implementation of IPTV in the educational setting.

Another study by Leem, Kim, Han, and Koh (2009) revealed that schoolteachers have shown great interest and anticipation in using IPTV in their classrooms in the near future. However, the teachers participating in the study emphasized the importance and necessity of high-quality educational content that could accommodate the classroom environment, students and teachers’ needs, and the national curriculum. They acknowledged the usefulness and effectiveness of IPTV, but they did not believe that the current content could fulfill their needs or greatly benefit students. In a study of the educational effectiveness of IPTV, Leem, Han, and Kim (2010) discovered that teachers in other regions showed more interest in using IPTV in their classrooms than those in Seoul and
Kyunggi. In other words, there is a greater need for qualified, motivational, educational content in regions in which students depend more on public education.

To effectively implement IPTV in the educational setting, Leem, Kim, and Han (2010) suggest strategies with three aspects: a) in the utilizing aspect, content and program developers should provide diverse content in diverse subject areas and develop sound educational models for using IPTV in the classroom; b) in the technical aspect, hardware companies should stabilize the USB-type set-top box, solve transmission and loading problems, and further develop techniques that can provide intelligent, realistic, and mobile content; and c) in the content aspect, developers should offer high-quality educational content that merges users’ everyday life experiences and educational experiences. Among many strategies, Leem, Kim, and Han (2010) particularly emphasize the importance of qualified, diverse, educational content. For effective use of IPTV in the classroom, they point out that it is necessary to develop content that is appropriate for the classroom situation, clip the content into small pieces, and categorize it so that teachers can easily select and use what they need: make navigation tools and access to content more user-friendly; and offer content guidebooks. In addition, they also suggest that IPTV developers should consider that, in the near future, users will be able to create their own content and share it with other users, rather than merely using the preexisting content.

III. METHODOLOGY

1. Content Description

The MEST installed IPTV and implemented content in 12 elementary schools, one in each province in the country, in 2010. Because the most serious impediment in using IPTV in the classroom was that there was not enough educational content provided for elementary and secondary school classrooms, as a part of the plan, EBSe developed content for the 3rd- and 4th-grade English classes in 2009, funded by the MEST. The selected schools used the content in the regular English classrooms for 1 to 7 months in the classrooms to test the effectiveness the IPTV content as well as the usefulness of IPTV.

The content areas consisted of three parts: traditional TV broadcasting content, IPTV-based content, and worksheets. The traditional TV broadcasting content refers to a TV program that runs every morning. For IPTV use, the 20-minute-long traditional TV shows were divided into small pieces and archived as short clips for easy and customized
handling. These clips are video-on-demand (VOD), from 40-seconds to 4 1/2 minutes long. Most of the IPTV content was developed specifically for IPTV and therefore originally consisted of short clips that are bidirectional and interactive. Additionally, worksheets were provided to boost the effective use of the content.

The entire curriculum was based on the 3rd- and 4th-grade English national curriculum and textbooks; thus, the functions and vocabulary of each lesson in the IPTV content correspond to those of the textbooks. Similar to that of the English textbooks, the IPTV content offers 16 lessons in each grade, 4 units in each lesson. The sequence of the content is based on the classroom flow: introduction, development, and consolidation. Each unit has from 12 to 15 clips (approximately 3 clips for introduction, 5-7 for development, 1-2 for consolidation). The VOD clips, which were originally developed for traditional TV, make up approximately 70% of the entire content. Like the CD-Rom of public elementary English textbooks, the content covers all four language skills and other areas, such as culture, storytelling, chant and song, vocabulary, projects, and phonics.

2. Companies

The IPTV content was delivered to users in schools through the networks of three companies - K, L, and S. USB set-top boxes were required to access the content regardless of the company. Although the content remained the same, each company offered different navigation bars, menus, functions, and designs. To use the content of Company K, users first had to install the software required and then visit the company’s website to view the content. When the user clicked on the content, the content was viewed in the IPTV viewer. For Companies L and S, unlike Company K, once the user connected the USB to the TV, the content automatically appeared without any installation or visiting a website. Both Company L and Company S provided My Page and My Folder functions, in which teachers could select and save the clips for each class. They also allowed teachers to recommend clips to other teachers through IPTV networks.

3. Participants

1) Teachers

In 12 elementary schools all over the country, 76 teachers participated in testing the effectiveness of IPTV in the classrooms over 1 to 7 months. Females made up the strong majority in this study (14 males and 62 females). There were equal numbers of teachers in both grades, with 38 teachers for each grade. The data on the teaching experience and
ICT proficiency of each teacher were also gathered, as they might influence the use patterns of IPTV under the study. The teaching experience of the teachers ranged from under 3 years to over 21 years. Interestingly, the survey revealed that all of the teachers involved in the study were confident in their ICT proficiencies. In terms of IPTV companies, Company K and Company L occupied the majority, while Company S served only a few schools. The demography of teacher–users is summarized in Table 1.

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Companies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SK</td>
<td>8</td>
<td>10.5</td>
</tr>
<tr>
<td>KT</td>
<td>33</td>
<td>43.4</td>
</tr>
<tr>
<td>LG</td>
<td>35</td>
<td>46.1</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>male</td>
<td>14</td>
<td>18.4</td>
</tr>
<tr>
<td>female</td>
<td>62</td>
<td>81.6</td>
</tr>
<tr>
<td><strong>Grade</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3rd</td>
<td>38</td>
<td>50.0</td>
</tr>
<tr>
<td>4th</td>
<td>38</td>
<td>50.0</td>
</tr>
<tr>
<td><strong>Teaching Experience</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>under 3 yrs</td>
<td>13</td>
<td>17.1</td>
</tr>
<tr>
<td>4–6 yrs</td>
<td>10</td>
<td>13.2</td>
</tr>
<tr>
<td>7–10 yrs</td>
<td>18</td>
<td>23.7</td>
</tr>
<tr>
<td>11–15 yrs</td>
<td>14</td>
<td>18.4</td>
</tr>
<tr>
<td>16–20 yrs</td>
<td>8</td>
<td>10.5</td>
</tr>
<tr>
<td>over 21 yrs</td>
<td>13</td>
<td>17.1</td>
</tr>
<tr>
<td><strong>ICT Proficiency</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>excellent</td>
<td>13</td>
<td>17.1</td>
</tr>
<tr>
<td>very good</td>
<td>44</td>
<td>57.9</td>
</tr>
<tr>
<td>moderate</td>
<td>19</td>
<td>25.0</td>
</tr>
<tr>
<td>poor</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>very poor</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>76</td>
<td>100</td>
</tr>
</tbody>
</table>

2) Students

During the test period, 2,262 students in total were exposed to the content under study, including 1,359 males and 1,235 females and 1,285 3rd-graders and 1,377 4th-graders. The following table shows the demographic data of the students.
4. Data Collection and Analysis

Two types of surveys were created for the study. The items in the teacher survey were categorized into four parts: bio/demographic data, preparation and use patterns of IPTV, user satisfaction with the hardware, and user satisfaction with the content. The questions were measured on a 5-point Likert-type scale (1=strongly agreed, 5=strongly disagreed) with the exception of 2 items inquiring about the most frequently used clips and 5 open-ended questions eliciting further information about the educational benefits and limitations of using IPTV in the English classroom. The student survey included three parts: biodata, inclinations toward learning English, and user satisfaction with the IPTV content.

Quantitative analysis was adopted as the primary data analysis method, with content analysis as the secondary method for the open-ended questions. Frequencies were calculated to map the distributions of the basic information about the participants and the
results of using IPTV. In addition, an ANOVA and an independent \( t \)-test were also conducted to investigate a variety of correlations among factors, such as the correlation between companies and user satisfaction with the hardware or between gender and user satisfaction. To verify the reliability of the survey, Cronbach’s \( \alpha \) was conducted in each part of both surveys. The results indicated that both surveys were reliable (Cronbach’s \( \alpha \) of the teacher survey=0.98, Cronbach’s \( \alpha \) of the student’s survey=0.94).

IV. RESULTS

1. Analysis of Teacher survey

1) Preparation and use patterns

Approximately half of the teachers used the IPTV content for 5-6 months, and 35.5% of them used it for 3-4 months. Those who used the content once a week accounted for 69.9%, followed by those who used it twice a week at 27.6%. More than half of the teachers answered that they spent less than 20 minutes of preparation time for each class with the IPTV content; it is notable that 26 teachers (34.2%) responded that they spent

<table>
<thead>
<tr>
<th>Table 3</th>
<th>Use Patterns of Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
<td>Response</td>
</tr>
<tr>
<td>Frequency of Use</td>
<td>invalid</td>
</tr>
<tr>
<td></td>
<td>everyday</td>
</tr>
<tr>
<td></td>
<td>once a week</td>
</tr>
<tr>
<td></td>
<td>twice a week</td>
</tr>
<tr>
<td>Preparation Time</td>
<td>under 20 min.</td>
</tr>
<tr>
<td></td>
<td>30 min - 1 hr</td>
</tr>
<tr>
<td></td>
<td>over 1 hr</td>
</tr>
<tr>
<td>Reduction Preparation Time</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Duration of Use</td>
<td>invalid</td>
</tr>
<tr>
<td></td>
<td>under 5 min</td>
</tr>
<tr>
<td></td>
<td>5-10 min</td>
</tr>
<tr>
<td></td>
<td>10-15 min</td>
</tr>
<tr>
<td></td>
<td>15-20 min</td>
</tr>
<tr>
<td></td>
<td>20-30 min</td>
</tr>
<tr>
<td></td>
<td>over 30 min</td>
</tr>
<tr>
<td>Total</td>
<td>76</td>
</tr>
</tbody>
</table>
less than 20 minutes, whereas only 2.6% reported spending more than one hour. Another question related to preparation was asked regarding whether using IPTV in their classrooms could reduce their workload for the preparation of lessons. Against expectations, the teachers answered that using IPTV did not reduce preparation time. Overall, the means of teachers’ responses in this subcategory remained around 3, suggesting that IPTV did not help them much with class preparation or efficient class flows. Table 3 sums up the result.

For the duration for each use, 5-10 minutes per use (39.5%) was the most frequent answer, followed by under 5 minutes (34.2%). Considering the lengths of the clips, this result indicated that the teachers used 2–3 short clips or 1 long clip in each class.

2) User satisfaction with the technical aspects

User satisfaction with the technical aspects measured the teachers’ satisfaction with menus, control, ease of use, video quality, design, interactivity, and help/guide functions. Although the teachers responded slightly positively to the menus, control, video qualities, and design, they were slightly negative toward the other items (Table 4). Among the three companies, for every item, Company L turned out to be the most satisfying, followed by Company S and then Company K. This category was further analyzed by ANOVA to investigate whether these differences were statistically significant. Among 7 items, the mean differences of 4 items: menu, control, ease of use, and design, were statistically meaningful, as described in Table 5.

<table>
<thead>
<tr>
<th>Item</th>
<th>Means</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Menu</td>
<td>2.71</td>
<td>.877</td>
</tr>
<tr>
<td>Control</td>
<td>2.68</td>
<td>.898</td>
</tr>
<tr>
<td>Ease of use</td>
<td>3.24</td>
<td>.950</td>
</tr>
<tr>
<td>Video quality</td>
<td>2.51</td>
<td>.959</td>
</tr>
<tr>
<td>Design</td>
<td>2.70</td>
<td>.849</td>
</tr>
<tr>
<td>Interactivity</td>
<td>3.37</td>
<td>.746</td>
</tr>
<tr>
<td>Guide/help</td>
<td>3.04</td>
<td>.840</td>
</tr>
</tbody>
</table>
The teachers’ answers to the open-ended questions explained the reasons underlying the results for user satisfaction with the technical aspects and differences among companies. First, the most serious concern about the technical aspects of IPTV was that the system was not stable, sometimes causing unexpected blackouts of the screen or requiring a long loading time. Second, the teachers pointed out that the menus were not intuitive, resulting in repetitive user errors. Additionally because some of the VOD content was not divided into short clips on Company C’s menu, the teachers were unable to benefit from the IPTV content. It was also pointed out as a technical limitation that the search function for a specific content element was not supported on IPTV. In all three companies, the help/guide function was not provided frequently enough to help the teacher solve technical problems or find the desired content. Interactivity, known as the most prominent benefit of IPTV in the prior studies (Kim, 2009; Lee, 2009; Leem, Kim, & Han. 2010), was far less satisfying than expected \((M=3.37, \text{SD}=0.746)\). Other variables, such as gender, region, teaching experience, and ICT proficiency, were also considered to examine whether any of these variables might affect the results; however, none of them significantly influenced the results.

### 3) Teachers’ satisfaction with content

The next category investigated teachers’ perceptions of achievement of teaching and learning goals through the use of the IPTV content. In response to the questions asking
whether the teachers perceived that using IPTV enhanced their teaching effectiveness and helped them manage the class better, the replies were moderately negative. However, there were slightly positive responses to the questions inquiring whether there were any perceived differences in terms of student motivation, flow, interest, and participation; and responses regarding interactions between students and the teacher and among students were neutral, as shown in Table 6. To examine whether there were any meaningful differences in teachers' satisfaction among the companies, descriptive statistics were used, followed by an ANOVA. The results of descriptive statistics indicated that the teachers subscribing to Company L were the most satisfied with the service for most items; however, the subsequent ANOVA did not confirm that these differences were statistically meaningful. Interestingly, in the open-ended question, the teachers wrote that they were satisfied more when they used the contents on the website, not with IPTV.

<table>
<thead>
<tr>
<th>Item</th>
<th>Means</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation</td>
<td>2.78</td>
<td>.776</td>
</tr>
<tr>
<td>Flow</td>
<td>2.88</td>
<td>.692</td>
</tr>
<tr>
<td>Interest</td>
<td>2.75</td>
<td>.768</td>
</tr>
<tr>
<td>Participation</td>
<td>2.83</td>
<td>.839</td>
</tr>
<tr>
<td>Student–student interaction</td>
<td>3.08</td>
<td>.762</td>
</tr>
<tr>
<td>Student–teacher interaction</td>
<td>3.11</td>
<td>.793</td>
</tr>
<tr>
<td>Improvement of s’ English proficiency</td>
<td>2.78</td>
<td>.873</td>
</tr>
<tr>
<td>Reducement of private lessons</td>
<td>3.17</td>
<td>.999</td>
</tr>
</tbody>
</table>

The study took a close look at the teachers' satisfaction with content with regard to language skills and areas, i.e., measuring the usefulness of individual clips in the classroom: listening, speaking, reading, writing, phonics, song and chant, culture, classroom English, and games. As shown in Table 7, the mean averages of each item ranged from 2.42 to 2.97, indicating that the teachers were somewhat satisfied with the content. The song and chant clips were given the highest points (M=2.42, SD=0.898), followed by the listening clips (M=2.58, SD=0.771), while the writing clips and reading clips received low marks (M=2.97, SD=0.765, and M=2.88, SD=0.816, respectively). The results of the ANOVA and t-test did not show any statistically meaningful differences in this subcategory with regard to companies, regions, gender, grade, teaching experiences, or ICT proficiencies.
The study also asked about the lengths, number, and levels of the clips. The majority of the teachers answered that the lengths of individual clips were, overall, appropriate (63.2%). They also replied that the total amount and the levels of the clips were appropriate (47.4% and 97.2%, respectively). Small numbers of teachers thought the amount was marginally too large or too small (17.2% and 17.1%, respectively).

The study discovered that the teachers used the IPTV content throughout the class but more frequently during the introduction (86.8%) than during development (76%) or consolidation (68.4%) stages. In the open-ended questions, the teachers remarked that the IPTV content was effective for drawing the attention of students, enhancing their motivation, and introducing the functions of the lesson. They used the clips for their own purposes regardless of the originally organized categories on the menu. For instance, they used song and chant clips mostly during the introduction, clips that were originally categorized for use in the development stage.

Lastly, the teachers were asked about expected learning outcomes of using IPTV in the classrooms. They replied that using IPTV would help students’ English abilities but that this would not lead to reducing private English lessons. They wrote that the IPTV content under study was useful and effective for classroom use. However, because they did not expect that students would use it at home, the content would not benefit student learning beyond the classroom.

2. Analysis of the Student Survey

1) Background information

Prior to the questions on the effectiveness of using IPTV, the study collected

---

<table>
<thead>
<tr>
<th>Table 7: Teachers’ Satisfaction with Clips</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Item</strong></td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Listening</td>
</tr>
<tr>
<td>Speaking</td>
</tr>
<tr>
<td>Reading</td>
</tr>
<tr>
<td>Writing</td>
</tr>
<tr>
<td>Phonics</td>
</tr>
<tr>
<td>Song &amp; Chant</td>
</tr>
<tr>
<td>Culture</td>
</tr>
<tr>
<td>Classroom English</td>
</tr>
<tr>
<td>Game</td>
</tr>
</tbody>
</table>
information about the students’ backgrounds. First, the survey asked about students’ interest in the subject. More than half of the students, including those who marked either “agree (point 2)” or “strongly agree (point 1),” reported that they liked English. Second, the students were asked about their confidence toward the subject. Approximately half of the students replied that they were confident about their English proficiencies, while 17.2% were not confident. The last item in this category pertained to the students’ private lessons. The means of the female students were higher than those of male students for both items, and the t-tests confirmed the differences were statistically significant at the level of \( p<0.00 \) (\( t=8.639 \), level of significance=0.00 in interest and \( t=4.151 \), level of significance=0.00 in confidence). Table 8 summarizes the result.

<table>
<thead>
<tr>
<th>Category</th>
<th>Item</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interest in English</strong></td>
<td>invalid</td>
<td>2</td>
<td>0.1</td>
</tr>
<tr>
<td></td>
<td>like it very much</td>
<td>797</td>
<td>30.4</td>
</tr>
<tr>
<td></td>
<td>like it</td>
<td>723</td>
<td>27.6</td>
</tr>
<tr>
<td></td>
<td>neutral</td>
<td>784</td>
<td>29.9</td>
</tr>
<tr>
<td></td>
<td>don’t like it</td>
<td>193</td>
<td>7.4</td>
</tr>
<tr>
<td></td>
<td>never like it</td>
<td>123</td>
<td>4.7</td>
</tr>
<tr>
<td><strong>Confidence in English</strong></td>
<td>invalid</td>
<td>7</td>
<td>0.3</td>
</tr>
<tr>
<td></td>
<td>very confident</td>
<td>636</td>
<td>24.2</td>
</tr>
<tr>
<td></td>
<td>confident</td>
<td>660</td>
<td>25.2</td>
</tr>
<tr>
<td></td>
<td>neutral</td>
<td>807</td>
<td>33.1</td>
</tr>
<tr>
<td></td>
<td>not confident</td>
<td>313</td>
<td>11.9</td>
</tr>
<tr>
<td></td>
<td>never confident</td>
<td>139</td>
<td>5.3</td>
</tr>
<tr>
<td><strong>Frequency of Private English Lessons</strong></td>
<td>Invalid</td>
<td>151</td>
<td>5.8</td>
</tr>
<tr>
<td></td>
<td>everyday</td>
<td>1,061</td>
<td>40.4</td>
</tr>
<tr>
<td></td>
<td>3 times a week</td>
<td>354</td>
<td>13.5</td>
</tr>
<tr>
<td></td>
<td>2 times a week</td>
<td>208</td>
<td>7.9</td>
</tr>
<tr>
<td></td>
<td>once a week</td>
<td>268</td>
<td>10.2</td>
</tr>
<tr>
<td></td>
<td>never</td>
<td>580</td>
<td>22.1</td>
</tr>
</tbody>
</table>

Table 8: Background Information of Students

Those who replied that they took private English lessons every day gave the highest scores (40.4%), and those who did not have private lessons at all also gave high scores (22.1%). This contrast implies a large gap between haves and have-nots in English education. Those who answered that they had lessons three times a week accounted for
13.5%, with 7.9% having lessons twice a week and 10.2% once a week. The results in this section revealed that a considerable number of the students took private English lessons, and approximately half of the students had confidence and interest in English. These results were employed for the subsequent analyses to determine the correlations between the students’ background information and the effectiveness of using IPTV in the English classroom.

2) Students’ satisfaction with content

The students’ satisfaction with the IPTV content was explored in three subcategories. First, students’ perceived levels of interest, understanding, and participation during the IPTV-supported English classes were calculated. Approximately half of the students (48.0%) strongly agreed or agreed that they became more interested in learning English as a result of using the IPTV contents. Regarding understanding, the number of students who perceived that they understood the content better with the IPTV content (43.1%) greatly exceeded the number of the students who answered this term negatively (21.0%). Regarding class participation, those who perceived positive effects (40.9%) outnumbered those who reported negative effects (21.6%). Although positive answers were more numerous in all three items, it should be noted that those who answered that there had been no change since using IPTV also gave considerably high scores to those items. The result is summarized in Table 9.

![Table 9] Students’ Perceived Satisfaction

<table>
<thead>
<tr>
<th>Item</th>
<th>Interest</th>
<th>Understanding</th>
<th>Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
<td>Number</td>
</tr>
<tr>
<td>invalid</td>
<td>27</td>
<td>1.0</td>
<td>17</td>
</tr>
<tr>
<td>strongly agreed</td>
<td>583</td>
<td>22.2</td>
<td>490</td>
</tr>
<tr>
<td>agreed</td>
<td>678</td>
<td>25.8</td>
<td>641</td>
</tr>
<tr>
<td>neutral</td>
<td>853</td>
<td>32.5</td>
<td>923</td>
</tr>
<tr>
<td>disagreed</td>
<td>246</td>
<td>9.4</td>
<td>327</td>
</tr>
<tr>
<td>strongly disagreed</td>
<td>235</td>
<td>9.0</td>
<td>224</td>
</tr>
<tr>
<td>Total</td>
<td>2,622</td>
<td>100.0</td>
<td>2,622</td>
</tr>
</tbody>
</table>

Second, it was examined which groups of clips benefited student learning. Overall, the students recognized that the IPTV content helped their learning, and the average of positive responses were 53.8%, with 53.5% in listening ($M=2.41$, $SD=1.15$), 48.2% in speaking ($M=2.53$, $SD=1.17$), 45.5% in reading ($M=2.59$, $SD=1.18$), 37.3% in writing
(M=2.79, SD=1.23), 58.1% in song and chant (M=2.32, SD=1.27), and 74.8% in games (M=2.11, SD=1.30). It is notable that games earned particularly positive responses, contrary to the teachers’ responses.

Lastly, it was investigated whether the students wanted to use IPTV in other subjects and whether they had intentions to use the IPTV English content at home. To the first item, 55.7% of the students responded positively, and to the second item, 60.3% responded positively.

In the next step, an ANOVA and $t$-test were computed to identify the variables that influenced the students’ levels of satisfaction. The relationships between the biodata of the students, such as company, region, gender, and grade, and the effectiveness of using IPTV, were investigated. Among the variables tested, the study found that only gender and grade influenced the results. In terms of gender, female students replied more positively in every item in this category. Concerning grade, the 3rd grade students displayed more positive answers to the use of IPTV in the English classrooms. Additionally, the students’ interest and confidence in English education turned out to significantly influence their satisfaction with the IPTV content. In all of the items in this category, the students with strong interest and confidence in English exhibited more positive responses. In summary, the study discovered that the IPTV-supported English classes significantly increased the students’ interest and participation and helped them understand the content better, compared with traditional English classes. In addition, it showed that gender, grade, interest, and confidence were correlated with the results.

V. DISCUSSION

The study found that participants were generally satisfied with using IPTV in the classroom, yet it also revealed that IPTV still faced many technical problems to solve for effective use in the educational setting. This section further discusses the advantages and limitations of using IPTV in the English classroom from technical and educational aspects based on the results of the study.

1. The Technical Aspects

The most frequently reported problem with IPTV was loading time. The teachers, regardless of the company used, complained about loading time. It sometimes took more than two minutes to access and to begin to watch the content that they wanted.
Considering much of the flash content was less than two minutes long, this loading time must have been frustrating to the users. Depending on the regions and the time of the day, the loading time varied; thus, it is assumed that this problem was caused by different traffic loads in the network systems. This was not a trivial matter, and in fact impeded the teachers’ use of IPTV. The teachers wrote in the open-ended questions that they sometimes gave up on using IPTV while waiting for the content to load, and after experiencing the problem a couple of times, they entirely abandoned using it in the classroom. In addition to loading time, sudden blackouts were also reported as a technical problem of IPTV. This can disrupt class flow and disturb students’ motivation in class. Hence, the companies should seek a solution for the problems immediately.

Menus and navigation functions should be improved, according to the teachers. The current menus are not metaphoric, thus, the users cannot find content intuitively. The current four to five levels of the menus and the resultant multiple clicking required to access the content should be made more user friendly. The navigation functions are not yet fully developed and do not offer search functions, making it take more time to find the content that the user wants. Because the search function is particularly necessary to IPTV equipped with a large archive and can complement menus and navigation functions, it should be provided.

Interactivity, formerly thought to be one of the strongest benefits of IPTV, turned out to be far less than satisfying in this study. Interactivity refers to interaction between the user and the hardware (in this study, IPTV). When prior studies predict that IPTV will immensely enhance interactivity, they usually compare it with traditional TV. However, the teachers in this study compared their IPTV experiences with other ICT experiences, namely, experiences with computers. Although IPTV has better interactivity than traditional TV, it is far less developed than computers. Thus, it is natural that the teachers felt IPTV to be less convenient than computers. As the teachers mentioned in the open-ended questions, this is the reason that they used the content more easily with computers than with IPTV. With the same content and different hardware, the only benefit of using IPTV was high-quality video. Evidently, hardware and technical aspects influence user satisfaction and continued use of the content; therefore, when launching IPTV in the educational context, like any other new technology, it is imperative to gauge technical aspects and prevent potential problems in the classroom in advance.

2. The Educational Aspects

Both teachers and students were quite satisfied with the IPTV content. The study
shows that the teachers used the content at least once a week, i.e., in every other English class. The strongest benefit of the IPTV content, according to the teachers, was that the content was archived as short clips. With the traditional long VOD clips, the teachers, even technology experts, had trouble clipping or showing only selected sections to students. The IPTV content completely eliminated this trouble. Another benefit was the large archive of the content. As described earlier, IPTV archives textbook CD content, VOD clips, and additional flash materials so that the teachers could find the materials that they wanted in one place. Even before using IPTV, the teachers found teaching materials on teacher collaborative websites, but English materials were usually difficult for individual teachers to create; hence, it was not easy to find high-quality English teaching materials online. The IPTV content contained some of these clips, such as culture, classroom English, and situational communication clips, which were of great help to the teachers.

Among all clips, the teachers utilized the listening and song and chant clips most frequently, whereas they did not use the writing clips very often. This is partly because there were a larger number of listening clips than writing clips in the IPTV content and partly because the national curriculum focuses more on oral language skills than on written skills in earlier grades. Regarding language skills, in descending order of frequency, listening, speaking, reading, and writing were the clips used by teachers. This order can serve as counter-evidence pertaining to which elements of language the teachers emphasized and spent more time on. However, it is worth considering whether content developers should accommodate the existing classroom practice or make an effort to bridge the gap between the various language skills.

For the teachers, the content provided convenient teaching materials because it was closely related to the school curriculum and was developed based on the traditional class flow. This reduced the teachers’ workloads in creating and finding teaching and learning materials appropriate for each lesson. However, using IPTV, overall, did not help to reduce the teachers’ preparation time for the lessons because browsing the content and selecting from the large archive also took time. Considering that the teachers involved in the study were proficient computer users and that the period of using IPTV did not affect the class preparation time, again, it is crucial to devise a way to reduce the time required to access the content that the teacher wants.

The study confirmed that the use of IPTV content was interesting and motivating and helped students to understand the curriculum better and more actively participate in the class compared with the traditional English classroom. Although the English textbook
CD–Rom already offers video and flash content, it usually lacks context or narratives. In contrast, the IPTV content provides diverse types of clips that are not found in the textbook CD–Rom. For example, some of the listening clips are finely dramatized to motivate student learning. In addition, the content provides stories in each lesson: in the story segments, a native teacher reads a story, and the story is retold in the animation. In this way, the students can practice telling the story and the key expressions learned in the flash clips. The contextualized and narrative–based clips might be interesting to the students.

In addition to the user satisfaction with technical aspects, another discrepancy between the teachers and the students found in the study was the type of clips preferred. Although the teachers selected the song and chant clips as the most useful, the students chose games as the most interesting, with song and chants as the second. This indicates that, although only a few of the game clips were included in each lesson, the students enjoyed them more than they enjoyed the others. This fact may indicate something about the students that the teachers and the content developers might not realize.

This study made an important finding regarding the relationships between the students’ satisfaction and their inclinations toward the English subject. According to the result of the study, the more the students liked English and were confident in English, the more they were satisfied with the IPTV content. Assuming that the positive inclination and strong confidence in English might come partly from private English lessons, those who did not take private lessons and did not have confidence in English may note benefit from the IPTV content as much as those who took provide lessons. This is particularly problematic because the primary reason for implementing IPTV in the classroom was to help the students who could not afford private lessons and to bridge the gap between the haves and the have–notts. Although this result may be natural and is consistent with other technology–enhanced materials, such as digital textbooks or computer study at home, program developers should invest more effort into further helping those who do not have private lessons.

3. Suggestions for Future Development

Based on the results of this study, for the effective implementation of IPTV in the English classroom, the following suggestions are made:

a. The IPTV networks and USB set–top boxes should be stabilized so that users will not experience any technical difficulties.
b. The menus and navigation functions should be improved. The content should be more easily searched and accessed. Additionally, content guidebooks would be helpful to teachers.

c. Compared to web-based learning sites, IPTV and its content still do not fully support classroom teaching and learning. For example, some of the functions of web-based learning sites for teachers, such as speech recognition or writing correction, are not embedded in the IPTV content, as the hardware cannot support the functions. In the future, the functions currently utilized on the web-based learning sites should also be available on IPTV to increase interactivity among users in the classroom.

d. Technical support should be provided, at least until IPTV is stabilized in the classroom, to help teachers when having technical difficulties. In addition, teachers' manuals would be useful.

e. The close connection between the IPTV content and the current English curriculum is crucial to the successful implementation of IPTV in the classroom; therefore, content developers should take into consideration the curriculum, classroom environment, and class flow.

f. Considering that teachers use the content mainly to motivate students, content developers should create visually attractive, topically interesting, and action-motivating content.

g. As the strongest benefit of the IPTV content is its short clips, future content should also be composed of short clips that users can easily handle and use.

h. In the future, researchers and developers should investigate ways to motivate the students who do not have confidence and do not particularly like English with IPTV in the classroom.

i. Most of the current content is only for classroom use, but content for individual users at home is also needed.

The suggestions above do not represent an exhaustive list. As IPTV has just begun to be used in the classroom and is yet to be used at home for educational purposes, there still needs to be research in diverse settings with diverse users, and more importantly, on the long-term effects of using it in educational settings.
VI. CONCLUSION

This study explores the educational effectiveness of using IPTV in the English classroom, from both teachers’ and students’ perspectives. Both parties were generally satisfied with the content, but there were still several problems to be solved with the technology and with the content. For the expectation of IPTV as a convergence medium of digital and broadcasting media, IPTV remains disappointing. It was not yet technically stable, and its functions were not as advanced or diverse as those of the computer; thus, it could not fulfill the expectations of the teachers who were used to the computer. Above all, the interactivity of IPTV is still in the rudimentary stage, and therefore it is not as user-friendly as the computer. In short, IPTV is "smarter" than the traditional TV, but it is not as smart as the computer.

Despite its current limitations, IPTV still has many potential benefits for educational purposes - both in the classroom and at home - as described earlier in the paper. Numerous technologies have been tested to support student learning during recent decades. Some of these were successful, and others died out quickly. To avoid allowing IPTV to become another short-lived educational technology, additional effort and research are required, both in terms of technology and content. With the combined efforts of the IPTV companies, content developers, and teachers, the new technology can be successfully incorporated into the educational setting and benefit students.

REFERENCES


부 록

[교사용 설문지]

이 설문지는 EBSè 초등영어 3, 4학년 콘텐츠 효과성연구를 위해 시행되는 설문입니다. 설문의 모든 내용은 EBSè 초등영어 3, 4학년 콘텐츠에만 국한되어 있습니다. 설문의 내용은 한 문, 세 줄 없이 손자하
고 성실하게 응답해 주시면 감사하겠습니다. 설문은 연구목적 이외에는 절대 쓰이지 않습니다.

1. 지역: ________ (도나 광역시)
2. 성별: 여 __ 남 ____
3. 학년: ① 3학년 ② 4학년
4. 교사경력: ① 3년 이하 ② 4-6년 ③ 7년-10년 ④ 11-15년 ⑤ 16-20년 ⑥ 21년 이상
5. ICT 활용능력: 컴퓨터와 그 외 교육기기들을 잘 활용할 수 있다
   ① 매우 그렇다 ② 그렇다 ③ 보통이다 ④ 아니다 ⑤ 전혀 아니다
6. EBSè초등영어 3, 4학년 콘텐츠 활용하여 매 수업을 위한 준비시간
   ① 5분 이하 ② 10분 이하 ③ 20분 이하 ④ 30~1시간 ⑤ 1시간 이상
7. EBSè초등영어 3, 4학년 콘텐츠를 얼마나 자주 활용하십니까?
   ① 매시간 ② 매일 ③ 일주일에 한 번 정도 ④ 일주일에 두 번 이상
8. 한 번 수업에 몇 분 정도 사용하십니까?
   ① 5분이하 ② 5~10분 ③ 10~15분 ④ 15~20분 ⑤ 20~30 ⑥ 30분 이상

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수업 활동

15. 다음 클립 중 가장 자주 쓰시는 클립을 세 개를 꼽아 1-3을 써 주십시오.
(1: 가장 자주 쓰는 클립, 2: 다음으로 자주 쓰는 클립)

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<td>(Phonics Times, Phonics Review)</td>
<td>(In the classroom)</td>
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16. 다음 클립 중 가장 쓰지 않는 클립을 세 개를 꼽아 1-3을 써 주십시오.
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39. EBS 초등영어 3, 4학년 콘텐츠는 수업의 도입, 전개, 정리 중 어느 부분에서 주로 사용하고 계십니까? 그 이유는 무엇입니까?

40. EBS 초등영어 3, 4학년 콘텐츠 활용이 학습자의 동기와 흥미를 유발하는데 도움이 되었습니까? 어떤 점에서 도움이 되었는지 (또는 안 되었는지) 기술해 주십시오.

41. EBS 초등영어 3, 4학년 콘텐츠 활용이 학습자의 수업 참여도를 높였다고 생각하십니까? 어떤 점에서 도움이 되었는지 (또는 안 되었는지) 기술해 주십시오.

42. EBS 초등영어 3, 4학년 콘텐츠의 장점은 무엇이라 생각하십니까?

43. EBS 초등영어 3, 4학년 콘텐츠에서 추가, 보완해야 할 부분에 대한 제안을 해 주십시오.

* 설문에 응해 주셔서 감사합니다.
A New Convergence Medium: IPTV in the English Classrooms

학습자용 (학습만족도 검사)

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2. 성별: 여 ___ 남 ___

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Key words: IPTV, effectiveness, user satisfaction
Applicable levels: elementary English

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Many researchers claimed that collaboratively produced documents are better in quality, but not many research studies have compared collaboratively produced documents and individually produced documents. Thus, this study aims to investigate whether collaboratively produced essays are better in quality than individually produced essays. The participants of this study were 24 Korean EFL college students. For collaborative writing, the students were paired based on a similar writing proficiency level. A total of 106 essays—three collaboratively produced essays and another three individually produced essays of each student—were compared in terms of fluency, accuracy, complexity, and essay score. The results showed that collaborative writing was better than individual writing in terms of fluency, complexity, and essay score, while the results for accuracy were mixed. In the case of both higher and lower level students, the results were similar; the collaborative writings of higher and lower level students were better than their individual writings with respect to fluency, complexity, and essay score although the results for accuracy were mixed. The findings of this study may benefit writing teachers who want to adopt computer-supported collaborative writing in their writing classroom.

I. INTRODUCTION

Collaborative language learning has been claimed to be effective for language learning because it provides opportunities for interaction as well as a more comfortable environment for students (Donato, 1994; Long, 1980; Swain & Lapkin, 1998). Thus,
collaborative language learning activities have been widely used in many language learning classrooms. Despite its claimed effectiveness, collaboration in language learning classroom has mainly focused on spoken interaction. With respect to written interaction, collaboration has been used mostly during the brainstorming and peer-reviewing stages (Ferris, 2003; Leki, 1993; Nelson & Carson, 1998; Nystrand & Brandt, 1989; Villamil & de Guerrero, 1996).

Some researchers claimed that students should be encouraged to collaborate not just on brainstorming or peer-reviewing, which is focused on the written product, but also throughout the writing process (Daiute, 1986; Wells, Chang & Maher, 1990). Collaborative writing can encourage students to learn how to write by sharing scaffolding with their peer students during the process of working together (Daiute, 1986; Storch, 2005). Collaborative writing could also be beneficial to students’ language acquisition (Donato, 1988; Ellis, 2003; Storch, 2005; Swain & Lapkin, 1998). Ellis (2003) claimed that constructing a written text together could be more beneficial for students’ language acquisition than spoken interaction.

Collaborative writing, the activity of writing together to produce written texts, has been rarely used in second or foreign language writing classrooms even though collaborative writing has been widely performed in academia, business, and government, and collaborative writing is claimed to be beneficial to students’ writing skills as well as learning of language. This lack of collaborative writing activities in writing classroom motivated this study. While many researchers claimed that collaboratively produced documents were better in quality (Ede & Lunsford, 1990; Glendinning & Howard, 2001; Lowry, Curtis, & Lowry, 2004; Passig & Schwartz, 2007; Storch, 2005), the claims were mostly based on the results of questionnaires or interviews. Some studies have compared written texts produced by the collaboration of two or more people with those produced by one person to verify that collaboratively produced texts are better in quality (Glendinning & Howard, 2001; Storch, 1999, 2005), but the results of the studies were mixed. Moreover, most of the studies investigated writing collaboratively on a paper-and-pencil mode. Thus, it is necessary to compare collaboratively produced compositions with individually produced compositions in a computer-supported environment in order to verify if collaboratively produced compositions are better in quality, particularly with respect to fluency, accuracy and complexity as well as essay scores.
II. LITERATURE REVIEW

1. Pedagogical Theory of Collaborative Learning and Collaborative Writing

The most fundamental educational philosophy that underlies collaborative learning, including collaborative writing, is often understood to be the cooperative learning and the learner-centered approach, which were inspired by humanistic psychology and experiential learning by Rogers (1983) and Kohonen (1992). Kohonen (1992) has claimed that the experiential model offers “potential for a learning atmosphere of shared partnership, a common purpose, and a joint management of learning” (as cited in Nunan, 1999, p. 7). According to experiential learning, learning is viewed as transformation of knowledge by active participation of the students in collaborative small groups, rather than transmission of knowledge from a teacher to students. In addition, according to the learner-centered approach, learners are not just passive receivers, but active participants. They actively acquire language learning by negotiating meaning through interaction both with their peer students as well as with the teacher.

Collaborative language learning activities provide opportunities for modified interaction between learners which is effective for language learning (Donato, 1994; Long, 1980; Long & Porter, 1985; Swain & Lapkin, 1998). According to Long (1980) and Long and Porter (1985), collaborative learning in a small group should increase the quantity and quality of comprehensible input for students because the students could have an opportunity for individualized negotiation of meaning and also because the students could work in a more comfortable environment. Collaborative learning also helps learners make use of the learning potential of other learners more fully (Kohonen, 1992; Long, 1980; Long & Porter, 1985).

Despite these positive aspects of collaborative learning, most of the research investigating collaborative learning has focused on oral interaction and not many studies have examined written interaction, particularly collaborative writing (Lowry et al., 2004; Seong, 2006; Storch, 2005). Ellis (2003) has argued that collaborative writing could be more beneficial for students’ language acquisition than spoken interaction because students could focus on language as an “improvable object”. Speck (2002) has claimed that learning naturally requires some form of interaction and that a certain form of interaction including collaborative writing provokes students to interact more actively:

[...] other methods, such as collaborative writing, promise greater potential for engaging students in active learning by drawing on the resources students themselves bring to
class—their ideas, their critical facilities to ask unique questions, their ability to teach each other, their knowledge about a wide range of topics. (p. iv)

Many researchers have also argued that socio-cultural theory provides a framework for analysis of learners’ interaction as well as for collaborative writing because, through conversation during collaborative writing, learners could receive assistance from their peers or could provide help to their peers. That is, when students engage in collaborative writing, within the zone of proximal development (ZPD) introduced by Vygotsky (1978), they share scaffolding that enables them to produce higher results (Donato & MacCormick, 1994; Jung, 2005).

2. Collaborative Writing and Individual Writing

Many researchers have claimed that collaboratively produced texts are better and more accurate than individually produced texts (Ede & Lunsford, 1990; Noël & Robert, 2004). However, most of the claims are based on questionnaires or interviews rather than on the comparative analysis of the written texts. It has been claimed that collaboratively produced texts are more accurate than individually produced texts because collaborative writing encourages students to pool their knowledge about language and to focus on grammatical accuracy as well as on the content (Donato, 1988; Ellis, 2003; Storch, 2005; Swain & Lapkin, 1998). Some studies have compared the quality of collaboratively produced compositions with individually produced compositions using various types of measures (Glendinning & Howard, 2001; Passig & Schwartz, 2007; Storch 1999, 2005), but most of the studies have compared the quality of compositions using only scores or some of the measures of fluency, accuracy, or complexity.

Storch (1999) has compared the same students’ collaboratively and individually produced texts. She asked eight graduates from an English for Academic Purposes (EAP) course to perform a cloze exercise and composition (individually) and then text reconstruction (collaboratively). And then, two days later the same students were asked to complete the same tasks but switched the mode. She found that collaboratively produced texts were shorter in terms of average number of words, clauses, and the length of sentences, syntactically less complex measured by average clauses per sentence (C/S), but more accurate in terms of the average number of errors and a proportion of error-free clauses to clauses. She argued that collaboratively produced texts were more accurate because students seemed to be more motivated to focus on grammatical accuracy when they work collaboratively. However, this result might also be affected by the time taken
to complete the tasks. Since she did not limit the time, groups took longer time to write and to revise their composition a number of times, while individuals tended to spend less time for writing and for revising their work. Moreover, the measure of complexity she used was not one of the valid and reliable measures suggested by Wolfe-Quintero, Inagaki, and Kim (1998).

Glendinning and Howard (2001) have analyzed one group of three students who worked individually first and then collaboratively to complete a story based on a series of pictures within a limited time. The results of their study showed that the collaboratively produced texts were not more accurate but slightly more complex than individually produced texts. They found that although students could identify and correct 50% of errors without teacher intervention, they failed to correct the other 50% and even made new errors. They interpreted this result as possibly due to time pressure, distraction, Politeness, and lack of commitment.

Storch (2005) has compared the compositions produced by five individual students and by nine groups of two students in terms of quantity, accuracy, and complexity. The students were asked to compose a short—one to two paragraphs—data commentary text based on a graphic prompt. The students were allowed to spend as much time as they needed and to self-select the partners to work with, but the writing proficiency of the two group members was similar. She used the total number of words to measure and compare the fluency, the ratio of error-free clauses to clauses (EFC/C) and the number of errors per word to measure accuracy, and the ratio of clauses to T-units (C/T) and the ratio of dependent clauses to clauses (DC/C) to measure complexity. The findings of her study showed that collaboratively produced texts, although more time was spent for writing collaboratively, were shorter in terms of the total number of words, but more accurate and more complex. She also found that the holistic scores of collaboratively produced texts were higher than that of individually produced texts.

To summarize, many researchers have claimed that collaboratively produced texts are better than individually produced texts based on the questionnaire or interview rather than on the comparative analysis of the written texts. Some studies have compared the written products produced collaboratively with those produced individually in terms of fluency, accuracy, or complexity, but few studies have measured and compared all those aspects with reliable measurements in their study. In addition, the findings so far comparing the quality of collaboratively produced texts and individually produced texts have shown mixed results, which might have been affected by the task types or task conditions such as time constraint. Thus, more research is needed to compare the written products
produced collaboratively and those produced individually using valid and reliable measures of quality, fluency, accuracy, and complexity as well as with different types of writing tasks and conditions.

3. Measures of Fluency, Accuracy, and Complexity

The best and valid measures of fluency, accuracy, and complexity have been suggested by Wolfe-Quintero et al. (1998) based on their analysis of more than a hundred measures used in thirty-nine second or foreign language research studies. They have concluded that the best measures of fluency include mean length of T-unit (words per T-unit: W/T), mean length of clause (words per clause: W/C), and words per error-free T-unit (W/EFT). For the best measures of accuracy, they have suggested error-free T-units per T-unit (EFT/T) and errors per T-unit (E/T). For the best measures of grammatical complexity, they have suggested clauses per T-unit (C/T) and dependent clauses per clause (DC/C) and the best lexical complexity measures include a word type measure (WT/√2W) and a sophisticated word type measure (SWT/WT). They have suggested these measures as the most reliable and valid measures because these measures are consistently linear and significantly related to program, school, or holistic rating levels.

Wolfe-Quintero et al. (1998) have finally included only ratio measures such as words per T-unit (W/T) as reliable and valid measures because the purpose of their study was to determine the most reliable and valid measures representing second language writing across studies. Even though frequency measures such as frequency count of production units are commonly used in many research studies, they did not include frequency measures because frequency measures can vary depending on the amount of time allotted or the nature of the task, so the results are meaningless in comparison across different participants or tasks.

Error-free measures such as error-free T-units per T-unit have been criticized because those measures could not reveal how many errors or what types of errors were produced within the T-unit (Bardovi-Harlig & Bofman, 1989). Moreover, different criteria for determining an error—whether morphosyntactic, lexical, spelling, or punctuation errors would be counted as errors or not—seemed to be used across different studies (Casanave, 1994; Larsen-Freeman, 1983; Hirano, 1991) even though what counted as an error could affect the results. Wolfe-Quintero et al. (1998) have suggested that the decision to include or exclude a certain type of error depends on “the learners’ level, the discriminative value of the errors within the population, and the researcher’s preferences” (p. 35). In addition, the ratio of word types to total words (WT/W) was also criticized because the ratio
tended to decrease as the total number of words increased (Carroll, 1967 as cited in Wolfe-Quintero et al. 1998).

In this study, however, both frequency measures and ratio measures were used because the same population and the same type of task were used and the same amount of writing time was allotted to the participants. However, only ratio measures were used to understand the results compared to those of other studies.

4. Computer-Supported Collaborative Writing

Traditionally, collaborative writing has been performed by exchanging each individual’s work, which was written on paper or on word processing program. However, these days a variety of technologies have been used in classrooms for the purpose of interaction and of collaboration and have had a larger impact on learning as well as on collaborative writing. With the advent of Web 2.0, teachers and students have begun to look for and to be able to use simple, free or less expensive, and easy-to-use programs. Various Web 2.0 technologies include blogs, wikis, podcasts, photo or video sharing sites, social bookmarking, and social writing platform. Among those technologies, social writing platforms, including wikis, Socialtext (http://www.socialtext.com/), and web-based office programs such as Google Docs, allow multiple writers to be able to edit and revise the same document together.

Recently, there has been considerable research on computer-supported collaborative writing using various technologies. For example, Passig and Schwartz (2007) have compared the quality of graduate students’ written academic assignment collaboratively produced using an online synchronized tool, GROOVE, with that of collaboratively produced in a face-to-face environment. They measured the quality of the written papers with an instrument called the Cognitive Level and Quality Writing Assessment (CLAQWA), which defined the parameters of the quality of an academic paper. They hypothesized that collaborative writing, when using conventional technologies such as pen-and-paper or computer, caused the collaborative writing process to be limited and difficult. Their findings confirmed this hypothesis that collaboratively produced documents on an online synchronized environment resulted in a higher quality in all the items measured including the quality of the assignment, structural integrity, matching language to target audience, conclusions and focus, grammar and standard editing, and miscellaneous.

However, few studies have examined a web-based social writing platform, particularly Google Docs, in writing classroom. Thus, more research is needed to examine if Google
III. METHODOLOGY

1. Participants

The participants in this study were 24 Korean EFL college students (17 male and 7 female students) who took a two-credit English reading course in one of the major universities in Korea during the 2007 winter semester. The students’ academic majors and year varied. A background questionnaire revealed that the majority of the students (17 participants, 70.8%) had never lived in a foreign country. Three participants (12.5%) had lived in a foreign country for less than six months, one participant (4.2%) had lived in a foreign country for less than two years, and three (12.5%) had lived in a foreign country for more than two years. Most students (18 participants, 75.0%) had never experienced collaborative writing, while six students (25.0%) had done collaborative writing, but less than three times.

In organizing groups for collaborative writing, this study considered size, writing ability, and gender of the students, which is slightly different from Speck (2002) who also included cultural difference. The students were grouped in two matching students with similar writing proficiency level based on the total amount of words of their pre-test essay. The total amount of words produced within a limited time was used to measure the students’ writing proficiency level because, as pointed out by Larsen-Freeman (1978), “subjects with a higher proficiency tended to write longer compositions (p. 444).” The length of the students’ pre-test essays was ranged from 95 words to 471 words. The students who wrote more than 200 words in their pre-test essay were assigned into higher level groups (a total of 10 students), while those who wrote less than 200 words were assigned into lower level groups (a total of 14 students).

A total of 12 groups (five higher level groups and seven lower level groups) were formed by the researcher and the grouping remained constant throughout the study. Half of the students (six higher level students and six lower level students) were randomly assigned to perform collaborative writing first, while the other half of the students (four higher level students and eight lower level students) were asked to write individually for the first three tasks. And then they switched the work mode of writing from collaborative writing to individual writing or vice versa for the next three writing tasks.
2. Research Questions

The purpose of this study is to compare computer-supported collaborative and individual writing written by Korean EFL college students in the aspects of fluency, accuracy, complexity, and essay score. The purpose is specified in the following research questions:

1. Are there any differences between Korean EFL students’ essays that are produced individually and collaboratively on a web-based social-writing platform, particularly in the aspects of fluency, accuracy, complexity, and essay score?
2. Are there any differences in those aspects in terms of their English writing proficiency level?

3. Instruments

In order to measure the participants’ writing proficiency level at the beginning of the semester, an essay writing test was administered. They were asked to write about the recent news story that had affected them the most; although the same topic was given at the post-test, the students wrote about different news story. The students were given 30 minutes to plan, write, and revise their composition. Thirty minutes was given because it is the amount of time allowed in the TOEFL writing test and also because limiting the writing time to 30–60 minute is common in most related studies (Silva, 1993). The pre- and post-essay writing test was conducted on a computer, particularly WordPad program, rather than on a paper-and-pencil mode. The WordPad program was chosen because it provides only basic word processing functions but does not provide more advanced functions such as auto-correction. Thus, it provides a similar condition to a computer-based writing test. In addition, the students were not allowed to use dictionaries or to consult any websites.

The participants were asked to write on a web-based social writing platform—specifically, Google Docs, a free web-based word processing program provided by Google—when they worked both collaboratively and individually in order to control the effect of the writing platform used. Google Docs was chosen because it allows group members to write together at the same time on the same document and to view each other’s work while writing. It also saves the history of changes made and allows a review of which parts have been modified and by whom. It is like a wiki, but it is easier to use because its menus and navigation look more like MS WORD, with which most students are
familiar. It also has a spell check function. For collaborative writing, the students were asked to talk with their peer using a synchronous computer-mediated communication (CMC) program when they worked collaboratively.

In order to compare collaborative writing and individual writing, each student wrote three collaborative essays and three individual essays. In each class, the students were given a writing topic and a news article about the topic. They were asked to take a position on the assigned topic, discuss or research on the internet, to write a draft, and then to review and revise their draft. Examples of the assigned topics include taking a position on whether nature or nurture is more important on a person’s personality or intelligence, whether physical appearance or competence is more important to get a good job, or whether tobacco taxes should be raised or not. There was a time limit for writing; they were given 30 minutes for researching and planning, 30 minutes for writing a draft, and 20 minutes for reviewing and revising. The students wrote as much as they wanted within the limited time. In addition, they were allowed to use dictionaries or to search any websites, if necessary.

4. Data Collection and Analysis

1) Data Collection

The class met for three hours per day and for 10 days that amounts to a two-credit class of 16 week semester since the course was a two-credit intensive course. In the first class, an essay writing test and a background questionnaire were administered. In the second class, the students were introduced and trained to use a web-based social writing platform, Google Docs. The data of the students’ collaboratively and individually produced essays were gathered for six classes—from class three to class eight. From class three to class five, half of the students worked collaboratively and the other half of the students worked individually. And from class six to class eight, they switched the mode; that is, the groups who worked collaborative writing first switched to individual writing and vice versa. Thus, all of the students wrote three collaborative writings and three individual writings; one group during class four and one individual student during class three missed writing. A total of 106 essays—35 collaboratively produced essays and 71 individually produced essays—were collected and used to compare collaboratively and individually produced writing. In the last class, an essay writing test and a perception questionnaire were administered.
2) Comparison of Writing Fluency, Accuracy, and Complexity

Table 1 shows fluency, accuracy, and complexity measures used in this study. Writing fluency, accuracy, and complexity were measured and compared using both frequency measurements and ratio measurements suggested by Wolfe-Quintero et al. (1998). Among the measures, T-unit based measures such as W/T, EFT/T, E/T, and C/T were used for this study because T-unit based measures have been determined to be the best measures of second language development in writing (Larsen-Freeman, 2006; Wolfe-Quintero et al. 1998) and also because a variety of measures have been based on T-unit (Gaies, 1980; Hunt, 1965; Larsen-Freeman, 1983). The ratio of words to error-free T-units (W/EFT) was not used in this study because some essays had no or only one error-free T-units. In addition to the ratio measurements, frequency measures were also used because all of the essays were written under the same time limit.

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Notes: W/C: number of words per clauses; W/T: number of words per T-units; EFT/T: error-free T-units per T-unit; E/T: errors per T-unit; C/T: clauses per T-unit, WT/√2W: word types per square root of 2 times total words

In order to measure and compare fluency, accuracy, and complexity, the students' essays had to be analyzed for errors, T-units, clauses, error-free T-units, and error-free clauses as well as for words, word types, and sentences in each essay. The total number of sentences was calculated with MS WORD statistics and the total number of words (tokens) and word types were calculated with VocabProfile1) (http://www.lexguru.ca/vp/). Both T-units and clauses were identified by the researcher based on the guidelines adopted from Polio's (1997) study. Two weeks later, T-units and clauses were marked again by the researcher and were compared for intra-rater reliability measured by Holsti's (1969) coefficient of reliability. The results showed that there was 99% agreement for

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1) VocabProfile is a web-based program that performs lexical text analysis. It divides the words used in a text into four categories by frequency: the most frequent 1000 words of English, the second most frequent thousand words of English, the academic words of English, and the remainder which are not found on the other lists. It also gives results about the total number of tokens and types, type-token ratio, and lexical density.
Collaborative Writing versus Individual Writing: Fluency, Accuracy, Complexity, and Essay Score

T-units and 98% agreement for clauses.

Errors were marked using the error categories adapted from Ferris and Roberts (2001) and Ma (2006). Ferris and Roberts (2001) chose five error categories—verb errors, noun ending errors, article errors, wrong word, and sentence structure errors—for their study. Ma’s (2006) error categories provided examples of each error category although she selected only three error types. Thus, error categories and examples were first adapted from Ferris and Roberts’s (2001) five error categories and Ma’s (2006) examples. A pilot analysis of some sample essays was conducted with the adapted error categories and examples. During the pilot analysis, the researcher noticed that preposition error was also one of the most frequent error types made by the participants in this study. Thus, the error categories were modified into six categories by extracting preposition error from wrong word. Some code names were also modified to make it easier to mark. Errors in essays were marked with this modified error categories and examples coded by one native speaker of English and then by the researcher. The coders reviewed the error categories and examples, practiced coding errors with some sample essays, and then moved on to mark errors in the total essays. The inter-rater reliability was measured by Holsti’s (1969) coefficient of reliability and the result showed that there was 91% agreement between the two coders. Finally, the RANGE program was used to count the total amount of errors, clauses, T-units, error-free clauses, and error-free T-units of each student essay.

3) Comparison of Essay Scores

Essays were rated by two native speakers of English using Jacobs, Zingraf, Wormuth, Hartfiel, and Hughey’s (1981) analytic scoring guide, which has been frequently used in many research studies. An analytic scoring guide was chosen because it leads to greater reliability particularly when scoring is conducted by a heterogeneous or less well trained group (Hughes, 1989; Lee, 2005). The mean score of the two raters were used for the analysis. Cronbach’s alpha for the inter-rater reliability of the two raters was .830.

IV. FINDINGS AND DISCUSSION

1. Comparison of Writing Fluency

Table 2 presents a summary of the average results of comparing the fluency of the essays produced collaboratively and individually. Collaborative writing produced a higher
amount than individual writing in terms of all of the produced units used in this study—
words, word types, sentences, T-units, and clauses. And all of the differences were
statistically significant, except for the total number of clauses produced: \( t(23) = 2.526, p = .019 \) for the total number of words; \( t(23) = 3.656, p = .001 \) for the total number of word
types; \( t(23) = 2.568, p = .017 \) for the total number of sentences; \( t(23) = 2.264, p = .033 \) for
the total number of T-units.

<table>
<thead>
<tr>
<th>[Table 2] Fluency of Writing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
</tr>
<tr>
<td>Collaboratively produced (N=24; Group=12)</td>
</tr>
<tr>
<td>Mean</td>
</tr>
<tr>
<td>S.D.</td>
</tr>
<tr>
<td>Individually produced (N=24)</td>
</tr>
<tr>
<td>Mean</td>
</tr>
<tr>
<td>S.D.</td>
</tr>
<tr>
<td>( t )</td>
</tr>
<tr>
<td>( p )</td>
</tr>
</tbody>
</table>

* \( p<.05 \); ** \( p<.01 \)

Clause length (W/C), according to Wolfe–Quintero et al. (1998), tended to gradually
increase at each proficiency level and it generally ranged from 5.20 words per clause for
the lowest level to 10.83 for the most advanced writers. T-unit length (W/T) were found
by Wolfe–Quintero et al. (1998) to be ranged from 6.0 words per T-unit for the lowest
level to 23.0 for the most advanced writers and T-unit length also increased in a linear
relationship with proficiency.

Compared to the average of 10.83 words per clause for the most advanced students
according to Wolfe–Quintero et al. (1998), both the clause length of collaborative writing
(the average of 8.48 words per clause) and that of individual writing (the average of 8.36
words per clause) were relatively long. Moreover, T-unit length of collaborative writing
(14.32 words per T-unit) and that of individual writing (13.83 words per T-unit) were
long, compared to the results of other research studies (Hirano, 1991; Wolfe–Quintero et
al., 1998). The ratio measures, clause length (W/C) and T-unit length (W/T), showed that
collaboratively produced essays were all longer although the differences were not
significant.

The collaborative and individual writing were also analyzed in terms of the students'
writing proficiency level. Interestingly, both higher level students and lower level students’
collaborative writing were more fluent than their individual writing. In the case of higher level students, as shown in Table 3, their collaboratively produced essays were more fluent in terms of the total number of words, word types, sentences, T-units, and clauses as well as in terms of clause length and T-unit length. However, only the results for clause length and T-unit length were statistically significant: \( t(9) = 2.368, p = .042 \) for clause length and \( t(9) = 3.195, p = .011 \) for T-unit length.

In addition, in the case of lower level students, as shown in Table 4, their collaboratively produced essays were also more fluent in terms of the total number of words, word types, sentences, T-units, and clauses as well as in terms of T-unit length. Interestingly, however, clause length was longer in their individually produced essays, although only the differences in all of the production units were significant at \( p<.001\):
t(13) = 6.079, p = .000 for the total number of words; t(13) = 7.406, p = .000 for the total number of word types; t(13) = 5.080, p = .000 for the total number of sentences; t(13) = 4.470, p = .001 for the total number of T-units; t(13) = 4.061, p = .001 for the total number of T-units.

To summarize, collaborative essays had a higher amount of words and sentences as well as longer clauses and T-units, suggesting that collaboratively produced essays were more fluent than individually produced essays. Students seemed to produce longer essays when they worked collaboratively because they could think of more and stronger arguments through negotiating with their team members. Interestingly, however, this result that collaboratively produced essays were more fluent contrasts with Storch’s (1999, 2005) study that reported collaboratively produced texts were shorter. This difference may be due to the different type of writing task used; while writing commentary task was used in Storch’s (1999, 2005) studies, writing an essay was used in this study. The students may have tried to write longer texts when they produce an essay compared to the writing commentary task.

In addition, in terms of the participants’ writing proficiency level, the results for both higher level students and for lower level students showed that their collaboratively produced essays were more fluent, although the results seem to suggest that lower level students were more affected than higher level students in terms of writing fluency. In the case of lower level students, their collaborative essays were longer in the amount of all of the production units and the differences were all statistically significant, but in the case of higher level students, their collaborative produced essays were all longer but only the differences in the clause length and T-unit length were statistically significant. Lower level students seemed to be able to produce longer texts because they felt less burden of writing and they could combine the work of two when they worked collaboratively. On the other hand, higher level students, who already could write long essays even under a time limit, seemed to focus on producing more logical arguments by refining their clauses and T-units.

2. Comparison of Writing Accuracy

Table 5 shows a summary of the results comparing the accuracy of the collaboratively and individually produced essays. The frequency measures produced mixed results for accuracy although all of these differences were statistically not significant. Collaboratively produced essays (average 36.60 errors per essay) had more errors compared to individually produced essays (average 29.75 errors per essay), suggesting that individual essays were
more accurate. This result may be because there were more words in collaboratively produced essays compared to individually produced essays, and as pointed out by Wolfe–Quintero et al. (1998) the more words produced, the more errors occurred. On the other hand, collaboratively produced essays (average 15.32 error-free T-units) had more error-free T-units than individually produced essays (average 13.41 error-free T-units), suggesting that collaborative essays were more accurate.

However, the ratio measures of accuracy consistently suggested collaboratively produced essays were more accurate. Wolfe–Quintero et al. (1998), based on the results of other studies that used errors per T-unit measure (E/T), suggested that the overall rates for errors per T-unit ranged from .035 for advanced learners in Perkins and Leahy’s (1980) study to 1.51 for students who failed a writing test in Perkins’s (1980) study.

<table>
<thead>
<tr>
<th>[Table 5] Accuracy of Writing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
</tr>
<tr>
<td>Collaboratively produced (N=24; Group=12)</td>
</tr>
<tr>
<td>Mean 36.60</td>
</tr>
<tr>
<td>S.D. 24.01</td>
</tr>
<tr>
<td>Individually produced (N=24)</td>
</tr>
<tr>
<td>Mean 29.75</td>
</tr>
<tr>
<td>S.D. 14.56</td>
</tr>
<tr>
<td>t 1.67</td>
</tr>
<tr>
<td>p .107</td>
</tr>
</tbody>
</table>

*p < .05

In terms of the total number of errors per T-units (E/T), the number of errors per T-units was large compared to the range of E/T scores, .035 to 1.51, suggested by Wolfe–Quintero et al. (1998), but collaboratively produced essays had less number of errors per T-units than individually produced essays. Collaboratively produced essays had average 1.04 errors per T-units, while individually produced essays had average 1.11 errors per T-units. Error-free T-unit ratio (EFT/T) of collaboratively produced essays (average .42) was marginally higher (average .41) than that of individually produced essays, which suggests that collaboratively produced essays were slightly more accurate.
[Table 6] Accuracy of Writing: Higher Level Students

<table>
<thead>
<tr>
<th>Students</th>
<th>No. of errors</th>
<th>No. of T-units</th>
<th>No. of EFT</th>
<th>E/T</th>
<th>EFT/T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaboratively produced (N=10; Group=5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>33.73</td>
<td>41.27</td>
<td>20.47</td>
<td>.77</td>
<td>.50</td>
</tr>
<tr>
<td>S.D.</td>
<td>31.78</td>
<td>20.21</td>
<td>9.94</td>
<td>.36</td>
<td>.15</td>
</tr>
<tr>
<td>Individually produced (N=10)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>29.73</td>
<td>38.27</td>
<td>20.33</td>
<td>.85</td>
<td>.51</td>
</tr>
<tr>
<td>S.D.</td>
<td>17.79</td>
<td>14.43</td>
<td>12.03</td>
<td>.47</td>
<td>.17</td>
</tr>
<tr>
<td>*p &lt; .05; **p &lt; .01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>t</td>
<td>.42</td>
<td>.51</td>
<td>.04</td>
<td>-.60</td>
<td>-.07</td>
</tr>
<tr>
<td>p</td>
<td>.678</td>
<td>.621</td>
<td>.968</td>
<td>.561</td>
<td>.940</td>
</tr>
</tbody>
</table>

[Table 7] Accuracy of Writing: Lower Level Students

<table>
<thead>
<tr>
<th>Students</th>
<th>No. of errors</th>
<th>No. of T-units</th>
<th>No. of EFT</th>
<th>E/T</th>
<th>EFT/T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaboratively produced (N=14; Group=7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>38.64</td>
<td>31.79</td>
<td>11.64</td>
<td>1.24</td>
<td>.36</td>
</tr>
<tr>
<td>S.D.</td>
<td>17.61</td>
<td>5.47</td>
<td>3.51</td>
<td>.55</td>
<td>.13</td>
</tr>
<tr>
<td>Individually produced (N=14)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>29.76</td>
<td>23.70</td>
<td>8.46</td>
<td>1.30</td>
<td>.35</td>
</tr>
<tr>
<td>S.D.</td>
<td>12.49</td>
<td>4.72</td>
<td>4.14</td>
<td>.55</td>
<td>.15</td>
</tr>
<tr>
<td>*p &lt; .05; **p &lt; .01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>t</td>
<td>3.42</td>
<td>4.47</td>
<td>2.52</td>
<td>-.34</td>
<td>.42</td>
</tr>
<tr>
<td>p</td>
<td>.004*</td>
<td>.001**</td>
<td>.025*</td>
<td>.736</td>
<td>.681</td>
</tr>
</tbody>
</table>

The collaborative and individual essays were also analyzed in terms of the students’ writing proficiency level. Interestingly, both in higher level students and in lower level students, their collaborative writing was more accurate than their individual writing in terms of the total number of error-free T-units and the number of errors per T-unit (E/T), while less accurate in terms of the total number of errors and the number of error-free T-units per T-unit (EFT/T).

In the case of higher level students, as shown in Table 6, the results for accuracy of texts were mixed although all of the differences were not significant. Collaboratively produced essays had more errors, but more error-free T-units as well. The number of errors per T-units (E/T) was slightly lower in collaboratively produced texts, suggesting that collaboratively produced texts were more accurate. However, the ratio of error-free T-units to T-units (EFT/T) was marginally lower in collaboratively produced essays, suggesting that collaboratively produced essays were less accurate.
The results of accuracy for lower level students, as shown in Table 7, were also mixed and were similar to those for higher level students. Collaboratively produced essays by lower level students had more errors, suggesting that their collaboratively produced essays were less accurate; the difference was significant, t(13) = 3.429, p = .004. However, there were more error-free T-units in their collaboratively produced essays, suggesting that they were more accurate; the difference was also significant, t(13) = 2.523, p = .025. The ratio of errors to T-units (E/T) was slightly lower in collaboratively produced essays, suggesting that the collaboratively produced essays were more accurate. However, the ratio of error-free T-units to T-units (EFT/T) was marginally higher, suggesting that their collaboratively produced texts were less accurate. However, all of the differences were not significant.

To summarize, the results of accuracy were mixed. Collaboratively produced essays had more errors than individually produced essays, suggesting that collaborative writing was less accurate. However, collaboratively produced essays also had more error-free T-units than individually produced essays, suggesting that collaborative writing was more accurate. These frequency measures, however, are likely to increase as the total number of words or the total number of error-free T-units is increased, as noted by Wolfe-Quintero et al. (1998). However, the number of errors per T-units was consistently lower and the ratio of error-free T-units to T-units was generally higher in collaboratively produced essays, suggesting that collaborative writing was more accurate. This result is in line with the results of previous studies (Glennding & Howard, 2001; Kowal & Swain, 1994; Storch, 1999, 2005).

In terms of the participants’ writing proficiency level, similar results were shown except for the number of error-free T-units per T-units (EFT/T), where collaborative writing of both higher and lower level students was less accurate than their individual writing. When comparing the accuracy of writing of higher and lower level students, there was also a big difference in the number of errors per T-units (E/T), which may suggest that higher level students tended to write not only more fluently but also more accurately than lower level students.

3. Comparison of Writing Complexity

Complexity reflects the writer’s willingness to risk the accuracy of their composition and to try various syntactic structures rather than to rely on simple and well-controlled structures. Thus, complexity should also be considered because there might be a trade off between complexity and accuracy (Foster & Skehan, 1996).
Table 8 presents a summary of the average results comparing grammatical and lexical complexity of collaboratively and individually produced essays. Collaboratively produced essays had the average 1.68 clauses per T-unit, while individually produced essays had the average 1.65 clauses per T-unit, suggesting that collaborative writing was grammatically more complex than individual writing. In addition, a type–token ratio (WT/$\sqrt{2W}$) of collaborative writing was 6.82, while that of individual writing was 6.31 and the difference was statistically significant, $t(23) = 4.040$, $p=.001$. This difference suggests that more varied words were used in collaborative writing and that collaborative writing was lexically more complex than individual writing.

Table 9 Complexity of Writing: Higher Level Students

<table>
<thead>
<tr>
<th>Students</th>
<th>No. of clauses</th>
<th>No. of T-units</th>
<th>C/T</th>
<th>No. of Word types</th>
<th>No. of words</th>
<th>WT/$\sqrt{2W}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaboratively produced (N=10; Group=5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Mean</em></td>
<td>69.95</td>
<td>41.27</td>
<td>1.76</td>
<td>253.33</td>
<td>602.47</td>
<td>7.31</td>
</tr>
<tr>
<td><em>S.D.</em></td>
<td>32.72</td>
<td>20.21</td>
<td>.18</td>
<td>61.72</td>
<td>185.68</td>
<td>.65</td>
</tr>
<tr>
<td>Individually produced (N=10)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Mean</em></td>
<td>58.26</td>
<td>38.27</td>
<td>1.73</td>
<td>221.53</td>
<td>556.53</td>
<td>6.70</td>
</tr>
<tr>
<td><em>S.D.</em></td>
<td>25.45</td>
<td>14.43</td>
<td>.15</td>
<td>59.28</td>
<td>226.59</td>
<td>.62</td>
</tr>
<tr>
<td><em>t</em></td>
<td>.19</td>
<td>.51</td>
<td>.54</td>
<td>1.41</td>
<td>.62</td>
<td>2.26</td>
</tr>
<tr>
<td><em>p</em></td>
<td>.848</td>
<td>.621</td>
<td>.601</td>
<td>.190</td>
<td>.547</td>
<td>.050*</td>
</tr>
</tbody>
</table>

* $p<.05$; ** $p<.01$; *** $p<.001$
The collaborative and individual writing were also analyzed in terms of the students’ writing proficiency level. In the case of higher level students, as shown in Table 9, collaborative writing had the average of 1.76 clauses per T-units, while individual writing had the average of 1.73 clauses per T-units. The score of grammatical complexity of collaborative writing was slightly higher than that of individual writing, suggesting that collaborative writing was grammatically more complex than individual writing. In addition, the average score of lexical complexity of collaboratively produced essays was 7.31, while that of individually produced essays was 6.70, suggesting that collaborative writing was lexically more complex than individual writing. Similar results were shown in the case of both higher and lower level students. However, only the differences in the lexical complexity were significant: $t(9) = 2.260$, $p = .050$ for higher level students and $t(13) = 3.954$, $p = .002$ for lower level students.

To summarize, the results of grammatical and lexical complexity suggest that collaborative writing was more complex than individual writing. Moreover, with respect to the participants’ writing proficiency level, the results suggested that both higher and lower students’ collaboratively produced essays were both grammatically and lexically more complex. This result, that collaboratively produced essays were grammatically more complex, is in line with previous research studies (Glendinning & Howard, 2001; Storch, 1999, 2005) that compared grammatical complexity in their studies.

4. Comparison of Writing Score

Table 11 presents a summary of the results comparing the average score of the essays produced collaboratively and individually. The average score of collaboratively produced...
essays ranged from 46.33 to 96.17 and the mean score was 80.72. On the other hand, the 
average score of individually produced essays ranged from 49.00 to 95.00 and the mean 
score was 80.03. The mean score of collaborative essays was marginally higher than that 
of individually produced essays, but the difference was not significant.

<table>
<thead>
<tr>
<th>Table 11</th>
<th>Writing Score: All Essays Considered</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>Collaboratively produced</td>
<td>24</td>
</tr>
<tr>
<td>Individually produced</td>
<td>24</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 12</th>
<th>Writing Score: Only First and Last Essays Considered</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>Collaboratively produced</td>
<td>24</td>
</tr>
<tr>
<td>Individually produced</td>
<td>24</td>
</tr>
</tbody>
</table>

Interestingly, the minimum score of collaborative essays was lower than that of 
individually produced essays. This result may be due to one lower level group who spent 
too much time discussing the topic and trying to reconcile their opinion; as a result, they 
had little time left to write their essay when they worked on their second essay. This 
group could receive only about two thirds of the scores that they achieved for their other 
collaborative essays. Since this group’s score had negatively affected the overall 
phenomenon, it would be meaningful to re-examine the essay scores of collaboratively and 
individually produced essays by excluding the scores of the second essay which was 
negatively affected and by re-calculating the average scores. Table 12 shows the results 
of comparing the average scores of collaboratively and individually produced essays 
without including the second essay. Both the minimum score and the mean score of 
collaboratively produced essays were higher than those of individually produced essays. 
The mean difference was statistically significant, t(23) = 2.469, p = .021.

The collaborative and individual essays were also analyzed in terms of the students’ 
writing proficiency level. In the case of higher level students, as shown in Table 13, the 
mean score of collaboratively produced essays was higher than that of individually 
produced essays although the difference was not significant. On the other hand, in the 
case of lower level students, as shown in Table 14, the average score of collaboratively 
produced essays was slightly lower than that of individually produced essays although the 
difference was not significant. This result may be due to the group that failed to manage
their time and received a very low score compared to the scores that they received for their other two collaborative essays.

<table>
<thead>
<tr>
<th>Table 13</th>
<th>Writing Score: Higher Level Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>Collaboratively produced</td>
<td>10</td>
</tr>
<tr>
<td>Individually produced</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 14</th>
<th>Writing Score: Higher Level Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>Collaboratively produced</td>
<td>14</td>
</tr>
<tr>
<td>Individually produced</td>
<td>14</td>
</tr>
</tbody>
</table>

To summarize, the analytic scores of collaboratively produced essays were higher than those of individually produced essays. This finding supports the results of previous studies (Beck, 1993; Storch, 1999, 2005). Similarly, the scores of collaboratively produced essays by higher and lower level students were also higher than those of individually produced essays although the differences were not significant. Interestingly, however, there was one group that received a lower score on one essay compared to their other essays because they had a hard time reconciling their opinion when they worked on the essay. This result seemed to imply that collaborative writing was better only when it was completed with few or no conflicts, or when the conflicts were well-managed, particularly when they work under time constraint. Otherwise, the results can be lower than individual writing.

V. CONCLUSION

This study is one of the first to compare Korean EFL students’ collaboratively and individually produced texts in the aspects of fluency, accuracy, complexity, and essay score. A total of 24 Korean EFL college students participated in this study. They were grouped into pairs and were asked to write three essays collaboratively and another three essays individually with a time limit. The same students’ collaboratively produced essays and individually produced essays were compared. Valid and reliable measures of fluency, accuracy, and complexity were used, as suggested by Wolfe-Quintero et al. (1998).

The fluency of writing was measured by the frequency of production units in the
essays such as words, sentences, clauses, and T-units, as well as by the length of production units such as words per clause (W/C) and words per T-unit (W/T). The results showed that there were significant differences in the frequency of all of the production units except for the total amount of clauses. Although the differences were not significant, clause length (W/C) and T-unit length (W/T) in collaboratively produced essays were all longer. In the case of higher level students, their collaboratively produced essays were more fluent than their individually produced essays although the differences were not significant. However, lower level students' collaboratively produced essays were statistically significant compared with their individually produced essays. Since lower level students felt less of a burden when they wrote collaboratively, they seemed to produce more fluent texts. Thus, it can be concluded that Korean ELF students' collaborative writing was statistically more fluent than their individual writing.

The accuracy of writing was measured by the frequency of errors and error-free T-units as well as by the error-free T-unit ratio (EFT/T) and the total number of errors per T-unit (E/T). Collaboratively produced essays were less accurate in terms of the total amount of errors, but more accurate in terms of the total number of error-free T-units. However, these frequency measures tended to increase as the total number of words increased, as pointed out by Wolfe-Quintero et al. (1998). Collaboratively produced essays were also more accurate in terms of the two ratio measures such as E/T and EFT/T although most of the differences were not significant. Similar results were shown in the case of both higher level and lower level students. Overall, the results were mixed: collaborative writing was less accurate because it had more errors, but it was generally more accurate than their individual writing in terms of the other three measures.

Grammatical complexity of writing was measured by T-unit complexity ratio (C/T) and lexical complexity of texts was measured by a type–token ratio ($\frac{WT}{\sqrt{2W}}$). The results showed that collaboratively produced essays were both grammatically and lexically more complex although only the difference in lexical complexity was statistically significant. Similar results were shown in the case of both higher level and lower level students. Thus, it can be concluded that Korean EFL students' collaborative writing was generally more complex than their individual writing.

The average score of collaboratively produced essays was slightly higher than that of individually produced essays although the difference was not significant. However, one of the groups barely finished their essay when they worked on their second essay because they tried to resolve their disagreement on the topic by discussing at length and had little time left for writing. When the essay scores were re-examined excluding the scores of
second essays, the average score of collaboratively produced essays was significantly higher than those of individually produced essays. Thus, it can be concluded that collaborative writing was better only when there were few or no conflicts between the group members or when the conflicts were managed.

Many researchers have claimed that students should be encouraged to collaborate throughout the writing process, not just on the product but also on the process of writing (Daiute, 1986; Wells, Chang & Maher, 1990). Moreover, since collaborative writing has been widely used and will be increasingly used in industry, academia, and government, all students and teachers need to be prepared to write with others in order to be able to handle the complexities of collaborative writing process (Fontaine & Hunter, 2006; Speck, 2002).

Collaborative writing could be beneficial to both students and teachers (Seong, 2006). Collaborative writing could help reduce the workload of writing teachers because the students in the collaborative classroom could get feedback from their peer students and thus they do not have to solely rely on their teacher. Through the collaborative work of writing, the students could learn about the writing process and skills by helping each other to produce better essays. Thus, the experience of collaborative writing could be beneficial for the students’ learning of and practicing writing. The collaborative writing classroom could also provide students a more comfortable and interactive atmosphere so that they could get more opportunities for negotiating. Students can also learn how to work with peers, how to compromise effectively, and how to value differences through their experiences of collaborative writing (Speck, 2002). In addition, the collaborative writing classroom could lead students to be engaged in active interaction and learning. Thus, students need to be provided with opportunities for being prepared for writing collaboratively. The findings of this study may also benefit writing teachers who may want to adopt computer–supported collaborative writing in their writing classroom.

Even though this study was carefully designed and conducted, the following suggestions can be recommended for further study. First, it would be beneficial to replicate this study with more students at other universities or at other school levels such as primary or secondary students. It would also be valuable to replicate this study with different types of writing task or under different writing conditions such as providing longer time to complete the task. Second, it would be also insightful to replicate this study with different methods of grouping, such as different group sizes or with mixed-ability groups, as recommended for a collaborative activity by many researchers (Ellis, 2003; Hamm, 1992; Seong, 2006). Fourth, it may be informative to compare the written texts
produced collaboratively and individually at the discourse level as suggested by Wolfe-Quintero et al. (1998) in order to find out if there is any difference between the two types of written texts.

REFERENCES


**Key words:**
Application Levels: computer–supported collaborative writing, fluency, accuracy, complexity

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Current research on curriculum-based textbooks indicates that there is a lack of comprehensive corpus-based studies of textbooks in the Korean EFL context. This recognition prompted us to investigate the vocabulary levels of elementary and secondary curriculum-based English textbooks. A corpus of 5,628,795 running words from a total of 140 different textbooks with the inclusion of the activity books was compiled for analysis. The operational measures for comparison involved the 2,000 General Service List (GSL), the 570 Academic Word List (AWL), the British National Corpus, the Freiburg-Brown Corpus of American English, and the Freiburg-LOB Corpus of British English. Our results indicated that 68% of the textbook words were beyond the 2,570 word level (i.e., total of word families of the GSL & AWL). Further corpus-based analysis indicated that textbooks of secondary schools presented word lists as large as 7,430 words compared to the 3,000 words that are permitted at the high school level by the National Curriculum. In the second part of the study, views and opinions of 600 stakeholders (i.e., learners, teachers, and experts) on a revision of the Basic Word List of the National Curriculum are presented. The results provide implications for the development of a revised Basic Word List.

1. INTRODUCTION

The issue of controlling vocabulary level has not been questioned in the development
of materials for vocabulary teaching and learning, such as in graded readers (Nation, 2003), and there is now a collection of vocabulary research demonstrating how knowledge of high frequency words is related to text coverage (Nation & Beglar, 2007). It has been noted in vocabulary learning how the group between 1,500–2,000 high-frequency words needs to be learned as quickly as possible and deserves attention in teaching (Nation, 2005). However, the authenticity of how curriculum-based textbooks published in the Korean context represents the use of the high frequency words of the native-speaker corpus has not been sufficiently investigated. It would seem to be necessary to discover if authorized textbooks that are being used nation-wide do, in fact, reflect native-speaker use of the English lexicon.

With regard to analyzing the relationship between curriculum-based textbooks published within the Korean context and the high-frequency words in the native-speaker corpus, previous studies have taken corpus-based approaches to analyzing textbook corpora at different grade levels (Im, 2010; Kim & Suh, 2006; Kwon, 2002, 2004; Yoon, 2009). The size of the textbook corpus in each study, however, has been limited to analyzing only those for certain grade levels, and has excluded the corpus of the accompanying activity books which is a prominent feature of the recently authorized textbooks of the 2007 Revised National Curriculum. Previous research thus far does not provide a comprehensive analysis of the textbooks for comparison across different school types (i.e., elementary and secondary school levels), and the analysis of the textbook corpus provides insufficient guidelines for how subsequent vocabulary lists can be developed for the National Curriculum of English.

The lack of studies with respect to the comparative analysis of the textbook corpus of different school types prompted the researchers to conduct an analysis of textbooks comparing the high-frequency word lists of the native-speaker corpus. In the latter part of the study, we also collected the opinions of stakeholders (i.e., students, parents, teachers, and experts) involved in English teaching and learning in order to seek some guiding principles for the development of a subsequent Basic Word List of the National Curriculum. The purpose of the present study is to provide guidelines for the development of a Basic Word List of the National Curriculum so that those learners whose L2 learning is limited to the EFL learning contexts can seek ways to expand their vocabulary knowledge.
II. BACKGROUND

1. Corpus Linguistics and L2 Teaching

Research in corpus linguistics has become popular with the development of computer technology, and some consider the field essentially a technology (Simpson & Swales, 2001, p. 1). The contribution of corpus linguistics to second language (L2) teaching is related to the importance that it puts on the empirical study of large databases of language (Biber, Conrad & Reppen, 1998; McEnery & Wilson, 1996; Kennedy, 1998; Sinclair, 1991; Stubbs, 1996; Tognini-Bonelli, 2001). The approach has made it possible to conduct studies with more data and more variables than was previously feasible, and to analyze the ESL/EFL textbook corpus which is the primary interest of the present study. Such corpus-based analysis of textbooks may provide implications and guidelines for the development of a word list to be adopted in a curriculum for a specific group of L2 learners.

The most notable contributions of corpus linguistics to language teaching thus far have been studies that describe how language features are used. These descriptions are especially important for language teaching because the textbooks for second language learners and teachers have commonly been shown to include incomplete or misleading explanations. Biber, Conrad and Reppen (1998), Holmes (1988), and Tognini-Bonelli (2001), for example, found through corpus-based analysis that L2 textbooks do not always reflect native-like use of certain discourse functions. Another branch of research that has emerged from corpus linguistics is the application of corpus-based vocabulary study for the generation of word lists in vocabulary learning. With the use of a particular application of corpus linguistics, it has therefore become possible to enumerate the words that are common across a variety of academic texts. In this connection, it is no longer surprising to know that learners need to have a high coverage of the most frequent words in order to read general texts. In his recent study, Nation (2006) noted that, if 98% coverage of a text is needed for unassisted comprehension, a vocabulary of 8,000 to 9,000 word families is needed for comprehension of written text and a vocabulary of 6,000 to 7,000 for spoken text. In the context of our present study, we take a corpus-linguistics approach for conducting a corpus-based analysis and comparison of the frequency of words1) in the curriculum-based textbooks with respect to the native-speaker corpus.

1) Unless otherwise noted, ‘words’ in the context of the present study refer to ‘word families’, and not ‘type’ of words as when counted individually.
2. Previous Corpus-based Studies of English Textbooks in the Korean Context

Although corpus-based approaches for textbook analysis have drawn the attention of researchers in recent years, a majority of the studies have been limited to interest in analyzing textbooks at certain grade levels or to a few representative texts for the analysis of specific vocabulary or grammar features (Im, 2010; Kim, 2002; Kim & Suh, 2006; Park, 2002). One of the earlier corpus-based studies of textbooks published in Korea was conducted by Park (2002), who analyzed and compared the vocabulary of the secondary school textbooks of North Korea with those of South Korea. While finding a high proportion of high-frequency words in both texts, he found that the types of vocabulary used in the texts differed in the representation of the differing ideologies of the South and the North.

More recent corpus-based studies that have taken a comprehensive approach to the analysis of the vocabulary aspects of textbooks have been conducted by Kwon (2002, 2004), and Yoon (2009). In her two consecutive studies, Kwon (2002, 2004) comprehensively examined the vocabulary aspects of textbooks at the middle school level. In her first study, Kwon (2002) conducted a corpus-based analysis of the Middle School 7th and 8th grade textbooks to compare the use of vocabulary between the 6th and 7th National Curricula of English. She found that the 319 high-frequency words of the corpus comprised 80% of the textbook words. In her follow-up study, Kwon (2004) expanded her previous corpus by also including the 9th grade textbook corpus and compared vocabulary use between the two curricula. She found, in her studies, that the number of words had increased in the more recent curriculum. At the same time, she found that a higher percentage of words were recycled at the lower grades in the 6th National Curriculum whereas there was a higher percentage of words recycled at the higher grades in the 7th National Curriculum. In both studies, she found a high portion of the words to be found in the native-speaker corpus. There is, however, lack of attention on or explanation for the types of low-frequency words that she found in the corpus. Yoon (2009) conducted a corpus-based analysis of the vocabulary in 25 revised Middle School English 1 (Grade 7) textbooks. Her specific area of interest was the examination of the frequency and distribution of words, type/token ratio, and high-frequency words compared to the previous English textbooks and the British National Corpus (BNC).

Another area of interest for her was the use of words from the Basic Word List of the National Curriculum. She found that there was more recycling of words in the previous textbooks. Comparison with the word list of the BNC indicated that the native-speaker corpus contained a higher frequency of function words: whereas, the
textbooks included a higher frequency of words such as *I* and *you* because of the spoken nature of the textbook corpus. Her results imply that we may need to design separate lists for spoken and written basic word lists. What is most noticeable from her study, however, is that she found 13.3% of the textbooks' words to be beyond the vocabulary level required by the Basic Word List of the National Curriculum (i.e., 2,315 words). As she acknowledges, the number of off-list words of the basic word list is expected to increase dramatically when textbooks are analyzed for both elementary and secondary school textbooks as a single corpus; and this will, as we can expect, lead to an increased vocabulary learning burden for university-bound students who are preparing for the CSAT.

3. The Basic Word List of the National Curriculum of English

Since the present study is interested in analyzing the frequency of the different words used in the curriculum–based textbooks authorized by the Korean Ministry of Education, we review the National Curriculum of English with particular interest in the criteria

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary School</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade 3</td>
<td>80~120 words</td>
<td>Within 450 words</td>
<td>Within 120 words</td>
<td></td>
</tr>
<tr>
<td>Grade 4</td>
<td>80~120 words</td>
<td>Within 120 words</td>
<td>Within 500 words</td>
<td></td>
</tr>
<tr>
<td>Grade 5</td>
<td>90~130 words</td>
<td>Within 140 words</td>
<td>Within 140 words</td>
<td></td>
</tr>
<tr>
<td>Grade 6</td>
<td>90~130 words</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle School</td>
<td>Approx. 200 words</td>
<td>Within 1,250 words</td>
<td>Within 170 words</td>
<td></td>
</tr>
<tr>
<td>Grade 7</td>
<td>Approx. 250 words</td>
<td>Within 1,290 words</td>
<td>Within 280 words</td>
<td></td>
</tr>
<tr>
<td>Grade 8</td>
<td>Approx. 350 words</td>
<td>Within 390 words</td>
<td>Within 390 words</td>
<td></td>
</tr>
<tr>
<td>Grade 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School</td>
<td>Grade 10</td>
<td>Approx. 450 words</td>
<td>Within 450 words</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>1,700</td>
<td>1,790</td>
<td>1,810</td>
<td></td>
</tr>
</tbody>
</table>
established for vocabulary. The previous Ministry of Education (1997) established a basic word level of 2,067 in its guidelines for the Basic Word List of the National Curriculum of English; however, because of the demand for a larger collection of words, the Ministry of Education and Human Resources Development (2006) extended the Basic Word List to 2,315 words. According to the guidelines for the Basic Word List, the suggested target number of words for each grade as listed in the 2009 Revised National Curriculum established by the Ministry of Education, Science, and Technology (hereafter ‘MEST’) for grades 3 to 6 is within 520 words, and within 1,290 words for grades 7 to 10, which totals a maximum of 1,810 words. Table 1 shows the details while also showing how the target number of words for vocabulary learning has increased since the revision of the curriculum. Guidelines present only the basic word forms (i.e., headwords) by assuming inclusion of derivatives and inflectional forms. Derivatives commonly used are presented separately in the word list.

Guidelines for the vocabulary level of the Elective Subjects of the High School English Curriculum provide further information on the permitted number of words that should be followed for teaching and materials development at each grade level or subject in the high school curriculum. Table 2 indicates how the permitted number of words is within 1,810 words for High School Common English and a maximum of 3,000 words for Advanced English Reading and Writing. As a whole, this indicates how the maximum number of words permitted for teaching is 3,000 words in the National Curriculum of English in Korea.

<table>
<thead>
<tr>
<th>Textbook Type</th>
<th>Permitted Number of Words for Teaching</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School Common English</td>
<td>Within 1,810 words</td>
</tr>
<tr>
<td>High School English I</td>
<td>Within 2,000 words</td>
</tr>
<tr>
<td>High School English II</td>
<td>Within 2,800 words</td>
</tr>
<tr>
<td>Practical English Conversation</td>
<td>Within 1,200 words</td>
</tr>
<tr>
<td>Advanced English Conversation</td>
<td>Within 1,800 words</td>
</tr>
<tr>
<td>English Reading and Writing</td>
<td>Within 2,300 words</td>
</tr>
<tr>
<td>Advanced English Reading and Writing</td>
<td>Within 3,000 words</td>
</tr>
</tbody>
</table>

Another important guideline for materials developers and writers is that 75% of the 3,000 words (where 90% were categorized to be from the 1st–3rd 1,000 word bands) should come from the Basic Word List of the National Curriculum. This guideline is
critical to textbook writers and developers since candidate textbooks are evaluated on this
criterion by the textbook authorizing group on behalf of MEST. When selection of 25% of
the words is left to the decision of the publishers, however, vocabulary exposure is
uncontrolled and haphazard. This was one area that prompted us to take a corpus-based
approach to analyzing textbook corpora and to examine the off-list words of the Basic
Word List.

Having reviewed the recent literature on corpus-based studies of textbooks published
in the Korean context and the guidelines presented for the Basic Word List of the
National Curriculum, the following research questions are presented to ultimately suggest
guidelines for the development of a refined vocabulary list of the National Curriculum of
English:

RQ1: What is the vocabulary level of the MEST-authorized textbooks as a whole?
How do the results compare to the native-speaker corpus?

RQ2: What are stakeholders’ views in the area of English Education in Korea with
respect to how vocabulary learning and teaching should be implemented in the
future National Curricula of English?

RQ3: What implications do the results provide for designing a subsequent Basic Word
List of the National Curriculum and the Korean College Scholastic Ability
Test(CSAT) for university-bound students?

III. MATERIALS AND METHODS

1. Compilation of Textbook Corpus

The types of curriculum-based textbooks that were analyzed are those currently used
in schools. An electronically compiled corpus of 5,628,795 tokens from a total of 140
textbooks with the inclusion of the activity books was used for analysis. The detailed
number of textbooks for each grade is presented in Table 3. Elementary school textbooks
for 5th and 6th years were not included since they are scheduled for authorization in 2011.
### Table 3: Details of Textbooks Used for Corpus Analysis

<table>
<thead>
<tr>
<th>Type</th>
<th>Grade/ Subject</th>
<th>Number of Textbooks*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary School</td>
<td>Grade 3</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Grade 4</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Grade 7</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>Grade 8</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Grade 9</td>
<td>15</td>
</tr>
<tr>
<td>High School</td>
<td>Grade 10 (High School Common English)</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>High School English I</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>High School English II</td>
<td>10</td>
</tr>
<tr>
<td>Elective Subjects</td>
<td>Practical English Conversation</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Advanced English Conversation</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>English Reading and Writing</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Advanced English Reading and Writing</td>
<td>4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>140</strong></td>
</tr>
</tbody>
</table>

Note: *= Here activity books are not counted separately but included as a part of the textbook corpora. Exceptions apply to Elective Subjects of the High School English Curriculum since Activity Books do not exist for these materials.

2. **Text Analysis Tools**

1) **GSL RANGE Program**

The elementary and secondary textbook corpora were analyzed for different word families\(^2\) using the GSL RANGE program (Heatley, Nation, & Coxhead, 2002). This software uses three types of Base Word Lists: Baseword One is the first 1,000 words, Baseword Two is the second 1,000 words of the General Service List (West, 1953), and Baseword Three consists of the 570 words of the Academic Word List (Coxhead, 2000). The software compared the textbook corpus against the Base Word Lists in the program to discover what words in the corpus are and are not in the lists, and what percentage of the vocabulary items in the corpus are covered by the lists, namely text coverage.\(^3\) The program shows how frequently the general words or academic words occur in the curriculum–based textbooks, and compares the extent to which the textbooks can prepare

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\(^2\) A word family is a word stem which includes both inflectional variations and derivational variations regardless of part of speech, for example, the word family go includes the word types go, goes, going, went, gone.

\(^3\) Coverage here refers to the percentage of the running words in a text or corpus that are also covered by a particular word list.
a learner for text coverage. Low-frequency words that are not in the list are indicated as ‘not found in any list.’

2) BNC RANGE Program

Another RANGE program that was used to compare the word families of the textbook corpus against the British National Corpus base word lists was the BNC Range program (Heatley & Nation, 2006). The British National Corpus (BNC), with more than 100 million words, is considered one of the largest corpora of present-day English usage in speech and in publications in the United Kingdom (Leech, Rayson, & Wilson, 2001). The 14,000 high-frequency word families are divided into fourteen base word lists, each containing exactly 1,000 word families, so that analysis of the corpus is possible at 14 different levels.

3) Frequency Program

The frequency program (Heatley & Nation, 2006) was used to compare the frequency of words in the textbook corpus against the native-speaker corpus. The program presents the output with information on the type4) of words by frequency order listing. The 1,000,000 word Frown (Freiburg–Brown Corpus of American English) (Hundt, Sand, & Skandera, 1999), and 1,000,000 word FLOB (The Freiburg–LOB Corpus of British English) (Hundt, Sand, & Siemund, 1999) were used to investigate how the twenty most frequent words occur in each type of corpus.

3. Questionnaires for Views and Opinions on the Revision of the Basic Word List

In the second part of the study, nine issues were raised in the form of a questionnaire to investigate stakeholders’ (i.e., students, teachers, and experts in English Education) opinions and views with regard to the revision of the Basic Word List of the National Curriculum. The questionnaire topics were collected based on the researchers’ experiential knowledge of national language policies of English Education in Korea with regard to how words can be better presented in the National Curriculum, such as in the guidelines for the Basic Word List (BWL). The problems and issues were discussed and reviewed by two experts (i.e., university faculty/researchers of English Education) in the related fields

4) A type is a word form that makes up a corpus; for example, the types of the word family for go are go, goes, going, went and gone.
to ascertain the validity of the questions. The questions were designed to identify the stakeholders’ perceived needs for a revised BWL of the National Curriculum, how basic words should be presented in the curriculum, what the target vocabulary size of the word list should be, and views on the comparison of word level between the College Scholastic Ability Test and the BWL in order to ultimately reach a principle for presenting a revised word list. The specific questions are presented in the Results and Discussion section.

4. Survey Participants

The questionnaires designed in 3) were distributed to stakeholders in the area of English Education. The 600 people who responded to the questions consisted of 200 secondary school students (Middle School=100, High School=100), 100 Elementary school teachers, 200 secondary school teachers (Middle School=100, High School=100), and 100 experts in the area of English Education (university faculty and researchers). Details on background variables are presented in Table 4. Elementary school students were excluded.

<table>
<thead>
<tr>
<th>Background Variables</th>
<th>Number of Respondents</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>220</td>
<td>36.7</td>
</tr>
<tr>
<td>Female</td>
<td>380</td>
<td>63.3</td>
</tr>
<tr>
<td><strong>Position/Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle School Students</td>
<td>100</td>
<td>16.7</td>
</tr>
<tr>
<td>High School Students</td>
<td>100</td>
<td>16.7</td>
</tr>
<tr>
<td>Elementary School Teachers</td>
<td>100</td>
<td>16.7</td>
</tr>
<tr>
<td>Middle School Teachers</td>
<td>100</td>
<td>16.7</td>
</tr>
<tr>
<td>High School Teachers</td>
<td>100</td>
<td>16.7</td>
</tr>
<tr>
<td>University Faculty/ Researchers</td>
<td>100</td>
<td>16.7</td>
</tr>
<tr>
<td><strong>Number of Years of Experience as Teacher or Specialist in English Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 5 years</td>
<td>106</td>
<td>26.5</td>
</tr>
<tr>
<td>5~10 years</td>
<td>98</td>
<td>24.5</td>
</tr>
<tr>
<td>11~15 years</td>
<td>52</td>
<td>13.0</td>
</tr>
<tr>
<td>16~20 years</td>
<td>33</td>
<td>8.3</td>
</tr>
<tr>
<td>20 or more years</td>
<td>106</td>
<td>26.5</td>
</tr>
<tr>
<td>No Response</td>
<td>5</td>
<td>1.3</td>
</tr>
<tr>
<td><strong>Location of Student/Teacher</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metropolitan Regions</td>
<td>564</td>
<td>94.0</td>
</tr>
<tr>
<td>Suburban Regions</td>
<td>32</td>
<td>5.3</td>
</tr>
<tr>
<td>Rural Regions</td>
<td>4</td>
<td>0.7</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>600</td>
<td>100</td>
</tr>
</tbody>
</table>
in the collection of responses since the questions were considered unsuitable to answer at their level. For practical reasons, the questionnaires were distributed, for the most part, in suburban and metropolitan regions; thus, the researchers acknowledge that the results may contain limitations in representing responses at a nation-wide level.

IV. RESULTS AND DISCUSSION

1. Corpus-based Analysis of Textbooks

1) Vocabulary profile based on the General Service List (GSL) and the Academic Word List (AWL)

This section answers the research question that examines the vocabulary profile of the textbooks authorized by MEST. In the analysis, we compared the textbook corpus to the 2,000 word families of the General Service List (GSL) (i.e., high-frequency words) and the 570 word families of the Academic Word List (AWL), these being, thus far, the most used native speaker word lists. Table 5 illustrates the analysis of the elementary and secondary school (middle and high school) textbooks based on the GSL and AWL.

<table>
<thead>
<tr>
<th>[Table 5] Analysis of Textbooks Based on GSL and AWL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Word Level</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>(1) 1st 1000</td>
</tr>
<tr>
<td>(2) 2nd 1000</td>
</tr>
<tr>
<td>(3) AWL</td>
</tr>
<tr>
<td>not in the lists</td>
</tr>
<tr>
<td>(1)+(2)+(3)</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

When we recall that the permissible number of target words is 520 for Grade 6 and a maximum of 1,360 words at the end of the middle school curriculum (which includes the 520 words; refer back to Table 1 for details), we can see from Table 5 that the number of words exceeds the 2,570 word families of the GSL and AWL by 35% at the elementary school level and 50% at the middle school level. It is interesting to note that, in the analysis, approximately 7% (i.e., 6.94%) of the words in the secondary school textbooks
were seen to consist of academic words. Since the British Academic Spoken English contains only 4.36% academic words and 4.97% for the Wellington Written Corpus, this means that our secondary school textbooks may be using more academic words than other general English texts. Most noticeably, however, the cumulative percentage of 67.78% for ‘not in the lists’ indicated a high proportion of low-frequency words; this indicates how vocabulary learning has not been sufficiently controlled in teaching or materials development. Although publishers are permitted by MEST to select 25% of the lexicon from the off-list words of the BWL, the results, as a whole, show that textbooks may be offering exposure to vocabulary that is random rather than frequency-based, leading to a substantial learning burden for the students.

2) Vocabulary profile based on the British National Corpus (BNC) 14,000 word list

As illustrated in the previous section, because of a relatively high percentage of words (i.e., 67.78%) going beyond the 2,570 word level (i.e., the GSL & AWL), we conducted an analysis with the BNC RANGE Program of the more advanced words based on the BNC 14,000 word list. The details are presented in Table 6 showing what percentage of the vocabulary items in the corpus are covered by the lists.

In spite of comparing the textbook corpus against a larger corpus, the cumulative percentage shows that 12% of the words are not listed in the BNC Word List. Considering that the native-speaker corpus contains less than 1% of the low-frequency words beyond the 5,000 word level (Nation, 2006), the results indicate that the textbook corpus contains a relatively larger variety of low-frequency words compared to the BNC. The total number of word families for each school type indicates that 861 words (i.e., as opposed to the 520 words of the Basic Word List), 4,055 words (i.e., as opposed to 1,360 words), and 7,430 words (i.e., as opposed to 3,000 words) respectively have been used in elementary, middle, and high schools. As stated previously in 3. The Basic Word List of the National Curriculum of English, the permissible maximum number of words for teaching at the high school level is 3,000 words in the National Curriculum of English. The analysis of textbook corpus clearly shows, however, that, by middle school, the vocabulary level exceeds that of the high school level (i.e., 3,000 words). We are therefore doubtful of the validity or usefulness of the guidelines for the BWL of the National Curriculum, and suggest a revision of the BWL in the next curriculum.
3) Word frequency list based on Freiburg-Brown (Frown) and Freiburg-LOB (FLOB)

At an exploratory level, the textbook corpus, in order to extrapolate the twenty most frequent words, was further compared to the most recently compiled native-speaker corpora: the Freiburg-Brown Corpus of American English (i.e., Frown), and the Freiburg-LOB British Corpus of English (i.e., FLOB). Table 7 presents the twenty most frequent words by corpus type.

The analysis indicates that function words, such as articles and prepositions rank high on the frequency list; this coincides with Yoon’s (2009) findings when she compared the middle school textbook corpus to the frequency list of the BNC. The frequency list also indicates that words in the Frown and FLOB, regardless of the type of English (i.e., American or English), are similarly ranked. In the list, the words proceed in the order of ‘the’ > ‘of’ > ‘and’ > ‘to’ > ‘a’ > ‘in.’ The textbooks, on the other hand, contain the verb ‘to be’, and pronouns, such as, ‘I’, ‘you’, ‘he’, and ‘we’. Interrogatives ‘what’ and ‘how’ also ranked high on the list; a possible explanation for this may be that the textbooks contain...
a high portion of English spoken discourse; whereas the Frown and FLOB are primarily written by nature.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Elementary</th>
<th>Middle</th>
<th>High</th>
<th>TOTAL</th>
<th>Frown</th>
<th>FLOB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>be</td>
<td>33,135</td>
<td>the</td>
<td>150,220</td>
<td>be</td>
<td>258,560</td>
</tr>
<tr>
<td>2</td>
<td>I</td>
<td>24,061</td>
<td>I</td>
<td>94,736</td>
<td>be</td>
<td>126,194</td>
</tr>
<tr>
<td>3</td>
<td>you</td>
<td>18,732</td>
<td>a</td>
<td>87,917</td>
<td>a</td>
<td>99,795</td>
</tr>
<tr>
<td>4</td>
<td>it</td>
<td>14,974</td>
<td>the</td>
<td>83,141</td>
<td>I</td>
<td>89,683</td>
</tr>
<tr>
<td>5</td>
<td>do</td>
<td>9,939</td>
<td>you</td>
<td>69,203</td>
<td>to</td>
<td>86,092</td>
</tr>
<tr>
<td>6</td>
<td>a</td>
<td>9,144</td>
<td>to</td>
<td>59,394</td>
<td>you</td>
<td>82,267</td>
</tr>
<tr>
<td>7</td>
<td>what</td>
<td>6,439</td>
<td>do</td>
<td>41,393</td>
<td>and</td>
<td>55,001</td>
</tr>
<tr>
<td>8</td>
<td>and</td>
<td>5,916</td>
<td>of</td>
<td>33,944</td>
<td>do</td>
<td>49,800</td>
</tr>
<tr>
<td>9</td>
<td>can</td>
<td>4,845</td>
<td>it</td>
<td>31,264</td>
<td>in</td>
<td>47,262</td>
</tr>
<tr>
<td>10</td>
<td>the</td>
<td>4,713</td>
<td>in</td>
<td>28,077</td>
<td>do</td>
<td>40,650</td>
</tr>
<tr>
<td>11</td>
<td>this</td>
<td>4,657</td>
<td>have</td>
<td>22,470</td>
<td>it</td>
<td>40,433</td>
</tr>
<tr>
<td>12</td>
<td>yes</td>
<td>4,529</td>
<td>he</td>
<td>21,242</td>
<td>have</td>
<td>31,933</td>
</tr>
<tr>
<td>13</td>
<td>let</td>
<td>4,479</td>
<td>what</td>
<td>18,426</td>
<td>that</td>
<td>31,050</td>
</tr>
<tr>
<td>14</td>
<td>how</td>
<td>4,059</td>
<td>of</td>
<td>18,220</td>
<td>he</td>
<td>26,364</td>
</tr>
<tr>
<td>15</td>
<td>hello</td>
<td>3,973</td>
<td>go</td>
<td>16,639</td>
<td>what</td>
<td>24,468</td>
</tr>
<tr>
<td>16</td>
<td>look</td>
<td>3,503</td>
<td>can</td>
<td>16,064</td>
<td>for</td>
<td>24,200</td>
</tr>
<tr>
<td>17</td>
<td>like</td>
<td>3,513</td>
<td>she</td>
<td>15,594</td>
<td>they</td>
<td>22,990</td>
</tr>
<tr>
<td>18</td>
<td>listen</td>
<td>3,498</td>
<td>for</td>
<td>14,881</td>
<td>we</td>
<td>19,982</td>
</tr>
<tr>
<td>19</td>
<td>have</td>
<td>3,458</td>
<td>we</td>
<td>14,634</td>
<td>with</td>
<td>19,123</td>
</tr>
<tr>
<td>20</td>
<td>no</td>
<td>3,448</td>
<td>that</td>
<td>14,507</td>
<td>on</td>
<td>17,734</td>
</tr>
</tbody>
</table>

In particular, it is interesting to note that 'hello' ranked high in the list at the elementary school level. This may also be attributed to the teaching of spoken English. Other words such as 'look' and 'listen' also ranked high on the list. This may be due to the way the L2 is used for giving directions in the textbooks at the elementary school level. The results demonstrate that there are differences in the use of high-frequency words between the textbook corpus and the native-speaker corpus. In effect, this also demonstrates the differences found between simplified texts (i.e., textbooks) and authentic texts, an aspect that needs to be considered for the development of word lists and materials development.

Another aspect of the textbook corpus that was considered worthy of attention was the appearance of words unique to each school type. There were respectively 8 words, 184
words, and 3,631 words that were limited to the elementary, middle, and high school levels respectively. Table 8 illustrates some of the words. Elementary school words such as ‘clang’, ‘tweet’, ‘shush’, and ‘whoa’ (onomatopoeic expressions) demonstrate how young learners may be fond of using these words in their discourse.

Most noticeably, however, the huge gap in the number of unique words found between middle and high schools demonstrates how vocabulary learning may not be based on a spiral approach to learning, or through the recycled use of words, a principle that is important for long-term vocabulary retention (Webb, 2007).

<table>
<thead>
<tr>
<th>Rank</th>
<th>Elementary</th>
<th>Middle</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>clang</td>
<td>cardinal</td>
<td>apparent</td>
</tr>
<tr>
<td>2</td>
<td>hew</td>
<td>larva</td>
<td>budget</td>
</tr>
<tr>
<td>3</td>
<td>phonic</td>
<td>peacock</td>
<td>client</td>
</tr>
<tr>
<td>4</td>
<td>rabbi</td>
<td>saucer</td>
<td>commit</td>
</tr>
<tr>
<td>5</td>
<td>shush</td>
<td>snatch</td>
<td>confer</td>
</tr>
<tr>
<td>6</td>
<td>tack</td>
<td>tadpole</td>
<td>contract</td>
</tr>
<tr>
<td>7</td>
<td>tweet</td>
<td>template</td>
<td>council</td>
</tr>
<tr>
<td>8</td>
<td>whoa</td>
<td>etc</td>
<td>etc</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>184</td>
<td>3631</td>
</tr>
</tbody>
</table>

In fact, to analyze if textbooks encourage spiral learning has been an important criterion of the materials evaluation process when the textbook authorizing committee evaluates candidate textbooks. This provides a type of guideline that the BWL and textbooks may need to develop in order to encourage the recycling of words. One way to do this in textbooks has been proposed by Nation (2003) through what he labels ‘elaborating’ as one of the psychological conditions that need to occur for the enhancement of vocabulary learning. Elaborating is further categorized as receptive generative use (i.e., meeting a known word in listening or reading where it is used in a way that stretches its meaning for the learner) and productive generative use (using a known word in contexts in which the learner has not yet experienced it). Nation claims that these types of conditions need to be fulfilled in the development of vocabulary material in the curriculum.

2. Stakeholders’ Views and Opinions on the Revision of the Basic Word List

Results discussed in the previous section draw our attention to how the future Basic Word Lists of the National Curriculum may need to be revised. In order to propose some
guidelines for the revision of the Basic Word List (hereafter ‘BWL’) of the National Curriculum, students, teachers, and experts (i.e., university faculty and researchers) of English Education were asked to respond to questionnaires. Nine questions were addressed to the respondents as issues to consider for the future revision of the basic word list. Each of the questions is dealt with in the following.

[Issue 1] The current Basic Word List of the National Curriculum is presented only for elementary school and secondary school levels. Do you feel there is a need to further subdivide the Basic Word List?

The stakeholders were provided with options A. Needs to be subdivided, and B. Does not need to be subdivided. With regard to [Issue 1], 62.2% of the group as a whole agreed on the need to have BWL subdivided into smaller lists for presentation. Detailed examination indicates that a majority of the teachers and experts in each group seemed to agree on the issue (i.e., Elementary School=73.0%, Middle School=57.0%, High School =70.0%, experts=72.0%) (See Figure 1). It seems that the in-service teachers and experts both consider it advisable to subdivide the word lists for presentation (for instance, by each grade level) so as to employ systematic vocabulary learning and teaching, and for the development of level-differentiated or graded materials. The middle school (54.0%) and high school students (47.0%) also agreed on the idea to some extent.

[Figure 1] Stakeholders’ Views on the Subdivision of the BWL

[Issue 2] If you think the current basic word list needs to be subdivided, how do you think this should be done?

The stakeholders were provided with options A. By grade levels, B. By 2 grade levels, and C. By Elementary School/Middle School/High School With regard to how the BWL should be arranged for presentation in the National Curriculum, 47.7% agreed that
the word list should be arranged by Elementary School/Middle School/High School divisions, and 41.8% suggested a division by grade level. By comparison, only 10.5% of the respondents favored the division by 2 grade levels; a result which was lower than expected since this was considered a compromise between the extreme options. The elementary school teachers showed a higher percentage of agreement by 24.7% that the word list should be divided by 2 grade levels; however, this response from the elementary school teachers was a probable reaction since textbook development would become difficult if the choice of words became limited by a BWL for each grade level.

[Issue 3] The current National Curriculum presents the Basic Word List for only up to 1st year high school students (10th grade). Do you think word lists should be presented for each grade level of high school?

The stakeholders were presented with the following four types of options:

A. Yes, the basic word list should be presented for each grade level
B. The current presentation of the Basic Word List is appropriate.
C. The current BWL should be abandoned, and the criteria on the presentation of the Basic Word List should be left to the decision of materials developers and writers.
D. No response

Inclusion of this question was deemed necessary since the current curriculum is designed to control the vocabulary level for only up to the 1st year of high school (10th grade), and no specific guidelines are presented for Grades 11 and 12, leaving the students with an additional learning burden. As many experts would agree, these vague guidelines are expected to impose an extra vocabulary-learning burden for university-bound EFL students.

In response to the question, 49.8% of the respondents agreed to the specific presentation of a BWL for every high school grade. In fact, a high response rate was recorded for this choice by 64.0% of the high school teachers; a response rate of 52.0% and 51.0% was respectively recorded for elementary and middle school teachers. It should be noted, however, that 14.7% of the respondents also agreed on removing any restrictions placed on controlling the vocabulary level. In particular, 36% of the university faculty/researcher group in the field of English Education (most of whom are involved in writing textbooks) supported the idea of abandoning control over vocabulary learning. The results, as a whole, show that stakeholders may have differing opinions depending on their field of expertise and what they value most for vocabulary learning or materials development. It seems that teachers feel more comfortable when having concrete
guidelines for vocabulary learning, such as through the presentation of a Basic Word List; whereas, some university faculty members may want to have less restrictions placed on vocabulary learning, which would impose less control over the types of words that textbook writers could use in materials development.

[Issue 4] If different word lists were to be presented for each grade level of high school, what do you think is the appropriate number of total words that learners should know by the end of high school?

The stakeholders were provided with options at five different word levels: A. 3,000 Word Level, B. 4,000 Word Level, C. 5,000 Word Level, D. 6,000 Word Level, and E. 7,000 Word Level. As mentioned previously, the current BWL of the National Curriculum is limited to 3,000 word families being taught by the end of the high school curriculum. Only 17.4% of the respondents considered this number to be appropriate while 35.1% of respondents considered 5,000 word families to be the appropriate target total number of words. The results seem to indicate that, regardless of what is stipulated in the curriculum, learners and teachers feel that they need to have a vocabulary size larger than 3,000 words, such as a 5,000 word level to prepare for the College Scholastic Ability Test. As illustrated in Figure 2, 54.8% of the university faculty/researcher group responded to this option at the highest rate. In connection with these results, it was found in a recent study that the measurement of the actual receptive vocabulary size of 2nd year high school learners (n = 402) in a suburban area of the country was at the 5,000 word level. This illustrates, as an example, that many university-bound learners
have been trained at cram schools with the use of test booklets and vocabulary lists to have a larger vocabulary size than what has been stated in the curriculum.

[Issue 5] Do you think the current Basic Word List of the National Curriculum is internationally usable and valid?

The options presented to the stakeholders were: A. Strongly Positive, B. Generally positive, C. Do not know, D. Generally Negative, and E. Strongly Negative. On the usability and validity of the current Basic Word List of the National Curriculum, approximately half of the respondents (48.2%) showed positive views; in fact, the elementary, middle, and high school teachers demonstrated positive views toward the current BWL respectively reaching an average of 60.0%, 67.0%, and 61.0% for having a 'generally positive' perspective towards the current BWL. Only 47.0% of the university faculty/researcher group, however, showed positive views towards the current BWL. The responses collected from the group triangulate the findings of [Issue 3] since it was found that some university faculty/researchers supported the idea of abandoning control over vocabulary learning.

[Issue 6] The current BWL of the national curriculum only presents the basic forms of the words [= headwords] (e.g., develop), but do you think there also needs be presentation of derivatives (e.g., underdeveloped) and inflections (e.g., developing) to go with the list?

As noted previously (see 3. The Basic Word List of the National Curriculum of English), the current BWL of the National Curriculum as a rule only presents the basic form of words, and assumes knowledge of derivatives and inflections through knowledge of the headwords (the form of a word after all affixes are removed). As seen in Figure 3, a majority of the respondents (i.e., 61%) replied that they would like to see the derivatives and inflections also presented in the BWL. Particularly in the rural areas, a response as high as 75% indicated that the stakeholders are in need of having explicit forms of words presented to them in the BWL. The results, therefore, indicate that it is necessary to present the derivatives and inflections with the headwords in the BWL for the most effective learning of vocabulary.
[Issue 7] What is your opinion on the vocabulary level of the English section of the College Scholastic Ability Test (CSAT)?

As seen in Figure 4, slightly more than half (52.8%) of the respondents replied that the vocabulary level of the English section of the CSAT is appropriate for the target learners; specifically, 56.0% of the elementary school teachers, 33.0% of the middle school teachers, 60.0% of the high school teachers, and 50.0% of the university faculty/researchers regarded the vocabulary level of the CSAT to be appropriate. In comparison, 36% (i.e., 28% + 8%) of the respondents considered the level of the CSAT to be too demanding for the intended students. At this point, we need to refer to the results of Joo’s
(2008) study, which found the vocabulary level of the CSAT to be at the 4,200 word level when he analyzed the corpus of the CSAT published from 1994 to 2008. Note that we saw the maximum vocabulary size established by the curriculum to be only 3,000 words (see previous 3. The Basic Word List of the National Curriculum of English). The results connect to [Issue 4] where it was found that 65.5% (i.e., 35.1% + 13.0% + 17.4%) of the stakeholders were in support of presenting vocabulary at the 5,000 word level or above for the BWL.

[Issue 8] Do you think the vocabulary level of the English section of the College Scholastic Ability Test (CSAT) corresponds with the current vocabulary level of the national curriculum?

The stakeholders were asked to respond to four options: A. CSAT vocabulary level surpasses that of BWL; B. CSAT vocabulary level corresponds with that of BWL; C. CSAT vocabulary level is lower than that of BWL; and D. Do not know. In connection to [Issue 7] which queries the vocabulary level of the CSAT, 41.3% of respondents replied that the vocabulary level of CSAT surpasses that of the current BWL. Although the question was based on the respondent’s intuitive calculation in comparing the vocabulary level between the CSAT and the curriculum, as mentioned previously, a corpus-based study of the CSAT (Joo, 2008) has actually demonstrated that the vocabulary level of the CSAT is slightly above the 4,000 word level. The stakeholder’s perceived difference between the vocabulary level of CSAT and the curriculum suggest that there may be a need for an adjustment in the way the Basic Word list is presented in the National Curriculum.

[Issue 9] What is your response to the following statement?

“Rather than increasing the target number of words for BWL, the vocabulary needs to be controlled for 95% of the words rather than 75%.”

Stakeholders were provided with the following options:

A. It would reduce the vocabulary gap between different textbooks so that learning burden can be reduced.

B. The specific presentation and stronger control of vocabulary would hold back exposure to a variety of textbooks containing a wider range of words.

C. The specific presentation of words alone can reduce students’ learning burden.

D. The increase in the number of words for the BWL or the control of vocabulary would not help in reducing students’ learning burden.

E. No response
[Issue 9] was raised because of the realization that vocabulary is currently presented to students in a way that can bring an unexpected learning burden. As stated previously (refer back to 1) Corpus–based Analysis of Textbooks), when materials writers develop textbooks to be authorized by MEST, 75% of the words must be from the Basic Vocabulary List of the National Curriculum. Since, however, selection of 25% of the words is left to the decision of the publishers in developing materials for the respective grades, this can lead to presentation of vocabulary that is not frequency-based or level-differentiated. As a way to relieve this problem, controlling 95% of the basic words rather than 75% was proposed to the stakeholders in the questionnaire.

![Figure 5] Control of Vocabulary, the Basic Word Lists and Learning Burden

As seen in Figure 5, 30% of the respondents showed a positive response towards the possibility of reducing the vocabulary gap between different textbooks by explicitly presenting 95% of the basic words for control. By comparison, 24% of the respondents were in support of the idea that stronger control of vocabulary would hold back exposure to a variety of textbooks containing a wider range of words. A relatively large percentage (37.0%) of university faculty/researcher group of English Education were not in favor of the idea of controlling vocabulary exposure. This may be because they have had to write textbooks in the past, and experienced difficulties in developing materials from a restricted number of words, such as with the BWL of the National Curriculum. It should be noted that 29% of the respondents (with similar rates for each group) replied that, regardless of the type of guideline provided for the presentation of the BWL, the students’ learning burden would not be reduced. The response rate for the different groups of stakeholders ranged from 22.0% (middle school teachers) to 35.0% (elementary school teachers). This skeptical view from the stakeholders, we can suggest, may have arisen from distrust developed towards the educational policies established for English Education.
V. CONCLUSION

The present study was conducted in two stages. In the first stage, the corpus of current elementary and secondary textbooks was analyzed with the inclusion of the activity books, totaling 140 different types of textbooks or 5,628,795 running words. Comparative corpus-based analyses were conducted with the use of the native-speaker corpus to examine vocabulary profiles and to list the most frequent words in the curriculum-based textbooks. The corpus-based analysis yielded a percentage as high as 66.78% for the low-frequency words when analyzed for comparison between the GSL and AWL as a whole. Comparison with the word list of the BNC also indicated that the vocabulary size of the middle school textbooks (i.e., 4,055 words) surpassed the maximum vocabulary level of 3,000 words for the high school BWL. The results most noticeably indicate that problems occur when there has not been sufficient control of vocabulary selection via the guidelines for the BWL of the National Curriculum. When 25% of the textbook words are left to the decision of the publishers, the vocabulary level of low-frequency words in textbooks published in the country as a whole cannot be predicted, and this is expected to cause an increased learning burden, particularly for university-bound students. The pool of vocabulary that is left under loose control in the guidelines for the BWL and materials development points to the need to develop a BWL with finer guidelines for the National Curriculum and textbook writers.

In the second part of the study, we queried 600 stakeholders with questionnaires to obtain opinions and views for the revision of the BWL. The stakeholders supported the idea of dividing the BWL into finer levels for elementary, middle, and high school levels, accompanied by detailed information on derivatives and inflections, and not merely by the presentation of headwords. The stakeholders also expressed the need to raise the vocabulary level of the BWL if students are to rely on the curriculum to prepare for the CSAT. When asked, 5,000 words were pointed out as the appropriate level.

Based on the results of the corpus-based analysis of textbooks and the responses received from the 600 stakeholders, we propose some guidelines for the revision of a potential BWL. As an appropriate level for vocabulary control of the BWL, we propose 95% rather than 75% control of the vocabulary in the BWL. This is expected to reduce students’ learning burden by providing learners with well-chosen vocabulary lists that are designed to give them the best results with the least effort. Some may argue that this type of restriction will deprive learners of exposure to a wider range of words; but we believe, based on previous research (Hu & Nation, 2000; Nation, 2006), that vocabulary
learning and materials development need to begin with the incorporation of high-frequency words. Much of the vocabulary research suggests that learners need to have 95% text coverage in order to have a sufficiently high level comprehension of texts.

To realize this principle, we would need to present the vocabulary in BWLs for elementary, middle, and high schools up to the senior year (i.e., 12th grade); we previously saw that the current curriculum presents the BWL for only up to 10th grade. Similarly, by increasing the number of words to be learnt via the curriculum, such as at a 4,000 or 5,000 word level, or by recommending a 1,000 word list to be added to the current 3,000 word list, we may be able to alleviate some of the problems of textbook writers who have a restricted number and type of words that they can use in curriculum-based textbooks. We acknowledge, nonetheless, that the decision on the target number of words in the BWLs would need to be carefully discussed among experts and contemplated before a final decision could be made for the target number of words to be presented in the BWLs.

Another recommendation for the revision of the BWLs is that vocabulary needs to be presented for each grade level. The BWLs in the current curriculum presents vocabularies for elementary and secondary schools. The current BWL, with the inclusion of 736 words, (marked by asterisks) is recommended for learning at the elementary school level totaling 2,315 words for learning at the secondary school level, but the list does not present the target vocabulary for each grade level. Stemach and Williams (1988), however, have proposed the idea of presenting 250 word groups generalized from several empirical studies of children’s oral productions for 10 consecutive levels beginning at the elementary school level. The division of the BWL at the respective school years is deemed important since this can be considered a prerequisite for the development of graded materials. The way guidelines are presented for BWLs currently in the curriculum, in fact, allows textbooks writers to use more difficult words in the 3rd grade textbooks than in the 6th grade textbooks. This is because the words in the current curriculum at the elementary school level are only presented as a ‘pool’ rather than distinguished by grade. If some materials writers should feel that dividing the words by grade level is too restrictive, since they are limited to the range of words that they can use in materials development, an alternative could be to combine the words at every other grade, such as for grades 3 and 4; and grades 5 and 6.

Lastly, we believe that, by explicitly presenting the words to be learnt at each grade level in a BWL, we would better facilitate the development of graded readers (Nation, 2003) that could be utilized in the level-differentiated classes of the current curriculum. Graded readers or ‘readers’ are books that have had the language level simplified to help
and encourage second language learners read them. Language that is graded for vocabulary, complexity of grammar structure, and the number of words is expected to cater to all levels from beginners through to advanced. Occurrence of vocabulary in graded readers (Nation & Wang, 1999) indicates that, as long as there is a high amount of input (one graded reader per week), there will be plenty of opportunities for spaced receptive retrieval of appropriate vocabulary because of the high probability of repetition.

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National University, Chunghuk.


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This paper discusses the multifunctional uses of *like* with the examples found in the American sitcom, ‘Friends’. The uses of *like* as a discourse marker and a quotative complementizer occur with high frequency in the colloquial everyday English of adolescents and young adults. Although some normativist grammarians and school teachers have defined these colloquial uses of *like* as nonstandard, they have attracted the attention of many studies since the 1980s. Many researchers have subcategorized the meanings of *like* into an approximator, an exemplifier, a hedge, a filler, a focus marker, a quotative complementizer, etc. However, following Buchstaller (2001), this paper suggests that all of the functions of nonstandard *like* basically convey a semantic trait of comparison or approximation, and that *like* functions as a hedge, a filler, a focus marker, or a quotative marker on the pragmatic level. This paper demonstrates that its interpretation depends heavily on the discourse context. This study also suggests some implications for ESL/EFL teaching. Since the multifunctional uses of *like* are very frequently found in everyday English, teachers need to pay attention to the discourse particle *like* and guide the learners to understand and use it appropriately.

1. INTRODUCTION

*Like* in its nonstandard uses is frequently found in the colloquial, everyday English of adolescents and young adults. Two main functions of nonstandard *like* have been identified, the discourse marker and the quotative as in (1) and (2).
(1) Joey: Ross has been in love with you for **like** 10 years.  
(‘Friends’, Episode 201)  

(2) Monica: Don’t scare me **like** that Okay? I mean for a minute there I was **like**, “Oh my God! The worst has happened!”  
(‘Friends’, Episode 723)  

Although the nonstandard uses have been highly criticized by normativist grammarians and school teachers, they nevertheless occur with high frequency and have attracted the attention of many studies since the 1980s (Andersen, 1998; Buchstaller, 2001; Ferrara & Bell, 1995; Fuller, 2003; Jucker & Smith, 1998; Romain & Lange, 1991; Schourup, 1985; Siegel, 2002; Underhill, 1988).

Many researchers have tried to subcategorize the meanings of **like** into an approximator, an exemplifier, a hedge, a filler, a focus marker, a quotative complementizer, etc. However, Buchstaller (2001) points out that **like** is multifunctional and its meanings are often ambiguous and that all of the functions of **like** basically convey a semantic meaning of comparison or approximation. I strongly agree with Buchstaller (2001) that its interpretation depends heavily on the discourse context.

In this paper, following Buchstaller (2001), I try to demonstrate the multifunctional uses of **like** found in the American sitcom, ‘Friends’. I also suggest some implications for ESL/EFL teaching since this sitcom has been widely used as a tool for learning English by many Korean students.

II. LITERATURE REVIEW

Schourup (1985), who first researched on nonstandard uses of **like** in great detail, points out that **like** expresses “a possible unspecified minor nonequivalence of what is said and what is meant” (p. 42). He suggests that **like** is used to express approximation, examples, interjection, and quotatives as in (3)–(6):

(3) ... **like** twenty dollars (approximately)  
(4) Yeah. Because see I and a lotta people **like** in business or other–uh thinks like that, they get internship you know for the summer.  
(for example use)

1) The italics is used for nonstandard **like**. According to Underhill (1988), nonstandard **like** can never be stressed.
Jucker and Smith (1998) define *like* as an information-centered presentation marker. They suggest that the main function of *like* is to indicate that the following utterance may not be the most successful representation of the thoughts to be communicated but only a sufficient approximation. They subcategorize the functions of *like* into an approximator, a hedge, an exemplifier and a quotative.

Siegel (2002) claims that *like* is a true discourse particle treating *like* as a sort of hedge favored by adolescent girls in the United States. It is said that young women tend to use *like* when they feel comfortable and informal. Siegel (2002) also mentions that speakers who are insecure about the accuracy of their assertions would most likely use *like*, as a way of apologizing for any errors in advance.

Dealing with only the non-quotative use of *like*, Underhill (1988) introduces a new perspective about the functions of *like*. He suggests that *like* is used as a marker of new information and focus.

(7) What we’re gonna do is ski for three days *like* at different ski resorts. (p. 235)

(8) Students coming in for help on a homework assignment:

I had problems *like* on the second question. (p. 238)

In (7), *like* is used to indicate that ‘different ski resorts’ is the most significant new information in the sentence. In (8), it is clear that *like* focuses on the specific area of problem.

In addition to a focus marker, Underhill (1988) discusses *like* as an approximator and a hedge.

(9) ... well there’s *like* ten of us right? (p. 236)

(10) One sister asking another:

Could I *like* borrow your sweater? (p. 241)

Underhill (1988) points out that with numerical expressions *like* can mean ‘approximately’ as in (9). *Like* can also function as a hedge meaning ‘sort of’ in an extension to nonnumerical expressions, and have the effect of politeness as in (10).
(10), “the speaker is slightly distancing herself, softening the request and at the same time shielding herself in case of refusal” (p. 241).

In an analysis of interview data, Fuller (2003) suggests that speakers frequently use like to indicate both approximation and focus. It is said that “the use of like is a reaction to the speaker’s perceived need for communicating approximation and/or focus” (p. 375). Fuller (2003) explains that the reason like has a high rate of use is that “contexts for marking focus and approximation frequently occur in interviews; in short, it is pragmatically useful” (p. 370).

There have been studies dealing with the quotative like. The form be like is semantically the equivalent of ‘say,’ except that it can be used to introduce inner monologue, speaker attitude, or non-verbatim renditions of dialogue (Blyth, Recktenwald, & Wang, 1990). Previous studies have indicated that age is an important factor in the use of like as it is used primarily by speakers born in or after the late 1950’s (Blyth, Recktenwald, & Wang, 1990; Ferrara & Bell, 1995; Romaine & Lange, 1991).

Romain and Lange (1991) analyze the quotative like as a result of an ongoing grammaticalization case based on Traugott’s (1982) model. Grammaticalization is usually thought of as that subset of linguistic change whereby a lexical item or construction in certain uses takes on grammatical characteristics, or though which a grammatical item becomes more grammatical (Hopper & Tragott, 2003, p. 2). Thus, like was once used only as a lexical work-adjective—meaning ‘similar’ and currently it is frequently used as a discourse marker and a quotative complementizer which are categorized as function words. Romaine and Lange (1991) point out that the quotative like seems especially useful for reporting and/or modulating the speaker’s feelings which may or may not have been explicitly lexicalized at the time of events.

From a sociolinguistic perspective, Ferrara and Bell (1995) analyzed tape-recorded data from 405 different speakers in Texas. They found out that the quotative like is “a vigorous new quotative expression that is not confined to one region, to females, to teens, or to being an introducer of first-person internal dialogue” (p. 285).

So far, most of the researchers above discuss like as a marker that has many different functions in discourse. However, following Lakoff’s (1987), Buchstaller (2001) presents a new perspective on the nonstandard use of like. She suggests that “synchronously the different functions of like have a strong link to a core meaning, namely that of comparison” (p. 23). In other words, all of the functions of like basically convey a semantic trait of comparison or approximation. Buchstaller (2001) also claims that multifunctional meanings of like are often ambiguous and overlapping, and the boundaries
of the different functions are very hard to determine and its interpretation depends heavily on the context. According to Buchstaller (2001), the quotative *like* can also be a focus marker since quotations are often the most important part of an utterance since they demonstrate immediacy and interpersonal involvement (p. 33).” In other cases, quotations introduced with *like* often approximate in nature “in that they are either constructed dialogue or it does not become clear if they were actually uttered or not” (p. 33).

III. **LIKE IN THE AMERICAN SITCOM ‘FRIENDS’**

In this section, I will discuss the multifunctional uses of *like* occurred in an American sitcom based on the Buchstaller’s (2001) analysis. According to Buchstaller (2001), all of the functions of *like* basically convey a semantic trait of comparison or approximation. At the same time, *like* functions as a hedge, a filler, a focus marker, or a quotative marker on the pragmatic level.

For this study, I collected data from TV scripts of ‘Friends.’ The literature agrees that the nonstandard uses of *like* are a feature of colloquial spoken American English. Interestingly, six young characters of twenties and thirties commonly use *like* in this show. This show was played on TV for ten years from 1994 to 2004.

1. **Like in Non-quotative Function**

1) Function as a hedge

Hedges are discourse particles to indicate the speaker’s attitude in the conversation. They can be used to index informality and indicate particular kinds of degree of uncertainty (Biber, Johansson, Leech, Conrad, & Finegan, 1999). There are a number of researchers who define *like* as a hedge (Buchstaller, 2001; Jucker & Smith, 1998; Siegel, 2002; Underhill, 1988) points out that *like* as a hedge is still linked to its old core meaning of comparison and “can be interpreted as a signal of imperfect rendering of what the speaker actually intended to express, an epistemic hedge” (p. 23). Let us consider the following examples:

(11) Rachel: Joey, just—just he—he’s new in town and I know he doesn’t have any guy friends. Just take him to *like* a ball game or something. I’ll really appreciate it.  

(Episode 705)
(12) Monica: Well, you just—you put a quarter in and y’know pull—pull some handles and win *like* a candy bar or something.
Chandler: A vending machine?  (Episode 812)

In (11) and (12), the speaker uses *like* to indicate a substitute for other lexical items adding ‘or something.’ *Like* still has the comparative meaning, ‘similar to.’ At the same time, it functions as a hedge. Buchstaller (2001) also mentions that *like* has the pragmatic implicature of ‘for example.’

*Like* as a hedge is also commonly used with numerical expressions. Consider the following examples:

(13) Phoebe: Ok, Ross, could you just open your mind like this much, ok? (Holding her thumb and forefinger close together) Wasn’t there a time when the brightest minds in the world believed that the world was flat? And, up until *like* what, 50 years ago, you all thought the atom was the smallest thing, until you split it open, and this like, whole mess of crap came out.  (Episode 203)

(14) Rachel: (obviously drunk) I mean, it’s a cat, y’know, it’s a cat. Why can’t they get one of those bugs, y’know, one of those fruit flies, those things that live for *like* a day or something? (belligerently) What’re they called, what’re they called, what’re they called?  (Episode 207)

(15) Rachel: Oh Amy, you remember Ross.
Amy: Not really. But you are much cuter then that geeky guy she used to date.
Ross: That was me.
Amy: No, he was this creepy guy from high school who had this huge crush on her since *like* the ninth grade.  (Episode 908)

In the examples above, *like* has the approximate meaning and signals inaccuracy of the information. It also has the effect of giving the speaker reduced responsibility.

As Underhill (1988) and Buchstaller (2001) point out, having the approximation and loose comparison meaning, *like* can have the effect of politeness on an affective level. Consider the following examples:
(16) Monica: Hey, you know I got a question for ya. Just a little thing, no pressure.
Richard: Okay.
Monica: Did you ever, uh, like, think about the future?
Richard: Sure I do. (Episode 224)

(17) Rob: The thing is, I think some of the parents, they were kinda hopin’ that you’d play more songs about like, barnyard animals.
Phoebe: I can do that. (Episode 212)

From the previous discourse in (16) and (17), it is easy to recognize that Monica and Rob have a question and a favor which are hard to ask. In (16), Monica wants to ask if Richard has a plan for another marriage in the future. In (17), Rob tries to suggest Phoebe to play any children song because Phoebe was playing songs inappropriate for children. In both examples, like has a hedge meaning, ‘sort of’ or ‘kind of.’ At the same time, like is used as a face-saving device in case of refusal.

2) Function as a filler

As Schourup (1985) recognized using the term, a ‘pausal interjection,’ like has a function as a filler. Consider the following examples:

(18) Ross: Uh, excuse me. Evolution is not for you to buy, Phoebe. Evolution is scientific fact, like, like, like the air we breathe. (Episode 203)

(19) Phoebe: Oohh, um, no, I don’t think that’s the problem. ‘Cause we went, um, dancing the other night and the way he held me so close, and the way he was looking into my eyes I just like... definitely felt something. (Episode 207)

(20) Phoebe: Come on Joey, don’t make me feel badly about this.
Joey: No, I’m gonna!! That’s right! Yeah, you made me feel really guilty about goin’ out with that girl! Like—like—like I did something terrible to you! And now Pheebs, you’re doing the same thing! (Episode 711)

As seen in (18)–(20), the filler like occurs in the beginning or middle of a sentence. Like is used when a speaker needs time to think or to find an appropriate lexical word as
in (18) and (19). In (20), *like* enables the speaker hold the floor in the speech. Consider more examples:

(21) Rob: OK, look, this isn’t the first time somebody’s said something to me about this, but, I don’t know... I always made excuses about it, *like*... uhhh...I’m just a social drinker,’ or, ‘C’mon, it’s Flag Day.’  (Episode 210)

(22) Chandler: Are you okay?  
Joey: Are you kidding me? I’m great! Yeah, I’m uh: I’m better than great. I am good. And now that she’s gone, I can uh, I can do all this stuff around here that I couldn’t do before. Y’know? *Like* umm, I can walk around naked again. Y’know?  (Episode 814)

In examples (21) and (22), *like* is used with other fillers, uhhh and umm. According to Buchstaller (2001), unlike other fillers, *like* still has the approximate meaning. She explains that “the comparative approximate semantics of the source item make it an ideal word for the filling function because in claiming that something is in a way ‘similar to’ or ‘in the same as something’” (p. 25).

3) Function as a focus marker

Underhill (1988) presents an interesting function of *like* as a focus marker. He defines a focused expression as the most significant information in the sentence. Consider example (23):

(23) Monica: Well, you just—you put a quarter in and y’know pull—pull some handles and win *like* a candy bar or something.  
Chandler: A vending machine?  
Monica: Don’t feel bad for me! I won *like* every time!  (Episode 812)

This example clearly shows that *like* is not used as a hedge or a filler. Monica uses *like* to emphasize how often she won the games.

As Buchstaller (2001) points out, multifunctional meanings of *like* are often hard to determine, and its interpretation depends heavily on the intra- and extralinguistic context. Consider the following:
(24) Joey: What about her? They’ve only been going out for two weeks. Ross has been in love with you for *like* 10 years. (Episode 201)

(25) Joey: You gotta tell Ross how you feel.
   Rachel: Come on. How can I just tell him? What about Julie?
   Joey: What about her? They’ve only been going out for two weeks. Ross has been in love with you for *like* 10 years. (Episode 201)

In (24), *like* functions as a hedge with an approximate meaning. However, *like* in (25) can be interpreted as a focus marker in the context where ‘for 10 years’ is the most important information contrasting with ‘for two weeks.’ Buchstaller (2001) points out that in her data analysis, there were no instance of *like* “where it can be interpreted purely as a focusing item without any approximative or comparative implication (p. 25).”

(26) Chandler: I’m telling you this thing won’t print. Yes, I pressed that button *like* 100 times. (Episode 208)

(27) Tag: And I never used to be able to just talk to girls in bars, but I got *like* 20 phone numbers last night. (Episode 705)

(28) Monica: What is the matter with your hand?
   Chandler: Well I’ve been playing it for *like* eight hours, it’ll loosen up. Come on, check out the scores. Oh, and also look at the initials, they’re dirty words. (Episode 812)

In the examples above, the numerical expressions with *like* are the focused information that the speakers consider as the most important in the speaking moment.

Let us consider examples of *like* with non-numerical expressions. It seems that *like* can be placed before any constituent that the speaker wants to highlight in the discourse.

(29) Ross: What? That’s *like* insanely easy! (Episode 708)

(30) Phoebe: I’m sorry, Monica, I’m really happy you got promoted, but cold cucumber mush for thirty-something bucks? No! Rachel just had that—that—that salad, and, and Joey with his *like* teeny pizza! It’s just... (Episode 205)
In (29), the focused information, ‘insanely easy’ clearly marked with like. In (30), Phoebe uses like trying to emphasize a very small pizza for an expensive price. Further examples of the uses of like as a focus marker found in (31)–(33):

(31) Phoebe: All right. Ok, but, but! You have to promise that you will not be all like control-y and bossy and Monica about it.
Monica: I promise.                     (Episode 201)

(32) Joey: I don’t want to drive all the way back by myself, get so lonely. (Gets an idea.) Oh—ooh! How about you come with me?
Phoebe: I don’t know, it’s such a long trip.
Joey: It’ll be great! We—we could talk, and play games! Huh? This could be our chance to like renew our friendship.       (Episode 601)

(33) Phoebe: Well, this doesn’t have to be so sad though. Y’know? Maybe instead of just thinking about how much you’re gonna miss each other, you should like think of the things you’re not gonna miss.       (Episode 606)

2. Like as a Quotative

Like as a quotative in a form of be like is semantically the equivalent of ‘say,’ except that it can be used to introduce inner thought, gesture, or non-verbatim renditions of dialogue. Thus, using like the speaker invites the listener to infer that this is what the speaker was thinking or saying at this very moment (Romain & Lange, 1991). According to Buchstaller (2001), be like can be used to present imaginary discourse “because of the inherent semantic property and because of the possibility of a ‘for example’ and ‘as if’ reading” (p. 27).

1) Like and reported speech

According to Ferrara and Bell (1995), every person and number possible in English is used in conjunction with be like as in the following:

I was like, “Who is it?”
We were like, “Tyrone, are you selling drugs?”
You’re like, “Okay.”
She’s like, “Well I take it y’all are dating now.”
And they were *like*, “Well that’s too bad.” (Ferrara & Bell, 1995, pp. 266-267)

Consider the following example from ‘Friends’:

(34) Phoebe: Ok, so this is pretty much what’s happened so far. Ross was in love with Rachel since, you know, forever, but every time he tried to tell her, something kind of got in the way, like cats, and Italian guys. Finally Chandler was *like* “forget about her” but when Ross was in China on his dig, Chandler let it slip that Ross was in love with Rachel.

(Episode 201)

In (34), Phoebe uses *be like* to introduce a direct speech while reporting the previous story about the love relationship between Ross and Rachel. Using *be like* signals a possibility that the reported speech may not the exact words by Chandler.

2) *Like* and inner thought

*Be like* is a very useful device to bring the speaker’s inner thought in a direct speech to the discourse.

(35) Monica: Oh wow! Okay. Don’t scare me like that okay? I mean for a minute there

I *was like*, “Oh my God! The worst has happened!” (Episode 723)

(36) Joey: (clinks his glass) I’d like to propose a toast. To Monica and Chandler, the greatest couple in the world. And my best friends. Now, my when I first found out they were getting married I was, I was a little angry. I *was like*, (overly angry) “Why God? Why? How can you take them away from me?!?” But then I thought back over all our memories together, some happy memories. (Does a fake laugh.) And–and there was some sad memories.

(Episode 801)

In (35) and (36), the speakers express their inner thoughts and feelings introduced by *be like*. In Joey’s speech in (36), Joey seems to perform a play with a facial expression and gestures. As Labov (1972) and Chafe (1982) mention, the speakers use a direct speech to make the narrative more vivid using the direct speech. This might be one of the reasons of many occurrences of *be like* for inner thoughts and feelings. Consider the
following example:

(37) Ross: Why are you laughing?
Rachel: Because (laughs), because, I just heard it. I heard it, and it’s ridiculous! I mean, you’re married. You’re—you’re married and it’s just ridiculous, and it’s like, it’s like when said it, I sort of like, I floated up out of my body, y’know? And, and—and then I heard myself say it and then the floating Rachel (laughs) was like, “You are such an idiot!” (Episode 502)

The speaker in (37) also delivers more than just the words of the quotation. She describes herself as a third person and fully expresses the embarrassment about what she has just said. Buchstaller (2001) points out that the speaker “aims to bring across the ambiance and what the speaker might have felt at the moment of talk. Thus, like introduces more than just speech, it introduces whole performances” (p. 31).

3) Like and Non-lexical Sounds and Stereotyped Lexicalized Sounds that Express Feelings

Finally, be like can introduce non-lexical sounds or stereotyped lexicalized sounds that express feelings. Consider the following examples:

(38) Phoebe: Finally Chandler was like “forget about her” but when Ross was in China on his dig, Chandler let it slip that Ross was in love with Rachel. She was like, “Oh my god.” So she went to the airport to meet him when he came back, but what she didn’t know was, that Ross was getting off the plane with another woman. (Episode 201)

(39) Ross: I got it. Uh, Joey, women don’t have Adam’s apples.
Joey: You guys are messing with me, right?
All: Yeah.
Joey: That was a good one. For a second there, I was like, “whoa.” (Episode 203)

In (38) and (39), be like introduces “oh my god” and “whoa” to express the speakers’ feelings of surprise. Buchstaller (2001) explains that be like with interjections brings the focusing effect and makes the discourse as vivid as possible.
In the literature, *be like* can also introduce gestures. Since an example of the non-verbal use of *like* was not found in 'Friends', I present examples from Buschstaller (2001) and my personal data collection:

(40) A: ... it was really great so, and I loved my teachers so it was like “wow.” Now this year it’s just *like*, (a shrug)  
    (Buschstaller 2001, p. 30)

(41) (At a university shuttle in USA)  
    A: Finally I found him.  
    B: What did you do?  
    A: I’m *like*, (a kind of dance)

In (40) and (41), *be like* is used to quote the non-verbal signs of a shrug and a kind of dance. These non-verbal signs might express the feelings even more precisely than words.

IV. TEACHING IMPLICATIONS

The study of the nonstandard *like* in ESL/EFL teaching has not received much attention from researchers although there have been a number of researchers who stress the important role of discourse particles in conversation (Biber et al, 1999; Celece–Murcia & Larsen–Freeman, 1999; Bolden. 2006; Brown, 1978). As Bolden (2006) points out, conversation is not purely informational but a medium for social action. Many researchers suggest that discourse particles are characteristic of spoken dialogue, and they facilitate the ongoing interaction. For ESL/EFL teaching, Celece–Murcia and Larsen–Freeman (1999) suggest that teachers need to recognize the important roles of discourse particles to improve oral communication skills.

To improve their speaking ability, many Korean learners have been interested in learning English through American dramas and movies including 'Friends.' As we have seen in this paper, it seems that the discourse particle *like* as one of the interactive factors can be very frequently found in those authentic learning sources. Since the pragmatic functions have not been taught in school or from grammar books, many learners might have difficulty in understanding the use of *like*. I believe that teachers need to recognize the multifunctional uses of *like* and guide the learners to understand
and use it appropriately.

V. CONCLUSION

In this paper, I have demonstrated the multifunctional uses of *like* with the examples found in the American sitcom, ‘Friends.’ Many researchers have previously subcategorized the meanings of *like* into an approximator, an exemplifier, a hedge, a filler, a focus marker, a quotative complementizer, etc. However, following Buchstaller (2001), I have suggested that all of the functions of *like* basically convey a semantic trait of comparison or approximation, and that *like* functions as a hedge, a filler, a focus marker, or a quotative marker on the pragmatic level. In my data analysis, I have also tried to show that its interpretation depends heavily on the discourse context.

Finally, I have suggested some implications for ESL/EFL teaching. Since the multifunctional uses of *like* are very frequently found everyday English, teachers need to pay attention to the discourse particle *like* and guide the learners to understand and use it appropriately. Further study about the use of *like* by ESL/EFL learners might be interesting.

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Discourse Functions of *like* in the American Sitcom ‘Friends’

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Tablet PCs, Ipads, and smartphones have brought about a drastic change in people’s lifestyle and with them, more challenges and demands in education. This study investigates how in-service teachers at secondary level view the importance of using multimedia in English classrooms and how much they value the needs of teacher training in the effective use of the multimedia. It further explores how the teachers in the present study perceive and utilize the multimedia differently from the teachers in the previous study, while comparing the needs and opinions on multimedia between middle school and high school teachers. The participants consisted of 91 middle school and 99 high school teachers who attended a teacher training program offered by Gyeong-gi Province. Based on the responses to the questionnaire completed by the teachers, it is concluded that the teachers in the present study still hold positive attitudes towards the use of multimedia in language classrooms while the use of the Internet and computer-based programs has increased compared to that in the past study. The teachers are well aware of the necessity in the training of the multimedia use and teaching. It is suggested that the teacher training program should be designed to reflect the new needs of advancing technologies and that it be separated between middle school and high school teachers to meet the different preferences and needs in the language classroom.

Ⅰ. 서 론

21세기 컴퓨터와 인터넷의 발전이 가속화되고 와이파이(Wi-Fi), 스마트폰 등의 최첨단 멀티미디어
디어 도구들이 활용되면서 정보의 파악, 전달, 사용과 공유의 방법이 더욱 편리하고 간소해지면서 멀티미디어 매체가 일상화되어, 교육현장에서 신속한 대응과 도전을 요구하게 되었다. 교실에서의 전자교과서의 활용 가능성과 현실화되고 다양한 자료제공과 온라인 교수, 학습 자료가 생산, 보급되고 있는 시점에서, 보다 효율적인 교육을 제공하기 위한 매체로서의 멀티미디어의 선택과 활용은 교사에게 지속적인 훈련과 관심을 요구하는 어려운 과제이다. 한편, 교육현장의 전반적 발전에 따른 미래교육의 새로운 패러다임에 적응하기 위해서는 외국어교육에 있어서의 교육의 방법과 질에 대한 근본적인 시각의 변화가 요구되며, 이에 따른 교사와 교재의 역할과 개념의 변화를 수용하고 다변화된 교육의 현실을 준비해야한다.

이충현과 한종임(2000)은 국내의 외국어 교육에서의 컴퓨터 및 인터넷의 활용의 문제점을 극복하기 위해서는 교육현장에서의 시설과 장비의 확충이 요구되고, 국내 영어교육의 상황적 특성과 요구를 반영한 맞춤형 소프트웨어의 개발과 보급이 시급하며, 일반 교육현장에서 멀티미디어를 효율적으로 사용할 수 있는 교수방안의 모색과 교사교육의 확충을 요구하였다. 이후 교육현장과 사 업이 가속화되면서 각 교 학교에 컴퓨터 보급률이 증가하고, 점차 정보통신기술의 발전에 힘입어 전자교과서 개발과 보급이 현실화되고, 방송과 통신의 융합매체로서의 IPTV의 시범 연구학교를 운영하고 있는 시점(교육과학기술부, 2009)에서 영어교육 현장에서의 멀티미디어 활용의 실태와 요구에 대한 후속연구가 필요하다고 판단된다. 이충현, 중학교와 고등학교의 교육의 단계에 따른 멀티미디어 활용의 현황과 교사 교육의 필요성을 비교 검토하여 앞으로의 멀티미디어 활용 영어 교육의 구체적인 필요성을 파악하고 이를 위한 교사교육의 바람직한 방향성을 탐색하고자 한다.

Ⅱ. 이론적 배경 및 선행연구


멀티미디어 영어교육은 이러한 멀티미디어를 활용하여 영어학습의 효율성을 극대화하는 방법론을 지칭하는 교육의 방법을 지칭하여, 컴퓨터를 활용한 영어교육(Computer-assisted Language Learning), 혹은 정보통신기술의 결합에 따른 ICT 교육 등으로도 불리우며, 최근에는 보다 통합적인 용어인 이러닝(e-learning)이 사용되고 있다.

이충현과 한종임(2000)에 따르면, 멀티미디어나 인터넷을 활용한 매의 문제점으로 첫째, 자료
의 제작과 준비에 지나치게 많은 시간이 소요되고, 둘째, 멀티미디어를 활용할 수 있는 지식과 기술이 부족하며, 셋째, 현장에서의 시설의 미비하고, 넷째, 영어수업에서 재적하여 활용할 수 있는 소프트웨어가 제대로 구비되어 있지 않으며, 다섯째, 멀티미디어 영어교육 교사연수의 기회가 제공되지 않는 점을 제시하였다. 이 외에도 교사 자신의 개인적인 선호도나 수업자료 작성을 위한 컴퓨터프로그램이 부족한 점이 포함되었다. 저자들은 다양한 학습매체를 평가할 수 있는 문헌지를 함양하고, 교사들의 컴퓨터 활용 능력을 강화하며, 각종 작사도구의 운용 능력을 훈련하기 위한 효율적인 멀티미디어 교사연수 모형을 제안하였다. 한편, Hong(2009)는 미국의 중등교사 200명을 대상으로 설문조사를 실시하여 연수의 효과에 대해 조사하였는데, 멀티미디어 지식과 기술에 관해 교사교육 여부가 영어교실에서 컴퓨터 사용하고, 교사의 지식에 따라 학생들이 관련 프로그램을 사용하고 학습활동을 하는데 결정적인 영향을 미치는 것을 확인하였다. 또한, 연수를 받은 시간이 더 많은수록 교수⋅학습활동을 위한 컴퓨터 사용에 더욱 긍정적인 태도를 보였고, 관련 교육품을 더욱 효과적으로 인식하고 있음을 드러냈다.


Freeman(1989)은 교수자로서의 전문성 향상에 의해 필요한 영역으로 1) 언어, 문화, 교수방법 및 평가 등의 지식(knowledge) 2) 기술(skills) 3) 태도(attitude) 4) 인식(awareness)을 꼽았다. 이 외에도 교과 내용의 학습자의 수준에 적합하게 변형시키며 제시할 수 있도록 맥락화시키는 내용 교수지식(pedagogical content knowledge, 이후 PCK)의 혼란이 필요하며, 교사의 전문성을 훈련하기 위해 교사연수를 구성할 필요가 있다(장경숙, 2008). Schulman(1987)의 경우, 내용 교수지식인 PCK를 더욱 세분화하여 1) 교과 내용 지식(subject–matter knowledge), 2) 교수법 지식(pedagogical knowledge), 3) 교육과정 지식(curriculum knowledge), 4) 학생 관련 지식(knowledge of students), 5) 사회적 맥락적 지식(social context knowledge) 등을 포함시켰다. Koehler와 Mishra(2005, 2006)는 교사자의 전문성을 위한 컴퓨터 및 정보통신의 지식과 기술을 포함한 TPACK(Technological Pedagogical Content Knowledge)를 규정하였는데, 이들은 교사자의 멀티미디어 활용능력을 포함한 세부 수행지표를 제안하고, 이를 성취하기 위한 통합적인 교사교육 모형을 제안하였다.

교사교육 모형에 관한 국내 연구는 반성적 성찰에 바탕을 둔 교수방법의 개선(Jung & Chang, 2006), 내용 교수지식(CK)의 훈련을 위한 연수 프로그램의 개발(장경숙, 2008), 교원평가에서의


이충현과 한종임(2000)은 연수에 참여한 중등교사를 대상으로 요구조건을 수용하여 21세기 교육에서의 변화를 예견하고 현행 멀티미디어 영어교육의 현황과 문제점을 탐색함으로써, 교사들이 보다 다양한 멀티미디어 자료의 활용을 통해 영어교육의 효율성을 향상시킬 수 있는 맞춤형 멀티미디어 영어교육 연수 모형을 제시하였다. 연구에 참여한 교사들은 현재 오디오와 비디오 자료로 대표되는 멀티미디어 자료가 향후 인터넷을 중심으로 발전하리라 예상하고 있었으며, 멀티미디어 자료의 평가와 선정을 위한 구체적인 가이드라인과 이를 교육현장에서 사용하기 위한 연수의 필요성을 요구하였다. 21세기 이후 Wi-Fi, 스마트폰 등 첨단 멀티미디어 도구들이 생활화됨에 따라 이전까지 제한된 멀티미디어 영어교육 모형을 평가하고 지난 10년간의 변화를 살펴 현재의 문제점을 진단하고, 향후 방향성을 탐색할 필요가 있다고 판단하였다. 또한, 임시와 학생의 수준 등의 환경적 요인과 멀티미디어의 활용에 차이를 가지고 있는 주요 변화를 인식하여, 중학교와 고등학교에서의 수업의 내용과 방법론적으로 어떤 차이가 있는지를 영어교육에서의 멀티미디어의 활용과 기능의 측면에서 비교하고자 한다. 이를 위한 연구문제는 다음과 같다.

첫째, 본 연구의 교사들의 영어 수업에서의 멀티미디어 활용 현황은 어떠하며, 과거 선행연구에 비해 어떤 차이가 있는가?

둘째, 본 연구의 교사들의 영어 수업에서의 멀티미디어 활용 현황에 대한 태도와 사고는 어떠하며,
과거 선행연구에 비해 어떤 차이가 있는가?

셋째, 본 연구의 중등교사는 멀티미디어 활용과 관련 교원연수의 필요성을 얼마나 느끼고 있으며, 구체적으로 멀티미디어 활용교사연수 프로그램에서 다루기를 희망하는 내용은 무엇인가?

넷째, 영어 수업에서의 멀티미디어 활용과 연수의 필요성과 태도에 있어 중학교와 고등학교 교사를 간의 차이가 있는가?

Ⅲ. 연구 방법

1. 조사 참여자

본 연구는 경기도 A대학 교육연수원에서 진행하는 하계 1급 정교사 자격연수에 참여한 경기도 지역 중등교원을 대상으로 시행되었으며, 중학교 교사 91명과 고등학교 영어교사 99명 총 190명이 참여하였다. 이 중 중학교와 고등학교의 남자교사가 각각 6명과 23명, 여자교사가 각각 85명과 76명으로 여교사 비율이 전체의 85%에 해당하였다. 학사학위 소지는 사범대학 출신이 100명, 비사범대 교직과정 출신이 49명이며 석사학위 소지는 37명이었다. 연령대는 26세 이상 30세 미만이 97명으로 과반수를 차지하였고, 31세 이상 35세 미만이 68명이었으며, 1차 자격연수가 4년차 교사부터 적용되는 규정에 따라 교직경력은 88%가 5년 이상 10년 미만에 해당하는 교사의 168명이며, 6년 이상 10년이 15명, 그 이상이 7명 포함되었다. 한편, 중학교 교사의 89%와 고등학교 교사의 83%가 35세 미만으로 나타났다.

[표 1]에서 확인되는 바와 같이, 참가한 교사들의 절반 이상이 영어권 체류 경험이 있었으며, 대학 재학 시 멀티미디어 관련 수업을 수강한 경우와 졸업 후 멀티미디어 연수 경험을 받은 비율이 각각 31%와 29%로 멀티미디어 사용과 교사 관련 전문훈련 경험이 부족한 것으로 나타났다. 교사들의 언어 기능별 능력 및 컴퓨터 활용능력의 자가평가 결과, 영어 내 기능 중 읽기와 듣기는 중상 미만기와 쓰기 능력은 중으로 평가하였으며, 이 중 읽기와 가장 높게, 쓰기와 가장 낮게 평가되었다.

한편, 교사들의 평균 컴퓨터 운용능력은 중이며, 중학교 교사들의 43%, 고등학교 교사의 33%가 자신의 컴퓨터 운용능력을 하 또는 중하로 평가하고 있어, 전자교과서의 사용을 앞두고 있는 시점에서 멀티미디어 활용을 위한 체계적이고 실제적인 훈련이 필요함을 시사하였다.
2. 조사 자료

본 연구에서 사용된 조사도구는 이충현과 한종임(2000)에서 사용한 설문지를 근간으로 본 연구의 목적에 맞게 수정, 보완되었으며, 사용 전 연구자와 영어교육 전공 교수 1인에게 개별 항목의 타당성에 관해 확인받았다. 설문은 교직경력과 멀티미디어 연수 여부 등을 묻는 배경 영역과 영어능력도와 컴퓨터 운용능력에 관한 자가평가 항목 외에도 현장에서 자주 활용되고 있는 멀티미디어 매체의 종류를 묻는 항목을 포함한 17개 항목과 멀티미디어 활용 현황과 견해, 연수의 필요성 등을 묻는 항목 41개의 항목 총 58개로 구성되었다. 이 중 25개 항목은 폐쇄형의 5점 척도(1=전혀 그렇지 않다; 5=매우 그렇다)의 라이커트형으로 제시되었고, 신뢰도는 안정적인 크론바흐 알파 계수 .80을 확보하였다. 마지막 2개의 문항은 교사들이 가장 유용하다고 느끼는 e-learning 도구와 관련 연수 프로그램에 포함되기를 희망하는 내용을 개방형으로 질문하였다.
3. 분석 방법

본 연구에서 사용된 설문 자료의 분석은 SPSS 15.0을 사용하여 배경 정보와 연수 경력, 멀티미디어 활용 실태, 태도를 포함한 각 측면의 문항에 대한 빈도분석을 시행하였고, 중학교와 고등학교 교사 간의 차이나 교직경력에 따른 차이를 조사하기 위해 t-test를 실시하였다.

4. 연구의 제한점

본 연구는 이충현과 한종임(2000)의 연수를 기점으로 멀티미디어 사용에 관한 교사들의 인식과 태도, 사물 현황을 비교하고자 하는 목적을 수행하기 위해 선행연구의 설문 항목을 그대로 사용하여 그 이후 점진 정보통신기술과 인터넷의 획기적인 발전으로 동영상 자료의 제작이 일상화되고, 관련 자료들이 잠재적 학습 자료로서의 가능성에 대한 인식과 그에 따라 활용 현황을 파악하지 못했다. 코퍼스, 음성 인식 및 합성 소프트웨어, 온라인사전, 학습 게임, 디지털교과서 등의 새로운 양상과 활동에 대한 후속 연구를 기대한다.

Ⅳ. 결과 및 논의

1. 영어 수업에서의 멀티미디어 활용 현황

본 연구에 참여한 190명의 영어교사들이 영어 수업에서 가장 많이 활용하는 매체는 CD-ROM과 컴퓨터로 각각 53%와 54%의 응답률을 보였고 인터넷은 47%로 인터넷 활용 비율이 9%에 그친 이충현과 한종임(2000)의 연구 결과와는 달리 주목할 만한 양상을 보였다. 한편, 오디오와 비디오의 사용률이 각각 94%와 80%였던 2000년 조사 당시의 교사들의 응답 결과와 비교할 때 46%와 19%의 응답률을 보여 인터넷의 사용 비중이 늘어나면서 오디오와 비디오의 사용이 감소한 것으로 드러났다. 2000년 조사에서는 48.5%의 활용도를 보인 워드프로세서의 사용에서도 본 연구의 교사들의 선호도는 21%에 그친 반면 파워포인트의 사용이 36%에서 48%로 증가하였다. 이와 반대로, 실물화상기와 OHP와 같은 매체의 사용비율은 각각 29%와 41%에서 3%와 2%로 크게 감소하였고, 종합적으로 독립된 교수 매체보다는 오디오, 이미지, 동영상자료와 여러 학습 프로그램을 포함한 사용이 늘어난 인터넷의 사용 비중이 크게 확대되었다. 이충현과 한종임(2000)의 결과와 비교한 내용은 [그림 1]에서 확인할 수 있다.

영어수업에서의 멀티미디어 활용에 관한 중등 교사들의 인식의 변화와 교사교육의 방향성

영어교실 현장에서의 멀티미디어 활용 실태는 중학교와 고등학교 교사들 간에 차이가 있으며, 특히 CD-ROM, 파워포인트, 인터넷 등을 포함한 컴퓨터의 활용 면에서 중학교 영어교실에서 더욱 활발하게 사용되고 있었으며, 오디오, 전자우편, EBS 방송 등의 활용 정도는 유사하게 나타났다. 전체 교사 190명의 52.6%에 해당하는 100명이 CD-ROM을 자주 활용한다고 응답하였는데, 이 중 중학교 교사는 72명, 고등학교 교사는 28명이었다. 파워포인트와 인터넷을 자주 활용한다고 응답한 경우 전체 교사 중 각각 90명과 87명으로 이 중 중학교 교사가 각각 60명과 59명으로 확인되었다. 컴퓨터를 자주 활용하는 것으로 응답한 102명의 교사 중에서도 중학교 교사가 63명으로 고등학교 교사들의 사용빈도와 비교시 2배 이상의 차이를 보였다. 입시와 진도의 부담이 큰 고등학교 영어교실보다는 중학교 영어교실에서 교과서에 맞추어 제작된 CD-ROM을 더욱 자주 활용


[그림 2] 중학교와 고등학교의 영어수업에서 활용하는 매체의 비교
하고, 수업의 진행과 보충자료의 제시에 있어 파워포인트 프로그램과 인터넷을 더욱 많이 활용하는 것으로 해석할 수 있다. 상세한 결과는 [표 2]에서 확인할 수 있다.

교사들이 멀티미디어를 활용하는 가장 큰 이유는 실제 생활에 쓰이는(authentic) 영어자료를 제공할 수 있기 때문이었다. 즉, 교실 수업이라는 제한된 교수학습 상황을 실제 영어가 쓰이는 상황으로 재현하기 위한 의사소통 능력의 함양을 위해, 보다 실제적인 언어입력의 기회를 제공하고 학교 수업의 동기가 강한 것으로 드러났다. 또한, 멀티미디어 자료는 다양하고 풍부한 학습 자료와 연습의 기회를 제공하고 각 언어 기능의 훈련과 발전에 도움이 되는 장점이 있으며, 교사 자신의 부족한 부분을 보완할 수 있고 교육의 수월성을 높여 주고, 학생들이 학습에서 자주 사용하고 있는 자료이기 때문으로 응답하였다. 이에 비해 교사의 개인적인 선호도나 외부의 제약은 멀티미디어 자료의 활용에 중요한 요인으로 작용하지 않는 것으로 드러났다.

[표 2] 영어수업에서 멀티미디어를 활용하고자 하는 동기

<table>
<thead>
<tr>
<th>순위</th>
<th>항목</th>
<th>평균</th>
<th>표준편차</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>실제 생활에 쓰이는 영어자료를 제공할 수 있기 때문에</td>
<td>4.20</td>
<td>0.56</td>
</tr>
<tr>
<td>2</td>
<td>학교 교실에서 영어가 쓰이는 실제 상황을 끌어들일 수 있기 때문에</td>
<td>4.06</td>
<td>0.65</td>
</tr>
<tr>
<td>3</td>
<td>다양한 풍부한 학습과 연습 기회를 제공하기 때문에</td>
<td>3.89</td>
<td>0.79</td>
</tr>
<tr>
<td>4</td>
<td>정보화 시대에 필수적이라고 생각되기 때문에</td>
<td>3.63</td>
<td>0.82</td>
</tr>
<tr>
<td>5</td>
<td>학생들의 언어 기능 향상에 도움이 될 것 같아서</td>
<td>3.62</td>
<td>0.65</td>
</tr>
<tr>
<td>6</td>
<td>교사로서 자신이 부족한 부분을 보완할 수 있기 때문에</td>
<td>3.51</td>
<td>0.84</td>
</tr>
<tr>
<td>7</td>
<td>영어교수를 비교적 쉽게 해주기 때문에</td>
<td>3.27</td>
<td>0.99</td>
</tr>
<tr>
<td>8</td>
<td>학생들이 수업시간에 활용하기를 기대하기 때문에</td>
<td>3.19</td>
<td>0.89</td>
</tr>
<tr>
<td>9</td>
<td>내 자신이 수업시간에 컴퓨터/인터넷을 활용하는 것을 즐기기 때문에</td>
<td>2.94</td>
<td>0.93</td>
</tr>
<tr>
<td>10</td>
<td>학교 행정 당국이 요구하기 때문에</td>
<td>2.70</td>
<td>0.97</td>
</tr>
</tbody>
</table>

2. 영어 수업에서의 멀티미디어 활용할 때 고려할 사항

영어교사들이 멀티미디어자료를 활용할 때 중요하다고 생각되는 요소는 (1) 영어수업을 위한 소프트웨어, (2) 영어수업을 위한 학교 컴퓨터 시설, (3) 멀티미디어 활용에 대한 교사의 태도, (4) 멀티미디어 수업자료의 제작과 활용을 위한 교사연수, (5) 멀티미디어 활용에 대한 학생의 요구 및 흥미로 나타났다.

![](그림 3) 영어수업에서 멀티미디어를 활용할 때 가장 중요하다고 생각되는 요소


한 가지 주목할 만한 차이점은, 과거 교사들이 자료의 제작에 필요한 준비시간을 주요한 요소로 인식한 반면, 본 연구의 교사들은 교실현장에 수업자료의 준비와 활용에 있어 컴퓨터와 소프트웨어 외에도 학생들의 흥미와 요구나 교사의 태도 등의 정의적인 요소의 중요성을 균형적으로 인식하고 있는 것이다. 반면, 과거의 교사들과 본 연구의 교사들 모두 수업자료의 제작과 활용을 위한 교사연수의 필요성을 주요 요소로 인식하고 있어, 관련 재교육의 필요성이 제기되었다. 고등학교 교사들은 중학교 교사들의 비해 시설의 확충과 교사의 태도를 상대적으로 더 우선시하였고, 멀티미디어 자료의 활용과 관련된 교사연수의 필요성을 더욱 중요시하고 있는 것으로 드러났다.

3. 멀티미디어 활용과 관련 교원연수의 필요성과 훈련 항목

멀티미디어의 활용 현황, 멀티미디어의 효용성에 대한 인식, 멀티미디어에 대한 교사들의 태도와 연수의 필요성에 관한 설문 조사 결과를 백분율과 평균, 표준편차의 기술통계에 근거하여 정리
하였다. 중학교와 고등학교 교사들의 응답을 비교한 독립검정 t-test 결과를 함께 제시하였다.

우선 컴퓨터와 인터넷 활용에 관한 교사들의 일반적인 태도와 관심은 매우 긍정적으로 나타났으며, 중고등학교 교사들 간의 차이는 없는 것으로 나타났다. 전체 80% 이상의 교사들이 컴퓨터와 인터넷에 관심이 있으며, 중학교 교사의 90%와 고등학교 교사의 83%에 해당하는 교사들이 컴퓨터와 인터넷은 영어교육에 유용하다고 생각하고 있었다.

[표 3] 컴퓨터 활용 영어교수법의 필요성과 유용성

<table>
<thead>
<tr>
<th>항목</th>
<th>구분</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>평균</th>
<th>표준 편차</th>
<th>t</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>컴퓨터/인터넷에 관한 관심이 있다</td>
<td>중</td>
<td>1.1</td>
<td>6.6</td>
<td>14.3</td>
<td>59.3</td>
<td>18.7</td>
<td>3.88</td>
<td>.83</td>
<td>0.105</td>
<td>0.916</td>
</tr>
<tr>
<td></td>
<td>고</td>
<td>0.0</td>
<td>4.1</td>
<td>20.4</td>
<td>60.2</td>
<td>15.3</td>
<td>3.87</td>
<td>.71</td>
<td></td>
<td></td>
</tr>
<tr>
<td>컴퓨터/인터넷은 영어교육에 유용하다고 생각한다</td>
<td>중</td>
<td>0.0</td>
<td>2.2</td>
<td>7.7</td>
<td>70.3</td>
<td>19.8</td>
<td>4.08</td>
<td>.60</td>
<td>1.283</td>
<td>0.201</td>
</tr>
<tr>
<td></td>
<td>고</td>
<td>0.0</td>
<td>3.1</td>
<td>14.3</td>
<td>66.3</td>
<td>16.3</td>
<td>3.96</td>
<td>.66</td>
<td></td>
<td></td>
</tr>
<tr>
<td>컴퓨터/인터넷을 활용한 영어 교수 방법을 배우 필요를 느낀다</td>
<td>중</td>
<td>2.2</td>
<td>0.0</td>
<td>6.6</td>
<td>58.2</td>
<td>33.0</td>
<td>4.20</td>
<td>.75</td>
<td>0.440</td>
<td>0.660</td>
</tr>
<tr>
<td></td>
<td>고</td>
<td>0.0</td>
<td>3.1</td>
<td>5.1</td>
<td>65.3</td>
<td>26.5</td>
<td>4.15</td>
<td>.65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>컴퓨터/인터넷을 활용한 영어 교수 방법을 현재 배우고 있다</td>
<td>중</td>
<td>10.1</td>
<td>47.2</td>
<td>27.0</td>
<td>15.7</td>
<td>0.0</td>
<td>2.48</td>
<td>.88</td>
<td>1.897</td>
<td>0.060</td>
</tr>
<tr>
<td></td>
<td>고</td>
<td>11.2</td>
<td>59.2</td>
<td>22.4</td>
<td>7.1</td>
<td>0.0</td>
<td>2.26</td>
<td>.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>컴퓨터/인터넷을 활용한 영어 교수 방법을 잘 알고 있다</td>
<td>중</td>
<td>5.6</td>
<td>37.8</td>
<td>41.1</td>
<td>14.4</td>
<td>1.1</td>
<td>2.68</td>
<td>.83</td>
<td>2.060*</td>
<td>0.041</td>
</tr>
<tr>
<td></td>
<td>고</td>
<td>10.2</td>
<td>46.9</td>
<td>33.7</td>
<td>8.2</td>
<td>1.0</td>
<td>2.43</td>
<td>.82</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*1=전혀 그렇지 않다; 2=그렇지 않다; 3=보통; 4=그렇다; 5=매우 그렇다

컴퓨터 활용 교수방법에 관한 교사들의 응답 결과와 중, 고등학교 간의 비교는 [표 3]에서 확인될 수 있는데, 관련 교수법을 잘 알고 있는가에 대한 응답에서 상대적으로 연령대가 낮은 중학교 교사들이 고등학교 교사들보다 높게 나타났다. 비록, 유의미한 차이는 없으나 중학교 교사들이 컴퓨터를 활용한 교수방법의 사용의 경험도 더 많고 현재 관련 영역을 배우고 있다고 응답한 경우가 더 많았다.

[표 4]는 교사들이 영어수업을 위해 컴퓨터를 활용하여 수업자료를 제작하며, 자주 활용하는 자료가 있는지, 다른 교사들과 자료를 공유하는지 조사한 결과를 정리하고 있다. 중학교 교사들과 고등학교 교사들 간에 유의미한 차이가 있는 항목은 더욱 자주 컴퓨터와 인터넷을 활용하며, 프로그램 작성하는 멀티미디어와 인터넷 자료가 있는가의 질문으로, 각각의 경우 중학교 교사들의 응답 빈도가 더욱 높은 것으로 나타났다. 이는 고등학교의 영어수업은 입시의 부담이 크기 때문에 보충수업에서도 EBS 방송 등의 자료를 활용하거나, 진도를 맞추기 위한 교과수업에 충실한 반면, 중학교 영어교실에서는 인터넷과 각종 멀티미디어 자료를 활용할 기회가 더욱 많기 때문에 해석된다. 반면, 수업자료를 스스로 제작하거나, 학교에서 관련 구입을 적극 지원하거나, 동료와 공유하는 부분은 부정적인 응답이 더욱 많았다.
[표 4] 컴퓨터 활용 수업자료의 제작과 공유

<table>
<thead>
<tr>
<th>항목</th>
<th>구분</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>평균</th>
<th>표준편차</th>
<th>t</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>컴퓨터/인터넷을 자주 활용하여 수업을 한다</td>
<td>중</td>
<td>3</td>
<td>3.3</td>
<td>3.8</td>
<td>3.9</td>
<td>3.6</td>
<td>3.3</td>
<td>3.17</td>
<td>.80</td>
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</tr>
<tr>
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<td>고</td>
<td>9.3</td>
<td>47.4</td>
<td>23.7</td>
<td>16.5</td>
<td>3.1</td>
<td>2.57</td>
<td>.98</td>
<td></td>
<td></td>
</tr>
<tr>
<td>컴퓨터/인터넷을 수업자료는 스스로 제작한다</td>
<td>중</td>
<td>9.9</td>
<td>28.6</td>
<td>31.9</td>
<td>26.4</td>
<td>2.2</td>
<td>2.82</td>
<td>1.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>고</td>
<td>16.3</td>
<td>28.6</td>
<td>25.5</td>
<td>25.5</td>
<td>4.1</td>
<td>2.72</td>
<td>1.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>수업자료로 자주 이용하는 멀티미디어/인터넷 자료가 있다</td>
<td>중</td>
<td>1.1</td>
<td>19.8</td>
<td>27.5</td>
<td>47.3</td>
<td>4.4</td>
<td>3.34</td>
<td>.88</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>고</td>
<td>6.2</td>
<td>33.0</td>
<td>24.7</td>
<td>32.0</td>
<td>4.1</td>
<td>2.95</td>
<td>1.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>동료교사와 컴퓨터/인터넷 자료를 공유한다</td>
<td>중</td>
<td>8.9</td>
<td>37.8</td>
<td>23.3</td>
<td>26.7</td>
<td>3.3</td>
<td>2.78</td>
<td>1.05</td>
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</tr>
<tr>
<td></td>
<td>고</td>
<td>14.3</td>
<td>40.8</td>
<td>20.4</td>
<td>22.4</td>
<td>2.0</td>
<td>2.57</td>
<td>1.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>학교에서 컴퓨터/인터넷 자료의 구입을 적극 지원한다</td>
<td>중</td>
<td>18.7</td>
<td>38.5</td>
<td>37.4</td>
<td>4.4</td>
<td>1.1</td>
<td>2.31</td>
<td>.87</td>
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<td></td>
<td>고</td>
<td>14.3</td>
<td>41.8</td>
<td>31.6</td>
<td>12.2</td>
<td>0.0</td>
<td>2.42</td>
<td>.88</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*1=전혀 그렇지 않다; 2=그렇지 않다; 3=보통; 4=그렇다; 5=매우 그렇다

[표 5]는 컴퓨터를 활용한 개별 수업자료의 활용의 실태에 대한 결과를 정리하고 있는데, 고등학교 영어교실에 비해 중학교 영어교실에서 CD-ROM(70%)과 웹사이트(43%)를 더욱 자주 활용하고 있는 것을 알 수 있었다. 한편, 고등학교 영어교사들이 EBS 방송자료를 상대적으로 더 자주 활용하는 것으로 응답하였으나 통계적으로 유의미하지 않았다. 개인 홈페이지의 제작이나 학교 홈페이지를 활용하는 교사들의 수는 극히 적었다.

[표 5] 컴퓨터 활용 개별 수업자료의 활용 실태

<table>
<thead>
<tr>
<th>항목</th>
<th>구분</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>평균</th>
<th>표준편차</th>
<th>t</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>교과서의 CD-ROM을 자주 활용한다</td>
<td>중</td>
<td>3</td>
<td>3.3</td>
<td>12.2</td>
<td>13.3</td>
<td>32.2</td>
<td>38.9</td>
<td>3.91</td>
<td>1.15</td>
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<tr>
<td></td>
<td>고</td>
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<td>35.1</td>
<td>19.6</td>
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<td>7.2</td>
<td>2.80</td>
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<td>영어교육 웹사이트를 자주 활용한다</td>
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<td>17.6</td>
<td>39.6</td>
<td>36.3</td>
<td>6.6</td>
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<td>.84</td>
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<td>고</td>
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<td>30.6</td>
<td>32.7</td>
<td>27.6</td>
<td>5.1</td>
<td>2.99</td>
<td>.98</td>
<td></td>
<td></td>
</tr>
<tr>
<td>웹 EBS 방송자료를 자주 활용한다</td>
<td>중</td>
<td>24.4</td>
<td>43.3</td>
<td>22.2</td>
<td>8.9</td>
<td>1.1</td>
<td>2.19</td>
<td>.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>고</td>
<td>18.4</td>
<td>41.8</td>
<td>23.5</td>
<td>13.3</td>
<td>3.1</td>
<td>2.41</td>
<td>1.03</td>
<td></td>
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</tr>
<tr>
<td>개인 홈페이지를 제작하여 자주 활용한다</td>
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<td>50.5</td>
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<td></td>
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<td>44.9</td>
<td>43.9</td>
<td>7.1</td>
<td>3.1</td>
<td>1.0</td>
<td>1.71</td>
<td>.81</td>
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<tr>
<td>학교 홈페이지를 자주 활용한다</td>
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<td>46.2</td>
<td>16.5</td>
<td>6.6</td>
<td>0.0</td>
<td>1.99</td>
<td>.86</td>
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<tr>
<td></td>
<td>고</td>
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<td>51.0</td>
<td>9.2</td>
<td>4.1</td>
<td>0.0</td>
<td>1.82</td>
<td>.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>포털사이트의 영어자료를 자주 활용한다</td>
<td>중</td>
<td>2.2</td>
<td>16.5</td>
<td>27.5</td>
<td>48.4</td>
<td>5.5</td>
<td>3.38</td>
<td>.90</td>
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<td></td>
<td>고</td>
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<td>17.3</td>
<td>24.5</td>
<td>46.9</td>
<td>5.1</td>
<td>3.28</td>
<td>1.01</td>
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</tbody>
</table>

*1=전혀 그렇지 않다; 2=그렇지 않다; 3=보통; 4=그렇다; 5=매우 그렇다
### 표 6 컴퓨터 활용 개별 수업자료의 효율성

<table>
<thead>
<tr>
<th>항목</th>
<th>구분</th>
<th>1a</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>평균</th>
<th>표준 편차</th>
<th>t</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>학교에서 구입한 컴퓨터/인터넷 자료는 효과적이다</td>
<td>중</td>
<td>16.5</td>
<td>26.4</td>
<td>45.1</td>
<td>6.6</td>
<td>5.5</td>
<td>2.58</td>
<td>1.02</td>
<td>0.757</td>
<td>0.450</td>
</tr>
<tr>
<td>교과서의 CD-ROM을 활용한 수업이 효과적이다</td>
<td>고</td>
<td>11.2</td>
<td>38.8</td>
<td>42.9</td>
<td>5.1</td>
<td>2.0</td>
<td>2.48</td>
<td>.84</td>
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<td></td>
</tr>
<tr>
<td>영어교육 웹사이트를 활용한 수업이 효과적이다</td>
<td>중</td>
<td>3.3</td>
<td>13.2</td>
<td>31.9</td>
<td>40.7</td>
<td>11.0</td>
<td>3.43</td>
<td>.97</td>
<td>5.105*</td>
<td>0.000</td>
</tr>
<tr>
<td>웹 EBS 방송자료를 활용한 수업이 효과적이다</td>
<td>고</td>
<td>8.2</td>
<td>34.7</td>
<td>34.7</td>
<td>21.4</td>
<td>1.0</td>
<td>2.72</td>
<td>.93</td>
<td>1.363</td>
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<td>25.3</td>
<td>37.4</td>
<td>30.8</td>
<td>6.6</td>
<td>1.1</td>
<td>3.22</td>
<td>.83</td>
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</tr>
<tr>
<td>학교 홈페이지를 활용한 수업이 효과적이다</td>
<td>고</td>
<td>31.3</td>
<td>39.6</td>
<td>22.9</td>
<td>5.2</td>
<td>1.0</td>
<td>2.05</td>
<td>.92</td>
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</tr>
<tr>
<td>포털사이트의 영어자료를 활용한 수업이 효과적이다</td>
<td>중</td>
<td>20.9</td>
<td>36.3</td>
<td>39.6</td>
<td>6.3</td>
<td>3.3</td>
<td>2.25</td>
<td>.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>학교 홈페이지를 활용한 수업이 효과적이다</td>
<td>고</td>
<td>34.4</td>
<td>37.5</td>
<td>21.9</td>
<td>6.3</td>
<td>0.0</td>
<td>2.00</td>
<td>.91</td>
<td></td>
<td></td>
</tr>
<tr>
<td>웹사이트자료는 교과서 내용과 맞는 것이 좋다.</td>
<td>중</td>
<td>1.1</td>
<td>7.7</td>
<td>50.5</td>
<td>35.2</td>
<td>3.3</td>
<td>3.33</td>
<td>.72</td>
<td>-0.468</td>
<td>0.640</td>
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<tr>
<td>포털사이트의 영어자료를 활용한 수업이 효과적이다</td>
<td>고</td>
<td>4.1</td>
<td>8.2</td>
<td>39.2</td>
<td>42.3</td>
<td>6.2</td>
<td>3.38</td>
<td>.88</td>
<td></td>
<td></td>
</tr>
<tr>
<td>웹사이트자료는 교과서 내용과 맞는 것이 좋다.</td>
<td>고</td>
<td>1.0</td>
<td>13.5</td>
<td>21.9</td>
<td>49.0</td>
<td>14.6</td>
<td>3.63</td>
<td>.93</td>
<td>3.245*</td>
<td>0.001</td>
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</table>

*1=전혀 그렇지 않다; 2=그렇지 않다; 3=보통; 4=그렇다; 5=매우 그렇다

[표 6]에서 정리된 바와 같이, 교사들의 개별 수업자료의 효율성에 대한 인식은 활용 실태와 상응하였다. 중학교 교사들은 CD-ROM과 웹사이트를 활용한 수업이 효과적이라고 인식하고 있는 반면 고등학교 교사들은 포털사이트의 영어자료 외에는 효율성이 대해 부정적인 편이었다. 또한, 중학교 교사들이 학교 홈페이지를 더욱 적극적으로 활용하고 있었고, 교과서와 부합하는 웹사이트 자료를 더욱 선호하는 것으로 드러났다. 최근 학습 게임 등 다양한 ICT 자료가 쏟아지고 있는 시점에서 여전히 기존의 CD-ROM만을 선호하고 있는 것은 수업의 개선과 교수자로서의 전문성 신장을 위한 노력의 측면에서 다소 아쉬움이 남는 부분이다.

본 연구에 참여한 교사들의 80% 이상이 e-learning 능력을 향상시킬 필요성을 인지하고 있었으며, 관련 연수의 필요성을 느끼고 있으며, 연수의 기회가 제공된다면 참여할 의사를 가지고 있었다. [표 7]은 중학교와 고등학교 교사들의 응답결과를 비교하고 있는데, 중학교 교사의 50%와 고등학교 교사의 44%가 e-learning능력과 수업능력의 상관관계가 있다고 생각하고 있었고, 중학교 교사의 84%와 고등학교 교사의 90%가 e-learning능력이 수업에 도움이 된다고 간주하고 있었다.
영어수업에서의 멀티미디어 활용에 관한 중등 교사들의 인식의 변화와 교사교육의 방향성

[표 7] e-learning 연수의 필요성

<table>
<thead>
<tr>
<th>항목</th>
<th>구분</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>평균</th>
<th>표준편차</th>
<th>t</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>교사의 e-learning 능력이 더 항상될 필요가 있다.</td>
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<td>1.1</td>
<td>4.4</td>
<td>15.4</td>
<td>58.2</td>
<td>20.9</td>
<td>3.93</td>
<td>.80</td>
<td>-0.038</td>
<td>0.970</td>
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<td>고</td>
<td>2.0</td>
<td>7.1</td>
<td>9.2</td>
<td>58.2</td>
<td>23.5</td>
<td>3.94</td>
<td>.89</td>
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<tr>
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<td>4.4</td>
<td>11.0</td>
<td>35.2</td>
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<td>5.5</td>
<td>3.35</td>
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<td>19.4</td>
<td>33.7</td>
<td>36.7</td>
<td>7.1</td>
<td>3.26</td>
<td>.96</td>
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<tr>
<td>교사를 위한 e-learning 연수가 필요하다고 생각한다.</td>
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<td>15.4</td>
<td>68.1</td>
<td>15.4</td>
<td>3.98</td>
<td>.60</td>
<td>-0.587</td>
<td>0.558</td>
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<td>6.1</td>
<td>72.4</td>
<td>17.3</td>
<td>4.03</td>
<td>.76</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>교사를 위한 e-learning 연수의 기회가 있으면 참여할 생각이다.</td>
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<td>4.4</td>
<td>8.8</td>
<td>61.5</td>
<td>25.3</td>
<td>4.08</td>
<td>.72</td>
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<td>0.738</td>
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<td>3.1</td>
<td>17.3</td>
<td>52.0</td>
<td>27.6</td>
<td>4.04</td>
<td>.76</td>
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<td></td>
</tr>
<tr>
<td>a=전혀 그렇지 않다; 2=그렇지 않다; 3=보통; 4=그렇다; 5=매우 그렇다</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

별 수업연수 프로그램에 포함되기를 희망하는 내용을 개방형으로 질문한 결과를 항목 별로 정리하면 [표 8]과 같다.

[표 8] e-learning 연수에 포함되길 희망하는 내용

<table>
<thead>
<tr>
<th>항목</th>
<th>중학교</th>
<th>고등학교</th>
</tr>
</thead>
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<tr>
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본 연구에 참여한 영어교사들은 가장 많은 수가 수업 시간에 직접 활용할 수 있는 유용한 웹페이지 정보를 제공하고, 파워 포인트, 소리파일, 동영상 파일의 수집과 편집, 제작 방법 등의 구체적이고 설계적인 기술을 훈련하며, 유용한 프로그램의 사용법과 각종 작도 도구의 활용에 관한 훈련 등이 포함된 멀티미디어 연수를 희망하였다. 교사들의 응답 중에서는 저작권과 고가의 사용료를 부담해야하는 자료보다는 교육현장에서 직접 활용할 수 있는 쉐어웨어나 무료 인터넷 사이트에 대한 정보를 원하기도 하였다. 한편, 소수의 교사들의 응답이기는 하나 컴퓨터 기본 기능의 이해를 바탕으로한 체계적인 훈련의 필요성을 저지하기도 하고, 인터넷에서 제공되는 영자 신문을 활용한 영어교육 방법, 코퍼스 자료의 활용을 위한 훈련 프로그램을 제안하기도 하였다.
교사들 간의 차이는 두드러지지 않았으나 중학교 교사들이 동영상 자료의 제작과 저작도구에 더 큰 관심을 보이는 것으로 나타났다.

V. 결론 및 시사점

본 연구는 영어교실에서의 멀티미디어의 활용 실태를 선행연구와 비교 분석하고, 중학교와 고등학교 영어교사들이 인식하고 있는 멀티미디어의 효율성과 필요성에 대해 점검하여, 보다 바람직한 멀티미디어 교사교육의 방향성을 제시하고자 하였다.

본 연구의 비교 대상으로 삼았던 이충현과 한종임(2000)의 영어교사들과 비교할 때, 과거 교실현장에서 자주 사용되던 OHP의 사용빈도가 감소되고, 컴퓨터를 근간으로한 매체의 사용이 크게 늘어난 것을 확인하였다. 즉, 오디오나 비디오의 개별 매체의 사용보다 컴퓨터를 매개로한 통합적인 멀티미디어 자료와 인터넷의 비중이 현저히 증가한 것으로 드러났다. 한편, 영어교실 현장에서의 멀티미디어 활용 실태는 중학교와 고등학교 교사들 간에 차이가 있으며, 특히 CD-ROM, 파워포인트, 인터넷 등을 포함한 컴퓨터의 활용 면에서 중학교 영어교실에서 더욱 활발하게 사용되고 있었으며, 오디오, 전자우편, EBS 방송 등의 활용 정도는 유사하게 나타났다.

교사들이 멀티미디어를 활용하는 가장 큰 이유는 실제 생활에 쓰이는(authentic) 영어자료를 제공할 수 있기 때문이었다. 또한, 멀티미디어 자료는 다양하고 풍부한 학습 자료와 연습의 기회를 제공하고 각 언어 기능의 훈련에 도움이 되는 장점이 있으며, 교사 자신의 부족한 부분을 보완할 수 있고 교육의 수월성을 높여 줄뿐 아니라, 학생들이 학습에서 자주 사용하고 있는 자료이기 때문으로 응답하였다. 이에 비해 교사의 개인적인 선호도나 외부의 제약은 멀티미디어 자료의 활용에 중요한 요인으로 작용하지 않는 것으로 드러났다. 이 결과는 10년 전 이충현과 한종임(2000)의 연구에 참여한 중등영어 교사들이 멀티미디어를 사용하는 동기와 크게 다르지 않은 편이다. 당시 교사들이 영어교육의 수월성과 풍부한 학습기회의 제공에 더 많은 가치를 부여했다면, 본 연구의 교사들의 목적이 더욱 구체적으로 교실환경을 영어가 사용되는 실제 생활을 재현할 수 있는 공간으로 재창출하기 위한 수단으로써 멀티미디어를 사용하고 있는 것으로 드러났다.

본 연구의 영어교사들이 멀티미디어자료를 활용할 때 중요하다고 생각되는 요소는 (1) 영어수업을 위한 소프트웨어, (2) 영어수업을 위한 학교 컴퓨터 시설, (3) 멀티미디어 활용에 대한 교사의 태도, (4) 멀티미디어 수업자료의 제작과 활용을 위한 교사연수, (5) 멀티미디어 활용에 대한 학생의 요구 및 흥미로 밝혀져, 과거 이충현과 한종임(2000)의 교사들이 학교의 컴퓨터 학습시설을 가장 우선시했던 것과는 다른 양상을 보였다.

컴퓨터와 인터넷 활용에 관한 교사들의 일반적인 태도와 관심은 중, 고등학교 교사 모두 매우 긍정적으로 나타나, 컴퓨터와 인터넷은 영어교육에 유용하다고 생각하고 있었다. 한편, 관련 교수법을 잘 알고 있는가에 대한 응답에서 상대적으로 연령대가 낮은 중학교 교사들이 고등학교 교사들보다 유의미하게 높게 나타났다. 고등학교 교사들에 비해, 중학교 교사들이 더욱 주저 컴퓨터와
인터넷을 활용하며, 평소 자주 사용하는 멀티미디어와 YouTube 자료가 있는 것으로 응답하였다. 또한, 중학교 교사는 CD-ROM과 웹사이트를 활용한 수업이 효과적이라고 인식하고 있는 반면 고등학교 교사들은 포털사이트의 영어 자료 외에는 효율성에 대해 부정적인 편이었다. 중학교 교사들이 학교 홈페이지를 더욱 적극적으로 활용하고 있었고, 교과서와 부합하는 웹사이트 자료를 더욱 선호하는 것으로 드러났다. 한편, 중학교와 고등학교의 다른 교육의 단계에서 요구되는 멀티미디어 선호도의 차이를 교사 교육 프로그램에서 반영하기 위해서는 중학교와 고등학교 교사들의 인상을 분리하여 시행할 필요성이 제기되었다. 대부분의 교사들은 자신의 e-learning 능력을 향상시킬 필요성을 인지하고, 관련 연수의 필요성을 느끼고 있으며, 연수의 기회가 제공되다면 참여할 의사를 가지고 있었다. 또 멀티미디어 교사 연수에서 수업 시간에 직접 활용할 수 있는 유용한 웹 페이지 정보를 제공하고, 파워 포인트, 소리 파일, 동영상 파일의 수집과 편집, 제작 방법 등의 구체적이고 실제적인 기술을 훈련하며, 유용한 프로그램의 사용법과 각종 저장 도구의 활용에 관한 훈련 등이 포함되기를 희망하였다.

참 고 문 현


Key words: multimedia teacher training, needs analysis
Application levels: secondary education

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The purpose of this study was to examine the effects of repetition of input materials and proficiency levels on students’ performance on a web-based listening test. A recurring debate in listening assessment is whether listening input should be played once or twice, and persuasive construct arguments can be made on both sides of the approach. Prior research has focused on materials that people can listen to once and thus failed to consider materials that can be heard more than once in target domains. To fill the gap, a web-based listening test was developed to assess test-takers’ ability to comprehend listening materials which they can listen to multiple times in real-life situations. Sixty-three college students participated in the study, and they were divided into two groups. The experimental group were allowed to listen to input materials as many times as they need whereas the control group students were provided only one opportunity to listen to input materials. The results showed that there was a statistically significant interaction effect between test takers’ proficiency level and the number of times repeated. In addition, both group of students reported that the optimal opportunities for listening tests should be twice.

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인터넷 기반 평가에서 듣기 자료 청취 횟수가 듣기 평가 결과와 수험자의 반응에 미치는 영향

Ⅰ. 서론

본 연구의 목적은 멀티미디어 기반 듣기 평가에서 듣기 자료의 제시 횟수가 듣기 평가 결과에 미치는 영향을 알아보는 데 있다. 멀티미디어 테크놀로지의 발달에 발맞추어 멀티미디어 기반 언어 평가가 많이 개발되어 실시되고 있다(Chapelle & Douglas, 2006). 북미 지역 소재의 대학으로 유학을 오는 영어가 모국어가 아닌 학생들의 영어 구사력을 측정하기 위해 실시되는 토플이 컴퓨터 기반 평가로 실시되다가 최근에는 인터넷 기반 평가로 실시되고 있는 것이 좋은 예이다.

컴퓨터나 인터넷 기반으로 실시되는 언어 평가는 단순히 지필 고사로 실시되던 평가 문항을 컴퓨터 화면으로 옮기는 차원을 넘어 멀티미디어 기술을 활용하여 진정성(authenticity)이 높은 평가 과제를 개발해서 실시할 수 있다는 장점을 가지고 있다(Alderson, 1988; Brown, 1997; Chapelle, 2001, 2003; Chapelle & Douglas, 2006; Roever, 2001). 듣기 평가의 경우 기존의 지필 평가 환경에서는 듣기 자료를 모든 수험자가 동시에 듣고 같은 속도로 문제를 풀어 나가야 하는 한계가 있었다. 그러나 컴퓨터 기반 평가에서는 멀티미디어 기술을 활용하여 오디오 자료 이외에도 의사소통 상황을 보여주는 사진이나 동영상 자료를 제공할 수 있고, 지필 고사보다 더 다양한 유형의 과제를 제시할 수도 있다. 또한 듣기 횟수도 다양하게 제시할 수 있을 뿐만 아니라 수험자가 스스로 듣는 횟수를 선택하게 할 수도 있다.

멀티미디어 기반 언어 평가의 여러 가지 장점에도 불구하고, 멀티미디어 테크놀로지의 사용이 수험자의 언어 능력 측정이라는 평가의 궁극적인 목적을 실현하는데 어떤 영향을 미치는지에 대한 연구는 부족한 실정이다. 예를 들어 오디오와 시각 자료를 동시에 제공한 평가에서 측정되는 능력이 오디오만 제공할 때 측정되는 듣기 능력과 차이가 나는지는 중요한 문제이다. 만약 평가 방식에 따라 평가 결과가 달라진다면, 수험자의 언어 능력 외에도 시험 방식이 평가 결과에 영향을 미쳤다는 뜻이므로 어느 점수가 수험자의 듣기 능력을 제대로 반영하고 있는지를 판단하기 어렵기 때문이다(Bachman, 1990).

듣기 평가에서 듣기 자료의 제시 횟수는 듣기 평가를 제작하는 평가자들이 고민하는 평가 요소이다. 듣기 자료를 한 번 제시하는 경우가 대부분인데 이는 실제 의사소통 상황에서 두 번 이상 듣는 경우가 없다는 점에서 타당하다는 주장이 있다(Buck, 2001). 반면에 듣기 자료를 적어도 두 번은 제시해야 한다고 주장하는 평가자들은 실제 의사소통 상황에서 문맥에 따라 상대방이 어떤 말을 할지 예측할 수 있는 경우가 대부분이고 잘 알아들지 못한 경우에는 다시 말해 달라고 요청할 수 있는데 반하여, 평가 상황에서는 이러한 듣기 활동의 특성이 결여되어 있기 때문에 두 번은 들려주어야 한다고 주장한다(Park, Cho, Kim, Kim, & Choi, 1995). 두 입장 모두 듣기 평가의 진정성을 강조한다고 볼 수 있지만 실제 의사소통 상황에서 여러 번 들을 수 있는 듣기 상황은 고려하지 않고 있다. 따라서 실제 상황에서 여러 번 들을 수 있는 듣기 자료를 시험 상황에서 한 번이나 두 번만 듣게 하는 것은 평가 과제의 진정성을 낮추는 결과로 이어질 수 있다. 실제 상황에서 여러 번 들을 수 있는 자료를 한 번 들려주고 나서 수험자가 잘 이해하지 못했을 때 그 수험자가 해당 듣기 자료를 이해할 수 있는 능력이 없다고 추론하는 것은 타당하지 않을 수 있다. 왜냐하면 실제 상황에서처럼 여러 번 들었다면 이해할 수도 있었기 때문이다.

본 연구의 목적은 실제 의사소통 상황에서 여러 번 청취할 수 있는 듣기 자료를 수험자가 제대로 이해하고 있는지 평가하는 방법을 모색하는 데 있다. 이를 위하여 실제 상황에서 여러 번 청취할 수 있는 듣기 자료를 분석하여 듣기 평가 문항으로 제작한 다음, 대부분의 듣기 평가처럼 수험자에게 한 번 들려주었을 때와 여러 번 들는 것을 허용하였을 때 수험 결과에 어떤 차이가 나는지를 분석하였다. 여러 번 들었을 때 실험 결과가 달라지지는, 실제로 수험자들은 몇 번이나 듣는지, 듣는 횟수에 따라서 점수에 차이가 나는지 등을 알아보고자 하였다. 이를 위하여 본 연구에서는 웹 기반 듣기 평가를 제작한 다음 63명의 대학생들을 두 그룹으로 나누어 한 번 듣는 집단과 무제한 청취하는 집단으로 나누어 배치한 다음 실험을 진행하였다. 본 연구의 연구 질문은 다음과 같다.

1) 듣기 횟수에 따라 평가 결과에 차이가 나는가?
2) 듣기 횟수에 대한 수험자의 반응은 어떠한가?

II. 이론적 배경

1. 듣기 횟수가 듣기 결과에 미치는 영향

Cervantes와 Gainer(1992)는 76명의 일본 대학생 영어 학습자를 대상으로 듣기 자료의 단순화(simplification)와 반복 청취의 효과를 비교하였는데, 단순화한 듣기 자료를 들은 집단과 단순화하지 않은 자료를 두 번 들은 집단의 점수에는 차이가 없었다. 그러나 두 집단 모두 통사적으로 복잡한 자료를 한 번 들은 집단보다는 더 높은 점수를 얻었다고 보고하였다.

Berne(1995)은 62명의 스페인어 학습자를 세 집단으로 나누어 세 가지 사전 듣기 활동, 즉 질문과 선택지를 미리 보는 활동, 어휘 학습활동, 그리고 1에서 50까지 숫자 쓰기 활동을 수행하도록 한 다음 이러한 사전 듣기 활동 유형의 차이가 듣기 이해도에 미치는 영향을 연구하였는데 실험 결과 듣기 자료를 한 번 더 들려주었을 때 세 집단의 듣기 이해도가 모두 향상되었다고보고하였다.

Sakai(2009)는 36명의 일본 대학생 영어 학습자를 상, 하 두 그룹으로 나누어 두 개의 듣기 자료를 각각 한 번 듣고 회상한 다음 다시 한 번 듣고 회상하도록 하여 반복 청취와 수험자의 능숙도가 듣기 이해도에 미치는 영향을 비교하였다. 연구 결과 두 그룹 모두 두 번 청취한 후 회상한 경우 유의미한 향상을 보였고 반복 청취 여부와 능숙도 사이에는 통계적으로 유의미한 상호작용이 없었다고 보고하였다. 이 결과를 바탕으로 반복 청취를 할 경우 능숙도에 상관없이 듣기 이해도가 높아진다는 결론을 내렸다.


Mun(2010)은 웹기반 듣기 평가에서 문제를 화면에 제시할 때와 음성으로 제시할 때 반복 청취 허용 여부가 평가 결과에 미치는 영향을 연구하였다. 그 결과 문제와 선택지를 음성으로 제시하였을 경우 능숙도에 상관없이 반복 청취한 집단의 점수가 한 번 청취한 집단의 점수보다 통계적으로 유의미한 수준에서 높았다. 반면에 문제와 선택자가 문자 언어로 컴퓨터 화면에 제시된 경우 상위 그룹 학생들이 하위 그룹 학생들보다 더 도움을 받는 것으로 나타나 듣기 첫수와 수험자들의 능숙도 사이에 통계적으로 유의미한 상호작용이 있는 것으로 드러났다.

지금까지 이루어진 듣기 자료 제시 횟수의 영향에 관한 선행 연구를 종합해 보면 반복 청취를 할 경우 듣기 이해도가 높아지지만 듣기 횟수의 효과가 수험자의 능숙도에 따라 달라질 수도 있는 것으로 나타났다. 그러나 위에서 지적한 것처럼 지금까지 이루어진 연구는 실제 생활에서 반복 청취가 가능한 듣기 자료를 대상으로 실험을 진행하였기 때문에 실제 상황에서 반복 청취가 가능한 듣기 자료를 평가할 수 있는 방법에 대한 논의는 이루어지지 않은 실정이다.

2. 듣기 평가의 진정성

진정성은 수험자가 목표를 하는 실제 의사소통 상황에서 이루어지는 의사소통 과제와 평가 과제가 얼마나 비슷한지를 뜻하는 평가 도구의 특성 중 하나이다(Bachman, 1990). Bachman과

위에서 지적한 것처럼 듣기 평가에서 듣기 자료를 제시하는 횟수에 대한 논의의 기저에는 진정성에 대한 고려가 깔려 있다고 할 수 있다. 한 번 들려주어야 한다는 평가자들은 실제 생활에서 한 번 듣는 경우가 대부분이기 때문에 두 번 들려주는 것은 수험자의 듣기 실력을 제대로 평가할 수 없는 방식이라고 주장한다(Buck, 2001). 여러 번 들려서 정답을 맞추한 수험자가 실제 상황에서 실제로 들을 수 있다고 추론하는 것은 위험하다고 보는 때문이다.

한편 두 번 들려주어야 한다고 주장하는 평가자들은 실제 의사소통상황에서는 듣기 활동이 이루어지는 상황이나 문맥을 파악하고 있기 때문에 수험자 본인이 가진 배경 지식을 활용하거나 내용을 예측할 수 있다고 말한다. 예를 들어 대화를 듣고 대화가 이루어지는 장소를 찾아가는 문맥은 그런 점에서 매우 어색하다. 왜냐하면 우체국에서 우표를 사는 화자가 지금 본인이 우표를 사는 장소를 파악할 필요는 없기 때문이다. 따라서 두 번 들려주면 수험자들이 어떤 내용인지 정확하고 중요한 내용을 예측할 수도 있고 처음에 잘 듣지 못한 부분을 다시 들을 수 있어서 실제 듣기 상황에 더 가깝다고 주장한다(Park 외 4인, 1995).

본 연구에서 주목하는 듣기 과제는 실제 의사소통상황에서 원하는 경우 여러 번 들을 수 있는 특성을 가진 과제들이다. 실제 생활에서는 여러 번 반복 청취가 가능한 듣기 자료를 한 번 들려주고 나서 수험자가 문제를 풀었을 경우 수험자가 실제 상황에서도 제대로 듣지 못한다고 결론을 내리는 것은 위험하다. 두 번만 듣는 경우도 진정성이 낮다고 볼 수 있을 것이다. 따라서 이러한 유형의 듣기 과제의 경우 시험 상황에서도 여러 번 들을 수 있도록 허용한다면 진정성을 높일 수 있을 것이다. 그렇게 해서 무작위 여러 번 들을 수 있도록 허용하는 것은 평가의 현실적 측면에서 여러 가지 어려움을 초래할 수 있다. 실제 수험 시간의 한계가 있으므로 몇 개의 과제를 제시할 지, 혹은 어느 정도의 시간을 허용해야 할지도 분명하지 않다.

ESL 프로그램의 온라인 배치고사를 설계한 미국 캘리포니아 대학의 WebLAS 시험의 경우 목표어 사용 상황(target language use domain)에서 듣기 자료를 반복 청취할 수 있는가를 판단 기준으로 삼아서 듣기 자료 청취 횟수를 한 번에서 무제한 반복 청취까지 다양하게 제시하고 있다 (University of California, Los Angeles, 2001). 그러나 이러한 자료 제시 방식의 타당성에 대한 연구 결과는 보고하지 않고 있다. 이러한 연구의 필요성에 따라 본 연구에서는 여러 번 청취 가능한 평가 과제를 제작하여 반복 청취가 수험자의 수험 시간과 시험 결과에 미치는 영향을 분석하였다.
III. 연구 방법

1. 연구 대상

본 실험에는 서울시에 위치한 대학교에 재학 중인 65명이 참여하였다. 실험에는 참가하였지만 사후 검사에 참여하지 못한 2명을 제외한 63명의 수험자를 한 번 청취하는 집단에 31명, 반복 청취하는 집단에 32명 배치하여 실험을 진행하였다. 수험자의 토익 성적을 기준으로 두 그룹으로 나눈 다음 다시 모의 토익 듣기평가를 실시하여 두 집단의 동질성을 확인하였다. 두 집단의 동질성을 일원분산분석을 실시하여 살펴본 결과 [표 1]과 [표 2]의 보고된 것처럼 두 집단의 평균 점수에는 .05의 유의수준에서 동계적으로 유의미한 차이가 없는 것으로 밝혀졌다. 사전시험 결과를 바탕으로 각 그룹의 수험자를 상위 30%와 하위 30%, 두 그룹으로 분류하여 듣기 자료 제시 횟수와 능숙도 사이에 관계가 있는지 분석하였다.

![표 1] 사전검사 기술통계

<table>
<thead>
<tr>
<th>집단</th>
<th>평균</th>
<th>표준편차</th>
</tr>
</thead>
<tbody>
<tr>
<td>실험집단 1</td>
<td>76.34</td>
<td>8.91</td>
</tr>
<tr>
<td>실험집단 2</td>
<td>75.16</td>
<td>10.09</td>
</tr>
</tbody>
</table>

2. 연구 절차

본 연구는 다음과 같은 절차로 진행되었다.

1) 목표 과제 선정

본 연구는 일반적인 영어 듣기 능력을 측정하기 위해 개발되는 평가의 일부분으로 실제 생활에서 반복 청취가 이루어질 수 있는 듣기 과제를 어떤 식으로 평가할 것인가에 대한 사전 연구로 진행되었다.

![표 2] 일원분산분석 결과

<table>
<thead>
<tr>
<th>집단 간</th>
<th>제곱합</th>
<th>자유도</th>
<th>평균제곱</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>집단 간</td>
<td>22.02</td>
<td>1</td>
<td>22.02</td>
<td>.243</td>
<td>.62</td>
</tr>
<tr>
<td>집단 내</td>
<td>5519.41</td>
<td>61</td>
<td>90.48</td>
<td></td>
<td></td>
</tr>
<tr>
<td>합계</td>
<td>5541.43</td>
<td>62</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

본 연구에서는 먼저 실제 듣기 상황에서 반복 청취가 이루어질 수 있는 상황을 선정한 다음 평가 개발팀이 3회에 걸쳐 반복 청취가 이루어지는 듣기 과제를 브레인스토밍 하였다. 이어서, 수험자의 경우 실제 생활에서 영어로 여러 번 듣기를 한 경험이 거의 없으므로 외국 국적의 교환학생 6명을 포커스 그룹으로 선정하여 수집된 과제 중 반복 청취한 경험이 있는 과제를 표시하도록 하였고,
그 결과를 수집하여 최소한 4명 이상이 반복 청취한 경험이 있는 과제를 평가 목표 과제로 선정하였다. 포커스 그룹 구성원 6명 모두가 반복 청취한 경험이 있다고 보고한 온라인 영화와 뮤직 비디오 감상은 본 시험이 오디오만 제공하는 시험으로 제작되었으므로 제외하였고 자동응답기 메시지, 온라인 강의, 전자제품 서비스 센터 안내 전화 등 총 10개 상황을 선정하였다.

2) 듣기 대본 제작 및 녹음

평가 도구에 사용될 과제를 선정한 다음 평가 과제를 개발하기 위하여 실제 듣기 자료를 수집하였는데 각 과업마다 해당 과업과 관련된 음성 메시지가 제공될만한 곳에 전화를 걸거나 실제 음성 자료를 수집한 다음 해당 기관이나 저작자의 동의를 얻고 듣기 자료를 녹취하였다. 녹취된 자료를 전사한 다음 특정 상호가 등장하지 않도록 대본을 수정하고 원어인 성우가 실제 듣기 자료의 특성을 최대한 살려서 녹음하는 방식으로 듣기 자료를 제작하였다.

3) 웹기반 평가 제작

듣기 자료의 길이가 각각 19초와 22초에 불과한 전화 자동응답 메시지와 휴대폰 음성 메시지의 경우 각각 1문항을, 나머지 듣기 자료에서는 각 두 문항을 출제하여 총 15문항을 총제하였다. 이어서 이들 문항을 웹기반 평가로 제작하였다. 예를 들어 12번 문항의 경우 미술관의 교통안내 전화 메시지를 들고 지도에서 위치를 파악하는 문제였는데 그림 1처럼 문제가 먼저 화면에 제시되었다. 이어서 1회 청취 집단의 경우 그림 2의 아래에 제시된 지도가 등장한 후 듣기 자료가 제시되었고 반복 청취 집단의 경우 미디어 플레이어(media player)와 지도가 동시에 화면에 제시되며 수험자가 작동, 정지, 앞으로, 뒤로와 같은 여러 가지 버튼을 작동하면서 과제를 수행하였다.

12. Where is the Santa Barbara Museum of Art located on the map?

(A) A  
(B) B  
(C) C  
(D) D

[그림 1] 문제 예시
4) 사전 실험

1회 청취하는 집단의 경우 30분의 시간이 허용되었지만 반복 청취하는 집단에게 허용하는 시간을 결정하기 위하여 사전검사를 실시하였다. 5명의 수험자에게 원하는 시간만큼 허용하여 수험자가 사용한 시간의 중간값(median)을 계산하여 시험 시간을 결정하였다. 5명의 수험자가 사용한 시간의 중간값이 48.7분이었기 때문에 50분을 반복 청취 집단의 제한시간으로 정하였다.

5) 시험 실시


6) 설문 조사

실험실에서 그룹 별로 듣기 시험을 실시한 다음 실험 참여자를 대상으로 평가 경험을 바탕으로 듣기 횟수에 대한 의견을 적도록 요청한 개방형 문항과 1회 청취, 2회 청취, 그리고 반복 청취 중에서 가장 바람직한 방식을 선택하도록 한 폐쇄형 문항으로 구성된 설문지에 응답하도록 하였다.
IV. 연구 결과 및 논의

1. 듣기 횟수가 시험 결과에 미치는 영향


[표 3] 사후 시험 기술통계표

<table>
<thead>
<tr>
<th>관련</th>
<th>평균</th>
<th>표준편차</th>
</tr>
</thead>
<tbody>
<tr>
<td>1회 청취 집단</td>
<td>상위그룹 10.75</td>
<td>1.29</td>
</tr>
<tr>
<td></td>
<td>하위그룹 8.19</td>
<td>1.68</td>
</tr>
<tr>
<td>반복 청취 집단</td>
<td>상위그룹 13.40</td>
<td>1.06</td>
</tr>
<tr>
<td></td>
<td>하위그룹 9.25</td>
<td>.94</td>
</tr>
</tbody>
</table>

[표 4] 사후 시험 이원분산분석 결과

<table>
<thead>
<tr>
<th></th>
<th>자유도</th>
<th>평균제곱</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>듣기 횟수</td>
<td>54.23</td>
<td>1</td>
<td>54.23</td>
<td>33.31</td>
</tr>
<tr>
<td>듣기 능숙도</td>
<td>177.28</td>
<td>1</td>
<td>177.28</td>
<td>108.91</td>
</tr>
<tr>
<td>듣기 횟수 × 듣기 능숙도</td>
<td>9.915</td>
<td>1</td>
<td>9.915</td>
<td>6.09</td>
</tr>
<tr>
<td>합계</td>
<td>332.32</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[그림 3] 사후 검사 결과
2. 듣기 횟수가 수험 시간에 미치는 영향

무제한 반복 집단의 경우 수험자가 원하는 만큼 들을 수 있도록 허용하였는데 상위 집단의 경우 필요한 정보를 파악한 경우 듣기 자료를 끝까지 들지 않고 답을 선정하는 수험자가 많아서 평균 43분이 소요되었다. 반면에 하위 집단의 경우 잘 알아듣지 못한 부분을 반복적으로 선택해서 듣는 수험자가 많아서 평균 48분을 필요로 하였다. 다 풀지 못한 학생도 3명이나 있었다. 상위 집단 학생들은 구체적인 정보가 나오는 부분을 반복해서 듣는 경우가 많았던 반면에 하위 집단 학생들의 경우 필요한 정보보다 더 넓은 범위를 듣는 경향이 관찰되었다.

3. 듣기 횟수에 대한 수험자의 의견


![표 5: 수험자 반응](image)

<table>
<thead>
<tr>
<th>그룹</th>
<th>수험자 의견</th>
</tr>
</thead>
<tbody>
<tr>
<td>문항에 따라서 더 들었으면 풀 수 있었던 문제도 있었던 것 같다.</td>
<td></td>
</tr>
<tr>
<td>전화번호처럼 세부정보는 한 번 들고 답하기 힘든 경우가 있었다.</td>
<td></td>
</tr>
<tr>
<td>길이가 길어질수록 기억해야 되는 양과 들여야 하는 정보가 너무 많아서 힘들었다.</td>
<td></td>
</tr>
<tr>
<td>모든 문제를 여러 번 듣는 것은 시간낭비라고 생각한다.</td>
<td></td>
</tr>
<tr>
<td>여러 번 들어서 적당한 것은 더 잘 들을 수 있었다.</td>
<td></td>
</tr>
<tr>
<td>실제 생활에서는 한 번 밖에 못 듣기 때문에 한 번 듣는 것이 옳다고 생각한다.</td>
<td></td>
</tr>
<tr>
<td>필요된 부분만 들을 수 있어서 도움이 되었다.</td>
<td></td>
</tr>
<tr>
<td>알아들었는데도 불안해서 더 듣는 경우가 있는 것 같다.</td>
<td></td>
</tr>
<tr>
<td>앞 문제에 너무 많은 시간을 보내서 뒷 문제를 놓는데 시간이 모자라는 것은 심각한 문제라고 생각한다.</td>
<td></td>
</tr>
</tbody>
</table>

실험에 참가한 수험자를 대상으로 바람직한 듣기 평가 청취 횟수에 대하여 조사하였는데 결과는 [표 6]과 같다. 표에서 알 수 있듯이 2회 청취가 적절하다는 의견이 절대적으로 많았다. 실험집단 2에 속한 9명의 학생이 반복 청취를 허용하는 것이 바람직하다고 응답하였다.

![표 6: 반복 청취 횟수에 대한 수험자 의견](image)

<table>
<thead>
<tr>
<th>1회 청취 집단</th>
<th>반복 청취 집단</th>
</tr>
</thead>
<tbody>
<tr>
<td>1회</td>
<td>8 (25.8%)</td>
</tr>
<tr>
<td>2회</td>
<td>20 (64.5%)</td>
</tr>
<tr>
<td>반복</td>
<td>3 (9.7%)</td>
</tr>
</tbody>
</table>
두 집단의 반응에 통계적으로 유의미한 차이가 있는지를 알아보기 위하여 카이제곱 검증을 실시해본 결과 집단에 따라서 청취 횟수를 선택한 빈도수에 통계적으로 유의미한 차이가 없는 것으로 밝혀졌다 ($\chi^2 = 1.73, df = 2, p = .420$).

V. 결론

본 연구는 듣기 평가의 진정성을 높이기 위해 반복 청취를 허용한 평가 방법이 수험자의 듣기 능력을 추론하는데 어떤 영향을 미치는지 살펴본 결과 수험자의 듣기 능력과 청취 횟수 사이에 통계적으로 유의미한 수준의 상호작용이 있는 것으로 나타났다. 상위 그룹과 하위 그룹 학생들 모두 반복 청취를 할 경우 1회 청취했을 때보다 더 높은 점수를 받았지만, 특히 상위 수준의 수험자가 반복 청취를 할 경우 더 큰 도움을 받는 것으로 드러났다. 이 결과는 반복 청취 여부와 능숙도 사이의 상호작용을 보고한 선행 연구(Cervantes & Gainer, 1992; Chang & Read, 2006; Mun, 2010)와 일치하는 결과로 평가의 진정성을 높이기 위한 평가 방법의 영향이 수험자의 능숙도에 따라 달라진다는 사실을 보여준다. 반복 청취의 효과가 수험자의 능숙도에 따라서 달라진다는 결과는 실험 실시 절차의 공정성에 문제를 제기할 수도 있다. 실제 상황에서도 상위 그룹 학습자가 반복 청취를 하였을 때 더 잘 이해한다는 연구 결과가 뒷받침되지 않을 경우 하위 그룹 수험자들이 상대적으로 불이익을 받는다고 볼 수 있기 때문이다.

한편 반복 청취를 허용할 경우 수험자에 따라서 듣는 횟수가 달라지기 때문에 어느 정도의 시간을 허용해야 하는지에 대한 문제가 발생한다. 본 연구에서는 사전 시험에 참여한 수험자가 사용한 시간의 중간값으로 허용 시간을 정하였는데 대부분의 수험자가 50분 안에 문제를 다 풀었지만 시간이 부족해서 다 풀지 못한 수험자도 3명 있었다. 사전 시험 결과와 본 시험 결과는 무제한 반복 청취를 허용한다는 조건에 따라 반복 청취가 평가가 불가능한 정도로 지나치게 오랜 시간을 사용하는 것을 허용할 수 없는다는 공정적인 결과와 함께 반복 청취 허용이 하위 수험자에게는 오히려 부정적인 영향을 미칠 수도 있다는 점을 보여준다. 실제 시험 상황에서는 수험자들에게 무제한 반복 청취 문항을 시간 내에 효과적으로 풀어야달 수 있도록 연습할 수 있는 기회를 제공하여야 할 것이다.

시험이 끝난 후 시험 경험을 바탕으로 반복적 듣기 횟수에 대한 개방형 질문에 1회 청취한 집단의 수험자의 경우 시간이 부족했고 다시 들으면 더 높은 점수를 받을 수 있었을 것 같다고 응답한 수험자가 있었던 반면에 반복청취한 집단의 경우 도움을 받았지만 무제한적으로 반복청취를 허용하는 것은 바람직하지 않고, 특히 군이 다시 들을 필요가 없는데도 듣는 경우가 있었다고 응답한 수험자도 있었다.

마지막으로 바람직한 듣기 횟수에 대해 물어본 결과 두 집단 모두 2번 청취가 가장 바람직하다고 응답한 것으로 드러났다. 반복 청취 집단에 속했던 수험자의 약 30%가 무제한 반복 청취가 바람직하다고 반응하였지만 2번 청취가 바람직하다고 응답한 수험자의 수가 60%에 달하였다. 이 결과는 평가자의 의도와 상관없이 수험자들이 선호하는 방식이 있다는 사실을 보여주는 결과이다.


하지만 본 연구에 참여한 수험자의 수가 63명에 불과할 뿐만 아니라 평가 과제의 유형도 단일 형 문항만 제시하였다는 한계가 있다. 또한 교차설계가 되지 않아 1회 청취 집단 학생들은 반복 청취 문항을 폐기화를 갖지 못하였다는 점도 바람직한 듣기 평가 횟수에 대한 1회 청취 학생들의 전해를 해석할 때 고려되어야 할 것이다.

참고 문헌


Key words: multimedia, web-based listening tests, repetition, authenticity

Application Levels: primary education, secondary education, adult education

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The purpose of this study is to identify the effectiveness of e-learning and its efficient utilization through meta-analysis. The results of meta-analysis with 67 studies published in Korea are as follows: First, e-learning in English education showed statistically significant effects for secondary school students in both language abilities and affective domains. Second, e-learning in English education was generally more effective for middle school students than for high school students. If analyzed again after dividing the high school students into academic and vocational, the greatest language achievement was seen in the vocational high school while the most positive improvement of the affective domain was in the middle school. Third, e-learning itself was significant in English education, but it was more effective when on-line community, cooperative learning, or both were integrated. Fourth, students’ affective attitudes toward English and its learning were improved depending on the length of the experiment period. However, the improvement was lower in the short experiments which had been conducted less than one month. It can be due to the students’ anxiety about the change of learning environment. Based on these results, teachers will be able to find more efficient ways for their students when adopting e-learning into their classrooms.

Ⅰ. 서론

2010년 한국인터넷진흥원이 발표한 우리나라 국민들의 인터넷 이용실태 조사 자료에 따르면, 만3세 이상 인구의 인터넷 이용률은 77.8%, 그 중에서도 학생들의 인터넷 이용률은 99.9%로 나타났다. 이러한 인터넷 이용실태는 교육과 학습의 영역에도 반영되어 전체 인터넷 이용자의 53.4%,
10대 이용자의 95.2%가 교육 및 학습의 목적으로 인터넷을 이용하고 있다고 응답했다. 따라서 보편화된 인터넷 환경을 활용하는 것은 지식기반사회에서 경쟁력이 되는 지식과 정보를 누구에게나 저렴한 비용으로 제공할 수 있기 때문에, 교육기회의 불평등 해소 및 사교육비 경감의 목적으로 정부 차원의 EBS 수능강의, 사이버가정학습 등 인터넷 기반의 이러닝이 추진되는 원동력이 되어 왔다.

영어교육에서 세계 각국 정보로의 접근이 용이한 인터넷을 활용하는 것은 학습자들이 목표 언어권 사용자들에 의해 직접 만들어진 실제적 자료를 비용 부담 없이 검색할 수 있게 하기 때문에, 목표 언어를 다양하게 접할 기회가 제공된 EFL 환경의 학습자들에게 잘 높은 언어적 인력을 제공하는 이점이 있다. 실제 교육현장에서는 교육정보화가 추진되기 시작한 1990년대 말부터 인터넷을 영어교육에 활용하기 위한 시도가 진행되었고 이를 뒷받침하기 위한 다양한 연구 자료와 논문들이 발표되었다. 현재 관련된 선행연구들이 상당히 증가되어 '인터넷을 활용한 영어교육'과 연관되어 검색되는 국내외여름논문과 학술지 논문만 해도 1,000여 편에 이른다. 이에 본 연구는 축적된 선행연구들에 대한 메타분석을 통해 영어교육에서의 효과적인 인터넷 활용 방안을 찾아보고자 한다.

메타분석이란 선행연구들을 통합할 목적으로 많은 수의 개별적 연구결과들을 통계적으로 통합하여 분석하는 방법이다(한국교육학술정보원, 2005). 특정 주제와 관련하여 동일한 가설들을 다루고 있다고 판단되는, 이미 행해진 개별연구들로부터 통합적인 결론을 얻기려고 할 때 적용될 수 있는 분석방법이다. 의학, 심리학 및 교육학 등의 분야에서 연구방법으로 활용되고 있지만, 영어교육 분야에서는 아직 생소하며 이와 관련된 연구 자료를 찾아보기가 힘들다. 그러나 인터넷 기반의 이러닝을 활용한 선행연구 자료들이 축적됨에 따라 메타분석을 위한 조건들은 충분히 마련되어 있으므로 기존의 연구들을 통합하여 그 시사점을 도출하는 과정이 필요하다고 보인다.

Ⅱ. 이론적 배경

1. 이러닝(e-Learning)

1) 이러닝의 정의와 특징

이러닝은 인터넷기반 학습, 웹기반 학습, 사이버교육, 가상교육, 온라인교육 등 다양한 용어가 함께 유사한 개념으로 사용되고 있는데, 본 연구는 관련 개념들 간 이러한 개념들을 '이러닝'이라는 용어를 중심으로 그 정의와 특징들의 살펴볼 것이다. 이는 이러닝이 오늘날 비슷한 교수 학습 체제를 지칭하는 용어들을 포함하며 통합하는 개념으로 언어의 사회성을 획득해 나가고 있기 때문이다(이혜정, 2008).

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한편 이리닝이 광범위하게 사용될 때 전자적 수단, 정보통신 및 전과기술을 활용하여 이뤄지는 학습(한국소프트웨어진흥원, 2009)으로 해석되기 때문에, 이리닝의 개념을 어디까지 확장시킬 것인가의 논란이 있을 수 있다. 하지만 최근의 여러 연구에서는 따로 설정된 전자매체와 테크놀로지로서 인터넷을 이용한 것이妒게 이뤄지고 있으므로(Hong, 2005) 본 연구에서는 이리닝을 인터넷이 가진 기능적 속성을 바탕으로 교육과 학습의 효과를 증진시키기 위한 활동으로 정의하고자 한다. 따라서 이리닝은 인터넷 매체가 가는 속성을 보완하면서 다음과 같은 특징들을 나타낸다(Kim, 2004; Sung, 2002; Hong, 2007; Hong, 2005; Kearsley, 2000; Romiszowski & Mason, 1996).

첫째, 시공간적으로 독립성을 갖는다. 학습자는 언제, 어디서나 자신의 계획에 따라 시간과 공간의 제한을 받지 않고 학습활동을 수행할 수 있으며, 학습자가 학습을 위해 정해진 장소로 이동하지 않아도 되기 때문에 비용 절감으로 이어진다.

둘째, 최신의 풍부한 정보를 제공할 수 있다. 웹을 기반으로 하기 때문에 많은 양의 최신 정보를 빠른 시간 내에 교류할 수 있고 계속적인 정보의 확장 및 개정이 이루어진다.

셋째, 상호작용 활동을 지향한다. 동시적 상호작용뿐만 아니라 이메일, 게시판, 자료실, 토론방 등을 활용한 비동시적 상호작용도 가능하게 해 준다.

넷째, 학습자의 자기 주도적 학습활동과 다양한 형태의 학습 환경을 강조한다. 개인의 능력 및 학습 욕구에 따라 반복학습 및 학습 진도 조절이 가능하고 학습자가 독립적으로 선택하면서 속도를 조절할 수 있기 때문에 학습자 주도의 학습을 강조한다.

다섯째, 동시적, 비동시적 상호작용을 통해 학습자들이 협동학습을 효과적으로 할 수 있는 환경을 제공해 준다. 학습자들은 시간적, 공간적 제약을 벗어나 편리한 시간과 공간에서 문화적, 지역적 경계를 뛰어넘는 상호작용을 할 수 있다.

여섯째, 전통적인 면대면 학습 심리구조에서 비롯되는 긴장 및 불안감과 같은 정의적 요인과 관련된 문제들을 효과적으로 해결할 수 있도록 돕는다. 따라서 학습자들은 학습에의 참여기회가 확대되고 학습 동기가 지속되며 보다 역동적인 의사소통이 가능해진다.

일곱째, 학습자들은 온라인 의사소통을 통해 서로 다른 배경의 문화를 교차적으로 학습하고 다문화적인 관점을 발전시킬 수 있게 된다.

2) 이리닝과 영어 교육

김정렬(2008)은 인터넷을 활용한 영어교육이 다른 과목보다 더 다양한 효과를 거둘 수 있다고 하였다. 학습자들은 웹상에 존재하는 다양한 자료를 수집할 수 있고, 시공의 제약 없이 원어민과 실제적인 의사소통을 하면서도 면대면 대화에서 오는 심리적 역압감으로부터 자유로워질 수 있다는 것이다. 또한 웹을 통한 응성통화나 화상대화는 듣기, 말하기 등의 기능 강화에도 도움을 주며,
학습자들을 영미권 국가나 문화와 연결시켜 줌으로써 학습동기 유발에도 도움을 준다고 하였다.

### 표 1 과목별 학생 1인당 월평균 사교육비 및 참여율(통계청, 2010)

<table>
<thead>
<tr>
<th>구분</th>
<th>2008년</th>
<th>2009년</th>
<th>초등학교</th>
<th>중학교</th>
<th>고등학교</th>
<th>일반고</th>
<th>전문고</th>
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<tr>
<td>사교육비(만원)</td>
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<td>26.0</td>
<td>21.7</td>
<td>26.9</td>
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<td>19.7</td>
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<tr>
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<td>2.2</td>
<td>-4.3</td>
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<td>8.4</td>
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<tr>
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<td>1.6</td>
<td>6.7</td>
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<td>2.8</td>
<td>1.1</td>
<td>1.4</td>
</tr>
<tr>
<td>예체능,취미</td>
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<td>4.5</td>
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<td>3.3</td>
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<tr>
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<tr>
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</tr>
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뿐만 아니라 웹기반 학습은 다른 매체보다 교육의 비용 효과 면에서 경제적이다(김혜숙, 2004). 따라서 [표 1]과 같이 가장 많은 사교육비가 지출되는 영어교과에 이리닝을 활용하는 것은 학습자의 진입장벽이 낮은 환경을 이용하여 지역 간, 계층 간 격차에 따른 교육 불평등을 해소하는 하나의 방법으로 활용될 수 있다.

### 3) 이리닝의 한계와 개선 방안

이러한 어러닝의 문제점을 해결하기 위해, 협동학습, 토론학습, 프로젝트 학습 등과 같이 동료 학습자들이 서로의 학습을 돕도록 하는 방법에 대한 연구가 많이 이루어졌다. 그리고 최근에는 웹을 활용한 학습과 전통적인 면대면 학습을 반반씩 섞는 혼합형 학습이 기존 웹 기반 학습보다 더 학습 효과가 우수하다는 연구결과가 나오고 있다(김준희, 2007). 즉 교실 내 면대면 학습 또한 그 가치와 장점이 있고, 사람간의 직접적인 커뮤니케이션이 학습자들의 책임감을 높임으로써 어러닝이 가지는 단점을 보완하고 학습에 긍정적인 결과를 가져올 것으로 기대된다.

2. 온라인 커뮤니티 기반 학습

1) 온라인 커뮤니티의 정의

인터넷 상에서 자신을 표현하고 전자 메세지를 이용한 커뮤니케이션 수단의 시조가 되었던 개인 용 홈페이지는 초기 인터넷 환경에서 사이버 공간에 내 집을 갖는다는 낭만성을 제공해 주었지만 관리와 유지를 위해서는 개인에게 상당한 기술적 지식과 시간의 투자를 요구하였다(김선미, 2005). 그러나 이후 개발된 인터넷 카페, 미니홈피, 블로그, 트위터 등으로 대표되는 사회적 네트워크 서비스(Social Network Service: SNS)는 사용자들이 비용 부담 없이 쉽고 편리하게 사용을 구현하고 업데이트를 할 수 있도록 도와주었다. 이러한 편리한 기술적 기반과 보편화된 인터넷 사용 환경은
사람들은 하여금 온라인을 오프라인과는 또 다른 형태로 사회적 관계를 맺을 수 있는 공간으로 인식하게 하였고, 공통의 관심을 가진 사람들 간의 자유로운 결속과 의도적이고 목적 있는 온라인 활동이 확산되어 왔다. [그림 1]은 우리나라의 인터넷 사용자 중 45명을 넘는 인구가 홈페이지 운영 및 커뮤니티 활동 등을 통해 온라인에서의 사회적 활동에 참여하고 있음을 보여준다. (한국인터넷진흥원, 2010).

일반적으로 온라인 커뮤니티는 [그림 1]에서 보듯이 카페, 클럽 등으로 지정되는 공간을 의미하지만, 본 연구에서는 홈페이지(블로그, 미니홈피 포함)도 온라인 커뮤니티로 규정하고 논의를 진행하고자 한다. 교육적 공간으로서의 교사나 학교의 홈페이지는 학습자들을 집결시켜 학습공동체를 만들고 심리적 소속감을 형성하므로 온라인 커뮤니티가 가지는 특성과 일맥상통하기 때문이다.

2) 온라인 커뮤니티의 교육적 활용


[그림 2] 학교교육을 위한 혼합형 학습의 주요 영역과 요소

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습요소들을 결합시키는 이러닝 설계전략으로 그 개념과 영역이 확장되고 있다. [그림 2]는 학습 환경, 학습 목표, 학습 내용, 학습 시간, 학습 장소, 학습 형태, 학습 매체, 상호작용 유형 등 8가지 혼합형 학습의 주요 영역과 요소들을 도식화한 것이다(한국교육학술정보원, 2003, p.17).


3) 온라인 커뮤니티를 활용한 협동학습


(1) 구두로 이루어지는 토론보다 아이디어를 표현할 수 있는 기회가 더 많이 주어진다.
(2) 다른 학습자가 작성한 내용에 대해 숙고할 수 있는 시간과 자신이 할 응답에 대해 정교화할 수 있는 시간을 제공한다.
(3) 특정 주제에 대해 집중적으로 의견을 개진하지는 않더라도 진행상황을 지켜보며 참여하고 있는 학습자들은 문자화된 상호작용 내용을 통해 유용한 정보를 제공받을 수 있다.

따라서 온라인 커뮤니티를 활용한 혼합형 학습과 협동학습을 결합하면, 커뮤니티는 협동학습에 도움을 주고 협동학습은 커뮤니티를 활성화시킴으로써 보다 강력한 학습공동체를 형성해 줄 것으로 기대된다. 한국교육학술정보원(2003)은 커뮤니티를 기반으로 하는 협동형 학습의 모형을 일반적으로 협동학습을 통해 수행되는 문제영역 학습, 프로젝트학습, 체험학습, 탐구학습, 토론학습 유형으로 개발하여 제시하였으며, 이러한 모형들의 교육적 효과는 다음과 같이 정리할 수 있다.

(1) 교수자의 다양하고 ‘개별화’된 조언: 교수자는 조언과 도움의 차원을 ‘개별화’할 수 있으며, 시·공간을 초월하여 ‘언제, 어디서나’ 제공할 수 있게 되는 온라인 환경과 면대면의 존재감을 활용하는 오프라인 환경의 장점을 시기별로 적절히 통합하여 활용할 수 있다.
(2) 과정의 공유: 커뮤니티를 통해 다른 사람들의 학습 과정을 확인할 수 있다. 정보탐색의 과정, 정보·자료 분석의 과정, 경리·종합·발표 등이 기록과 자료의 형태로 남기 때문이다.
(3) 평가의 용이성: 온라인 커뮤니티에서는 학습자의 학습 과정이 그대로 기록과 자료의 형태로 남게 되므로, 이를 기반으로 학습 과정과 학습 결과에 대한 평가를 실시할 수 있다.
이러닝을 활용한 영어교육의 효과에 관한 연구

(4) 동등한 학습의 주도권: 커뮤니티에서는 학생 개인 모두가 자신의 공간이 있을 뿐만 아니라 자신의 학습과정에 능동적으로 참여해야 하기 때문에 모든 학습자가 학습주도권을 갖게 된다.

따라서 이러닝을 영어교육에 도입하고자 하는 경우 온라인 커뮤니티를 통한 혼합형 학습의 활용과 다양한 형태의 협동학습을 접목시킨 모형의 설계를 고려해 볼 수 있었다.

Ⅲ. 연구 방법

1. 메타분석(Meta-Analysis)

1) 메타분석의 개념과 특징


메타분석에서는 각기 다른 척도와 방법을 사용하여 얻은 연구결과들을 수량적으로 통합하여 비교하기 위해 효과크기를 사용한다. 효과크기는 실험집단의 평균값과 비교집단의 평균값 차이를 비교집단(혹은 두 집단)의 표준편차로 나눈 값을 말하며 이를 통해 두 집단 간의 차이나 실험효과의 크기를 알 수 있다. 따라서 개개 연구결과들은 효과크기 산출을 통해 통합 혹은 비교 가능한 공동의 단위로 변환되고 이것이 메타분석을 가능하게 한다(김지은, 구병두, 2001; 오성삼, 2002).

2) 메타분석의 취약점과 보완 방법

메타분석의 가장 큰 한계는 분석 대상으로 하는 기존 연구결과들의 결점과 한계를 벗어날 수 없다는 것이며(National Association of Social Workers, 1999), 많은 통계학자들은 메타분석이 지나치게 결과에 초점을 맞추고 있고 증례변인의 개입이나 상호작용 효과를 무시함으로써 한 연구의 결과를 지나치게 단순화시킨다고 비난해 왔다(오성삼, 2002).


(1) 효과크기의 가중치 적용: 메타분석에서 분석의 대상이 되는 다양한 형태의 선행연구들을 갈
은 비중으로 통합분석을 하는 것은 결과를 추정하는데 문제가 있기 때문에 본 연구에서는 표준오차 값에 의한 가중치 산출 공식을 사용하여 가중치를 적용한 효과크기를 산출하였다.

(2) 효과크기들의 동질성 검정: 수집분석 대상이 되는 각각의 연구결과의 효과크기들이 동일 모집단으로부터 추출되어 나온 값인지를 검정하기 위해 동질성 검사를 실시한다.

(3) 이질분포의 효과크기: 위의 동질성 검정에 실패하는 경우 효과크기들의 분포가 이질적이라고 추론되어 산출된 평균 효과크기의 값이 집단분포를 대표하는 값으로 적절치 못하게 된다. 이 경우 메타분석은 연구마다 모수가 임의로 변한다고 가정하는 랜덤효과 모형, 연구논문의 독립변수로 인해 발생되는 분산에 초점을 맞추어 분석하는 고정효과모형, 초과 변량치의 근원이 일부는 체계적이고 일부는 랜덤효과일 것이라고 추정하며 적용하는 혼합효과 모형의 세 가지 대안을 제시한다.

(4) 평균효과크기의 표준오차와 신뢰구간의 산출: 일반적으로 통계추정을 통해 우리가 얻게 되는 값들에는 항상 표본오차(sampling error)가 존재하기 마련인데 주어진 추정값의 표준오차를 고려하여 모수값이 포함될 추정값의 구간을 확률적으로 진술하여 신뢰도를 구할 수 있다.

2. 연구 대상 선정 및 수집

메타분석의 대상이 되는 선행연구들의 수집을 위해 2010년 8월 시점에 한국교육학술정보원 (http://www.riss.kr)과 국회전자도서관(http://nanet.go.kr)에 이르러닝을 활용한 영어교육과 관련되어 발표된 모든 국내 석,박사 학위논문과 학술지 논문을 검색하였다. 이르러닝이 환경적 영향이 크다고 판단하여 대상 논문은 국내 논문으로만 한정시켰고, 수집된 논문들은 다시 각 논문의 연구대상과 연구목적, 연구방법 등을 기준으로 걸러졌다. 본 연구는 중등학생을 대상으로 한 이르러닝의 효과를 분석하고자 하므로 중학교, 고등학교를 대상으로 하고 이르러닝을 배개로 할 실험처치가 이루어진 논문들을 분석대상을 줄여나갔다. 또한 동일한 실험연구가 학위논문과 학술지 논문으로 모두 출간된 경우에는 보다 구체적인 정보를 포함하고 있는 학위논문으로 통일하였다. 이렇게 수집된 논문들은 메타분석을 위한 다음과 같은 조건을 충족시키는지를 기준으로 최종 정리되었다.

(1) 통제집단과 실험집단이 있는 실험연구이면서 효과크기 산출에 필요한 통계값이 제시된 논문이어야 한다(오성삼, 2002).

(2) 언어적 영역에 대한 실험집단과 통제집단의 사전 동질성이 확인 가능한 논문이어야 한다.

(3) 정의적 영역은 사전 동질성 검정이 이루어진 경우가 다수지만, 실험이 보통 비슷한 환경을 가진 한 학교 내에서 동일 학년의 두 학급을 대상으로 하기 때문에 정의적 영역에 영향을 주는 경제적, 사회적, 문화적 환경이 집단간에 크게 차이나지 않을 것이라는 가정 하에 사전 동질성 검정이 없어도 분석에 포함시켰다.

이와 같은 검증 과정을 거쳐 최종적으로 메타분석 대상으로 선정된 선행연구는 1999년부터 2010년까지 발표된 67편의 논문으로 국내 석,박사 학위논문 66편, 학술지 논문 1편이다.
3. 자료의 코딩과 분석

메타분석에 사용될 연구논문들의 수집이 끝나면 연구의 특성을 파악하고 메타분석의 결과에 영향을 미칠 만한 변인이나 특성을 토대로 코딩하는 작업이 따르게 된다(오성삼, 2002). 본 연구는 연구 논문의 기본 정보(저자, 발행연도, 출처, 연구문제), 학습자 정보(인원수, 학교급, 학년, 지역, 학습 능력, 특이사항), 실험의 특성(기간, 집단별 실험처리), 실험결과(집단별 평균, 표준편차, t값, F값, p값) 등을 코딩표에 기록하였고, 또한 온라인 커뮤니티를 통한 상호작용과 협동학습을 이론에 접목시키는 것이 학습에 영향을 미치는지 알아보기 위해 온라인 커뮤니티의 활용 여부와 소집단을 통한 협동학습 여부도 추가로 기재하였다.

1) 효과크기의 산출


![공식 1]

사후 집단별 평균과 표준편차가 명시되지 않았지만 t값 또는 F값이 제시된 일부 논문의 경우 [공식 2]를 사용하여 효과크기를 계산하였다.

![공식 2]
2) 역변량 가중치를 적용한 효과크기 산출


\[ w = \frac{1}{se^2} \]

\[ ES = \frac{\sum (w \times ES)}{\sum w} \]

\[ w: \text{역변량 가중치} \]
\[ se: \text{표준오차} \]
\[ ES: \text{역변량 가중치를 이용한 평균 효과크기} \]

3) 효과크기의 해석


\[ ES \leq .20 \quad \text{작은 효과크기가 있다} \]
\[ ES = .50 \quad \text{중간의 효과크기가 있다} \]
\[ ES \geq .80 \quad \text{큰 효과크기가 있다} \]

그러나 이것으로 효과크기를 의미 있게 해석하는 어렵기 때문에 비중복 계수(\(\nu_p\); percentile of nonoverlap)와 함께 나타내었다. 비중복 계수를 이용한 해석 방법은 효과크기를 표준화점수 Z와 동일한 개념으로 취급하여 정규분포표를 이용하여 해석하는 것이다. 다시 말하면 평균은 0이고 표준편차가 1인 표준정규분포 표에서 효과크기를 Z점수로 보고 Z점수까지의 누적 면적에 해당하는 값을 찾아 이 값을 백분위로 나타내는 것이다. 예를 들어 효과크기가 0.24인 경우 효과크기 값을 정규분포표 내에서 그에 상응하는 수치, 즉 Z값을 찾아보자. 누적 면적이 59.5%로 통제집단의 평균은 50%로 보았을 때 실험집단의 평균은 9.48% 만큼 상승되었음을 알 수 있다(윤연희, 2008). 따라서 비중복 계수를 활용하면 본 연구에서 알고자 하는 이론을 통한 영어교육의 효과가 어느 정도 되는지 알 수 있다.
이러닝을 활용한 영어교육의 효과에 관한 연구

IV. 연구 결과 및 해석

이러닝을 활용한 영어교육의 효과를 언어적 영역과 정의적 영역으로 구분하여 메타분석을 통해 살펴보고, 세부적으로는 학교급에 따른 효과의 차이와 온라인 커뮤니티나 협동학습 등을 접목시켰을 때의 차이를 분석함으로써 이러닝의 보다 효과적인 활용방안을 찾아보고자 한다. 또한 선행연구들의 실험기간별로 학습자들의 학습효과 차이가 있었는지에 대해 분석해 볼 것이다.

1. 선행 연구물의 특징


<table>
<thead>
<tr>
<th>[표 2] 학교급별 실험집단과 통제집단 인원 구성</th>
</tr>
</thead>
<tbody>
<tr>
<td>집단 구분</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>중학교</td>
</tr>
<tr>
<td>고등학교</td>
</tr>
<tr>
<td>인문계</td>
</tr>
<tr>
<td>실업계</td>
</tr>
</tbody>
</table>

2. 효과크기의 동질성 검정

본 연구에서 메타분석을 위해 선정한 67편의 선행연구로부터 산출된 효과크기가 동일 모집단에서 추출되어 나온 간任职성 동질성 검정 결과, 언어적 영역과 정의적 영역 모두에서 효과크기들의 분포는 이질적인 것으로 나타났다. 즉 언어적 영역은 $Q=242.709(p<.001)$, 정의적 영역은 $Q=429.346(p<.001)$으로 나타나 두 영역에서 모두 효과크기들의 분포가 동질하지 않은 것으로 나타났다. 따라서 본 연구는 메타분석에 사용된 개개 연구들이 모집단 연구들로부터 무선으로 추출되었다는 가정에 의해 랜덤효과 모형(Random Effects Model)을 이용하여 평균 효과크기를 계산하고 이를 기준으로 결과를 분석하도록 하겠다.
3. 언어적 영역과 정의적 영역의 효과 분석

이러닝을 활용한 영어교육이 언어적 영역에 미치는 효과를 메타분석한 결과는 [표 3]과 같다.

[표 3] 이러닝을 활용한 영어교육이 언어적 영역에 미치는 효과크기 (n=효과크기 사례수)

<table>
<thead>
<tr>
<th>관련변인</th>
<th>n</th>
<th>ES</th>
<th>95%CI</th>
<th>SE</th>
<th>( U_3 )</th>
<th>Z</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>학업성취도</td>
<td>29</td>
<td>.366</td>
<td>.232-.501</td>
<td>.069</td>
<td>.643</td>
<td>5.339</td>
<td>.000</td>
</tr>
<tr>
<td>읽기</td>
<td>22</td>
<td>.656</td>
<td>.504-.808</td>
<td>.078</td>
<td>.744</td>
<td>8.460</td>
<td>.000</td>
</tr>
<tr>
<td>듣기</td>
<td>10</td>
<td>.519</td>
<td>.284-.754</td>
<td>.120</td>
<td>.698</td>
<td>4.326</td>
<td>.000</td>
</tr>
<tr>
<td>쓰기</td>
<td>10</td>
<td>.393</td>
<td>.163-.621</td>
<td>.117</td>
<td>.653</td>
<td>3.350</td>
<td>.001</td>
</tr>
<tr>
<td>말하기</td>
<td>5</td>
<td>.733</td>
<td>.411-1.055</td>
<td>.164</td>
<td>.768</td>
<td>4.458</td>
<td>.000</td>
</tr>
<tr>
<td>전체</td>
<td>85</td>
<td>.500</td>
<td>.418-.582</td>
<td>.042</td>
<td>.691</td>
<td>11.908</td>
<td>.000</td>
</tr>
</tbody>
</table>


한편, 이론적 활용한 영어교육이 정의적 영역에 미치는 효과는 [표 4]와 같이 산출되었다.
### 표 4. 이러닝을 활용한 영어교육이 정의적 영역에 미치는 효과크기 (n=효과크기 사례수)

<table>
<thead>
<tr>
<th>관련 변인</th>
<th>n</th>
<th>ES</th>
<th>95%CI</th>
<th>SE</th>
<th>$U_3$</th>
<th>Z</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>정의적 영역</td>
<td>99</td>
<td>.529</td>
<td>.430-.628</td>
<td>.051</td>
<td>.702</td>
<td>10.473</td>
<td>.000</td>
</tr>
</tbody>
</table>

정의적 영역의 평균 효과크기는 .529로 Cohen(1988)의 효과크기 해석 기준으로 보면 중간 정도의 효과크기로 나타났으며 유의한 효과가 있는 것으로 드러났다 (p<.001). 비중복 계수 ($U_3$)로 환산하면 70.2%로 통제집단보다 실험집단이 20.2%만큼 높다는 것을 의미한다.

이 결과는 이론이 전통적인 면대면 학습 상황에서 오는 학습자들의 긴장감 및 불안감 등을 해결함과 동시에 참여도와 동기를 높이면서 영어 학습에 대한 긍정적인 태도를 길러줄 수 있다는 기존 문헌조사 내용과 일치한다. 따라서 메타분석 대상 논문 대부분은 결과에서 긍정적인 정의적 효과를 나타냈다. 그러나 박수진(2009)의 경우 전자게시판과 온라인 피드백을 활용하여 영어쓰기 능력 향상의 효과를 기대했지만 실험집단의 학습자들이 쓰기 능력과 참여도에서 모두 통제집단보다 낮은 성과를 보였다. 이것은 언어적 영역에 대한 효과 분석에서 이론을 활용한 영어교육이 쓰기에서 유의한 효과가 있었다는 결과와도 상반된다. 그 요인을 박수진은 온라인보다 오프라인에서 과제를 수행하고 피드백을 받는 것이 원활한 강압성이 있고 면대면 의사소통이 피드백 내용에 대한 이해에도 더 효과적이라고 학습자들이 느끼기 때문이라고 분석하였다. 또한 온라인에서 과제를 하는 것에 번거로움을 느끼고 다른 학습자들이 자신의 과제를 누구나 볼 수 있는 것에 부정적 감정을 가지기 때문이라고 하였다. 결국 학습자들의 정의적 반응이 온라인 학습 상황에서 부정적인 방향으로 전개되면서 통제집단보다 저조한 참여도와 낮은 학업성취도로 연결되었기 때문에 새로운 학습 환경을 설계할 때 학습자들의 정의적 요인을 고려하는 것이 필요함을 보여준다.

### 4. 학교급별 효과 분석

학습자 특성에 맞는 효과적인 이론 활용방안을 찾기 위해 학습자의 학교급에 따라 미치는 효과크기가 다른지 살펴보았다. 먼저 중학교와 고등학교를 구분하여 평균 효과크기를 계산하였고, 고등학교는 다시 인문계와 실업계로 구분하여 효과크기를 비교하였다. [표 5]는 메타분석을 통해 이론을 활용한 영어교육이 언어적 영역과 정의적 영역에 미치는 효과를 학교급별로 제시한 것이다.

### 표 5. 이론을 활용한 영어교육이 학교급별로 미치는 효과크기 (n=효과크기 사례수)

<table>
<thead>
<tr>
<th>학교급</th>
<th>언어적 영역</th>
<th>정의적 영역</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$ES(U_3)$</td>
<td>95%CI</td>
</tr>
<tr>
<td>중학교</td>
<td>전체</td>
<td>.513(.696)</td>
</tr>
<tr>
<td>고등학교</td>
<td>전체</td>
<td>.484(.686)</td>
</tr>
<tr>
<td>인문계</td>
<td>전체</td>
<td>.434(.668)</td>
</tr>
<tr>
<td>실업계</td>
<td>전체</td>
<td>.619(.732)</td>
</tr>
</tbody>
</table>
메타분석 결과 전 학교급의 학습자들이 언어적 영역과 정의적 영역 모두에서 유의한 효과를 보인 것으로 나타났다. 중학교 학습자와 경우, 언어적 영역의 평균 효과크기는 .513(\(p<.001\)), 정의적 영역의 평균 효과크기는 .672(\(p<.001\))로 중간 정도의 효과크기를 나타내었고 두 영역 모두에서 유의한 효과가 있었다. 비중복 계수(\(r_u\))로 환산하면 통제집단에 비해 실험집단의 중학교 학습자들은 언어적 영역에서 19.6\%, 정의적 영역에서 24.9\%만큼 효과가 있었다. 고등학교 학습자를 대상으로 계산한 평균 효과크기는 언어적 영역 .484(\(p<.001\)), 정의적 영역 .390(\(p<.001\))으로 모두 중간 정도의 효과크기를 유의하게 나타냈다. 비중복 계수(\(r_u\))로 결과를 환산하면 실험집단의 전체 고등학교 학습자들은 통제집단에 비해 언어적 영역에서 18.6\%, 정의적 영역에서 15.2\%만큼 효과가 있었다.

[그림 3] 이론을 활용한 영어교육의 학교급별 효과크기

[그림 3]은 [표 5]의 결과를 시각적으로 비교하기 위해 나타낸 그래프이다. 그래프를 통해 살펴보면 중학교 학습자들의 경우 정의적 영역에서의 효과가 두드러지게 나타나 학습도구의 활용에 따른 수업에 대한 흥미와 반응이 중학교 학습자들에게서 보다 크게 나타남을 알 수 있다. 반면 고등학교 학습자들은 언어적 영역에서의 효과가 정의적 영역보다 높게 나타났는데, 정의적 영역에서도 유의한 효과가 나타나기는 했지만 오랜 기간 축적된 학습자 자신과 영어 학습에 대한 태도로 인해 중학교 학습자들에게 비해 그 효과가 크게 향상되지 않았다고 해석된다. 언어적 영역에서의 효과는 실업계 고등학교 학습자들에게서 높게 나타났는데, 교사 주도로 진행되는 전통적 수업에서 공정적 학습태도나 적극적인 참여가 떨어질 수 있는 실업계 고등학교 학습자들이 이론을 통해 스스로 학습을 주도하고 참여할 수 있는 기회를 갖게 되면서 학업성취도에 의미 있는 효과를 가져온
것으로 보인다. 김건우(2009)는 연간 50일 이상 각종 체육행사에 참여하면서 정규 수업을 제대로 받지 못해온 체육고등학교 학생들을 대상으로 학습자 수준에 맞는 문법 자료를 홈페이지에 게시하고 학습자들이 개별적으로 학습하게 함으로써 성적 향상을 이끌어내었다. 학습자들이 처한 상황과 환경에 따라 다양한 방안을 모색하는 것도 교사의 역할임을 보여주는 연구이다.

5. 수업유형과 학습도구에 따른 효과 분석

이러닝을 활용한 영어교육을 교실수업에 적용할 때 학습을 보다 효율적으로 도와줄 수 있는 수업유형이나 학습도구를 분석하기 위해 온라인 커뮤니티나 협동학습의 활용이 어떠한 차이를 나타내는지 살펴보았다. [표 6]은 메타분석을 통해 온라인 커뮤니티와 협동학습 활동의 유무에 따라 산출한 언어적 영역의 평균 효과크기이다.

<table>
<thead>
<tr>
<th>표 6</th>
<th>온라인 커뮤니티와 협동학습 활용에 따른 언어적 영역 효과크기(n=효과크기 사례수)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
</tr>
<tr>
<td>커뮤니티</td>
<td>26</td>
</tr>
<tr>
<td>협동학습</td>
<td>13</td>
</tr>
<tr>
<td>커뮤니티+협동학습</td>
<td>29</td>
</tr>
<tr>
<td>기타</td>
<td>17</td>
</tr>
</tbody>
</table>

분석 결과 온라인 커뮤니티만 활용한 경우의 효과크기가 .530, 온라인 커뮤니티와 협동학습을 동시에 활용한 경우 .508, 협동학습만 활용한 경우 .490, 둘다 이용하지 않은 경우 .452로 수치의 차이는 있지만 모든 경우에 중간 정도의 효과크기를 나타냈고 그 효과가 유의한 것으로 나타났다 (p<.001). 비중복 계수($U_3$)로 환산한 결과를 살펴보면 실험집단은 통제집단보다 온라인 커뮤니티만 활용한 경우 20.2%, 온라인 커뮤니티와 협동학습을 동시에 활용한 경우 19.4%, 협동학습만 활용한 경우 18.8%, 둘다 이용하지 않은 경우 17.4% 높았다. 이는 이러한을 활용한 영어교육이 수업유형과 학습도구에 상관없이 언어적 영역에서 모든 효과가 있었지만 온라인 커뮤니티나 협동학습을 적절히 활용하면 그 효과가 커질 수 있음을 보여준다.

한편, 온라인 커뮤니티와 협동학습 활동의 유무에 따라 산출한 정의적 영역의 평균 효과크기는 [표 7]과 같다.

<table>
<thead>
<tr>
<th>표 7</th>
<th>온라인 커뮤니티와 협동학습 활용에 따른 정의적 영역 효과크기(n=효과크기 사례수)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
</tr>
<tr>
<td>커뮤니티</td>
<td>22</td>
</tr>
<tr>
<td>협동학습</td>
<td>15</td>
</tr>
<tr>
<td>커뮤니티+협동학습</td>
<td>46</td>
</tr>
<tr>
<td>기타</td>
<td>16</td>
</tr>
</tbody>
</table>
분석 결과를 살펴보면 협동학습만 활용한 경우의 효과크기는 .615, 온라인 커뮤니티와 협동학습을 모두 이용하지 않은 경우 .547, 둘다 동시에 활용한 경우 .534, 온라인 커뮤니티만 활용한 경우 .446으로 모든 경우에 중간 정도의 효과크기로 효과가 유의한 것으로 나타났다(p<.001). 비중복 계수($U_4$)로 환산하면 이론을 영어교육에 활용한 실험집단은 통제집단보다 정의적 영역에서의 효과가 협동학습만 활용한 경우 23.1%, 온라인 커뮤니티와 협동학습을 모두 이용하지 않은 경우 20.8%, 둘다 동시에 활용한 경우 20.3%, 온라인 커뮤니티만 활용한 경우 17.2% 높았다. 언어적 영역에서는 온라인 커뮤니티를 활용하는 것이 다소 학습효과가 높았던 것에 비해 정의적 영역에서는 협동학습을 활용하는 것이 조금 더 긍정적인 반응을 나타내는 것으로 보인다.

온라인 커뮤니티와 협동학습을 동시에 적용하는 것이 학습자와 교수자에게 부담으로 작용할 우려도 있지만 메타분석 대상 논문들은 중학교와 고등학교 모두에서 커뮤니티와 협동학습을 둘다 활용한 경우의 논문이 가장 많았다. 협동학습을 도입하는 경우 모둠별로 토론과 발표, 과제 수행 등이 이루어지고 온라인 커뮤니티를 통해 과제를 제출하는 방식을 많이 활용하였다. 김명선(2009)은 중학교 2학년 학습자들을 대상으로 에듀넷을 활용한 온라인 커뮤니티 기반 탐구학습을 통해 학습자들의 쓰기 능력 향상 뿐 아니라 흥미도, 자신감, 학습태도 등의 정의적 영역에서도 유의미한 효과를 이끌어내었다.

6. 실험기간에 따른 효과 분석

이러닝을 활용한 영어교육이 교실수업에 적용된 실험기간에 따라 효과성에 차이가 있는지 살펴보았다. [표 8]은 분석대상 논문에서 개별 논문의 실험기간에 따라 산출된 언어적 영역의 평균 효과크기이다.

<table>
<thead>
<tr>
<th>실험기간</th>
<th>n</th>
<th>$\hat{E}$</th>
<th>95%CI</th>
<th>SE</th>
<th>$U_4$</th>
<th>Z</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1개월 이하</td>
<td>11</td>
<td>.614</td>
<td>.383-845</td>
<td>.118</td>
<td>.730</td>
<td>5.210</td>
<td>.000</td>
</tr>
<tr>
<td>2개월</td>
<td>29</td>
<td>.432</td>
<td>.279-.585</td>
<td>.078</td>
<td>.667</td>
<td>5.522</td>
<td>.000</td>
</tr>
<tr>
<td>3개월</td>
<td>8</td>
<td>.573</td>
<td>.297-.849</td>
<td>.141</td>
<td>.717</td>
<td>4.074</td>
<td>.000</td>
</tr>
<tr>
<td>4개월</td>
<td>17</td>
<td>.451</td>
<td>.268-.635</td>
<td>.094</td>
<td>.674</td>
<td>4.813</td>
<td>.000</td>
</tr>
<tr>
<td>5개월</td>
<td>7</td>
<td>.603</td>
<td>.323-.884</td>
<td>.143</td>
<td>.727</td>
<td>4.205</td>
<td>.000</td>
</tr>
<tr>
<td>6개월</td>
<td>8</td>
<td>.403</td>
<td>.119-.687</td>
<td>.145</td>
<td>.657</td>
<td>2.781</td>
<td>.006</td>
</tr>
<tr>
<td>6개월초과</td>
<td>3</td>
<td>.576</td>
<td>.129-.1024</td>
<td>.228</td>
<td>.718</td>
<td>2.525</td>
<td>.012</td>
</tr>
</tbody>
</table>

실험기간이 명시되지 않은 2편의 논문은 제외하고 분석한 결과, 이러닝을 활용한 영어교육은 실험기간에 상관없이 언어적 영역에서 모두 중간 정도의 효과크기를 나타내며 유의한 효과가 있었다. 그러나 기대했던 바와 달리 실험기간과 언어적 영역의 효과크기 사이에는 유의미한 상관관계가 나타나지 않았고, 따라서 학습의 효과는 실험기간보다 학습자와 학습내용에 맞는 실험설계가
보다 중요한 요소로 작용했을 가능성이 크다고 보인다.

중학교 1학년 학습부진아 대상으로 인터넷 게임을 활용하여 4주 동안 학업성취도의 변화를 살펴보고자 했던 이신숙(2004)은 연구대상이 학습결손이 있는 학생들이었기 때문에 흥미와 호기심을 자극할 수 있는 인터넷 게임으로 학습도구를 선정하였다. 이를 통해 즉각적인 피드백과 반복학습, 경쟁과 협동심을 유도하였고 학습자들은 단기간에도 비교적 높은 효과크기를 나타냈다. 전주성, 임진호, 김소영(2008) 또한 고등학교 2학년 학습자를 대상으로 온라인 게임을 통해 3주간의 여름 학습 효과를 측정하여 1.053의 효과크기를 나타내었다. 이것은 언어적 영역의 다른 요소에 비해 어휘 능력이 비교적 단기간에 성과의 향상을 기대할 수 있다는 점도 있지만, 제시되었던 어휘의 양이 1주일에 100단어씩 3주간 300단어로 매우 많은 분량이었기 때문에 학습자들이 흥미를 잃지 않으면서 학습 목표를 이룰 수 있도록 한 것이 유효했다고 보인다. 그러나 두 연구 모두에서 무엇보다 의미 있었던 것은 게임 그 자체보다 짧은 기간의 실험 동안에도 학습자들이 스스로 학습할 수 있도록 동기를 유발한 것이다. 결국 학업 성취도의 향상을 가져오는 것은 학습자가 학습에 얼마나 능동적으로 참여하는가에 중요한 요소이며 학습자의 흥미나 관심을 이끌어내고 온라인 게임이나 커뮤니티, 협동학습 등을 활용하는 것도 이를 위한 장치라고 볼 수 있다.


한편, 정의적 영역에 대해 개별 논문의 실험기간에 따라 산출된 평균 효과크기는 [표 9]와 같다.

[표 9] 이러닝을 활용한 영어교육이 실험기간별로 언어적 영역에 미치는 효과(n=효과크기 사례수)

<table>
<thead>
<tr>
<th>실험기간</th>
<th>n</th>
<th>$E^S$</th>
<th>95%CI</th>
<th>SE</th>
<th>$U_q$</th>
<th>Z</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1개월 이하</td>
<td>13</td>
<td>.254</td>
<td>-.017-.524</td>
<td>.138</td>
<td>.600</td>
<td>1.840</td>
<td>.067</td>
</tr>
<tr>
<td>2개월</td>
<td>36</td>
<td>.475</td>
<td>.310-.640</td>
<td>.084</td>
<td>.683</td>
<td>5.657</td>
<td>.000</td>
</tr>
<tr>
<td>3개월</td>
<td>21</td>
<td>.545</td>
<td>.331-.759</td>
<td>.109</td>
<td>.707</td>
<td>4.999</td>
<td>.000</td>
</tr>
<tr>
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<td>16</td>
<td>.609</td>
<td>.374-.844</td>
<td>.120</td>
<td>.729</td>
<td>5.074</td>
<td>.000</td>
</tr>
<tr>
<td>5개월</td>
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<td>.664</td>
<td>.229-1.099</td>
<td>.222</td>
<td>.747</td>
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<td>.003</td>
</tr>
<tr>
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<td>5</td>
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<td>.426-1.283</td>
<td>.219</td>
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<td>3.908</td>
<td>.000</td>
</tr>
<tr>
<td>6개월 초과</td>
<td>4</td>
<td>.842</td>
<td>.375-1.308</td>
<td>.238</td>
<td>.800</td>
<td>3.536</td>
<td>.000</td>
</tr>
</tbody>
</table>

분석 결과 1개월 이하의 실험연구를 제외하면 이러닝을 활용한 영어교육이 정의적 영역에서도 모두 유의한 효과가 있는 것으로 나타났다. 그러나 언어적 영역에서와 달리 정의적 영역에 대한 결과는 실험기간의 증가에 따라 평균 효과크기 또한 점차로 증가되어 실험기간과 학습자들의 정의적 반응 간에 상관관계가 있는 것으로 보인다.

[그림 4] 실험기간에 따른 언어적 영역과 정의적 영역의 효과크기 변화

그레프로 비교해보면 정의적 영역의 효과크기는 실험기간의 증가에 따라 언어적 영역과 다른 양상으로 전개됨을 볼 수 있다. 시간이 지남에 따라 학습자들은 긍정적인 정의적 반응의 향상을 나타내는 한편, 1개월 이하의 실험연구에서는 굉장히 낮은 효과크기를 보이고 있다. 이것은 학습초기 학습자들이 학습도구나 학습 환경이 바뀌면서 관심이나 흥미도가 높아질 수도 있지만 변화된 환경에 적응하기 위한 불안감이나 두려움 등을 경험할 수 있기 때문이다. 김주혜(2007)는 컴퓨터나 인터넷 활용 경험이 많지 않은 학습자는 학습초기에 과제를 제출하거나 자신들의 견해를 표현해야 하는 상황에서 불안감이 높아지고 이로 인해 학습이 제대로 이루어지지 않는 경우도 발생한다. 또한 학습자들의 영어 학습에 대한 태도나 자신감 등의 일시적인 학업성취의 변화가 있다고 해도 쉽게 향상되기 어려우며 성공적 경험의 축적이 필요하기 때문이라고도 볼 수 있다. 따라서 시간이 지남에 따라 학습자들은 변화된 환경에 익숙해지고 학습 경험이 쌓이면서 긍정적인 정서가 커지게 되므로 이것은 교사가 새로운 학습 환경을 설계하고자 할 때 고려해야 할 점으로 판단된다.

V. 결론

하루가 다르게 발전하는 정보통신기술은 우리의 일상생활을 급속히 변화시켰고 이러한 변화는 학교 현장을 비롯한 교육과 학습의 영역에서도 예외가 아니다. 발달된 정보통신 인프라라는 이제 학
이러닝을 활용한 영어교육의 효과에 관한 연구

습자의 개인적 공간 뿐 아니라 학교 현장과 각종 공공시설에도 확산되어 있어 이러닝을 활용한 영어교육은 학습자가 의지만 있다면 언제, 어디서나 지역과 계층의 격차 없이 편리하게 학습의 기회를 제공할 수 있도록 물리적 기반을 마련되어 있다. 또한 이러닝의 활용은 많은 학습자들에게 생활의 일부가 되어 있는 인터넷을 어떻게 교육적으로 활용할 수 있는지를 보여주므로써 지식기반사회에 필요한 학습자의 태도를 길러줄 수 있다.

본 연구는 메타분석을 통해 이러닝을 활용한 영어교육의 효과성과 효율적인 활용방안을 알아보고자 했으며, 다음과 같은 결과를 얻을 수 있었다.

첫째, 이러닝을 활용한 영어교육은 중고등학교 학습자들의 언어적 영역과 정의적 영역에서 모두 유의한 효과가 있는 것으로 나타났다. 특히 언어적 영역의 경우 읽기, 듣기, 말하기, 쓰기 등의 전 영역에서 유의한 효과가 있었다.

둘째, 이러닝을 활용한 영어교육의 효과를 학교급별로 분석했을 때 전체적으로는 고등학교 학습자보다 중학교 학습자들에게 높은 효과가 나타났다. 그러나 고등학교 학습자를 인문계와 실업계로 구분한 후 다시 분석했을 때 언어적 측면에서는 실업계 고등학교 학습자들의 효과가 가장 컸고 정의적 영역에서는 중학교 학습자들의 효과가 가장 컸다.

셋째, 이러닝을 활용한 영어교육에 온라인 커뮤니티나 협동학습을 접목시킨 경우의 효과를 분석했을 때 둘다 사용하지 않은 경우가 포함된 모든 경우에 이러한 언어적 영역과 정의적 영역에서 유의한 효과가 있는 것으로 나타났다. 그러나 언어적 영역에서는 온라인 커뮤니티나 협동학습을 활용하는 것이 더 효과적이었고 정의적 영역에서는 협동학습을 활용하는 것이 보다 긍정적인 것으로 나타났다.

넷째, 분석대상 논문들의 실험기간에 따라 이러닝을 활용한 영어교육의 효과를 분석했을 때 언어적 영역에서는 실험기간의 증가와 학습효과가 비례하지는 않아서 실험기간보다는 학습내용과 학습자의 특성에 맞는 실험설계가 보다 유의한 변인이 될 것이라고 해석되었다. 반면 정의적 영역에서는 실험기간이 증가함에 따라 학습자들의 긍정적인 반응 또한 같이 향상되기지만 1개월 이하의 짧은 실험에서는 낮은 효과가 확인된 것으로 나타났다.

이와 같이 다수의 선행연구들을 통합하고 그 메타분석 결과를 통해 보다 효율적으로 이러닝을 활용하기 위해 다음과 같은 제언을 할 수 있다.

첫째, 다수의 선행연구를 토대로 지역, 계층, 학업 수준 등이 다른 다양한 학습자들을 통합하여 분석한 양적 연구는 개별 논문이 가지는 한계를 넘어 연구 결과에 대한 객관성과 일반화의 가능성을 높였다. 따라서 이러닝을 활용한 영어교육은 일반적으로 효과가 있음을 입증하였으며, 보다 효율적인 이러닝을 위한 방안으로써 온라인 커뮤니티를 통한 학습의 거점 형성과 소집단 활동 등을 통한 학습자간 상호작용 증진 및 책임감 부여 등을 고려할 수 있다. 입시에 대한 직접적인 부담이 덜하고 또한 집단과의 상호작용이 필요한 중등학교 학습자들에게는 협동학습이 긍정적 효과를 줄 수 있고, 고등학교 학습자들은 자율적인 학습을 도와줄 수 있는 도구들이 보다 효과적으로 보인다.

둘째, 수업설계에 있어 가장 중요한 것은 학습자가 능동적으로 학습에 참여하도록 하는 것이 다. 메타분석 결과에 따라 이론을 활용한 영어교육이 일반적으로 효과가 있음이 증명되었으나 이러닝을
비롯하여 특정 학습 도구가 항상 학습의 성공을 보장하는 것은 아니다. 선행연구 중에는 실험집단에 대한 처리가 학습자들에게 오히려 부정적으로 나타나 참여도가 떨어지고 학업성취도 또한 통계적 검정에 비해 낮은 결과도 있었다. 따라서 다양한 학습 도구를 활용하여 학습자의 홍미를 유발하는 것도 학습자가 스스로 학습을 하도록 돕는 보조적 장치의 하나이며 학습효과에 절대적인 것은 아니다. 그러므로 교수자는 자신의 학습자들에게 맞는 도구의 선택과 학습 과정에 대한 평가를 통해 학습자의 자기주도적 학습을 이끌어내야 할 것이다.

셋째, 이러닝 등을 교실수업에 적용하고자 할 때 새로운 학습 환경으로의 변화는 초반에 학습자들에게 긴장과 불안감을 일으키는 요소가 될 수 있고 학습에도 영향을 미치게 되므로 주의가 필요하다. 교수자는 학습 초기에 발생할 수 있는 학습자들의 부정적 정서와 혼란을 최소화하기 위해 학습자들이 어려움을 겪을 수 있는 부분을 미리 예측하고 충분한 설명을 제시해야 한다. 또한, 온라인 커뮤니티와 같은 학습자들간의 의사소통 통로가 있어 학습 과정에 대해 지속적인 점검을 할 수 있다면 보다 빠르게 학습자들의 흥미를 유발할 수 있을 것이다.

본 연구는 방법적 측면에서 고전적 메타분석이 가지는 한계를 보완하기 위해 효과크기에 가중치를 적용하였고, 효과크기의 동질성 검정을 통해 랜덤효과 모형으로 평균 효과크기를 계산하여 결과를 분석하였고, 표준오차와 95% 신뢰구간을 산출하여 함께 제시하였다. 그럼에도 본 연구는 다음과 같은 연구의 제한점을 가지고 있다.

첫째, 이론적 메타분석은 영어교육과 관련된 선행논문들의 수가 상당히 축적되어 있기지만, 메타분석을 하기 위한 조건을 충족시키기 못해 자료 처리 과정에서 많은 수의 논문들이 분석에서 제외되었다. 그 중에는 연구의 목적이 이론적 토대나 활용 방안 등을 제시하기 위한 것이기 때문에 제외된 논문도 있지만, 학습수의 논문들은 실험을 통해 의미 있는 결과를 제시할 때 통계적 검정을 통해 통제집단의 설정 없이 사전, 사후 비교를 통한 통계적 검정을 제시하고 있어 본 연구의 기준에서는 제외될 수밖에 없었다. 가능한 한 많은 논문들을 분석 대상에 포함시키려 했지만 제외된 논문의 수도 상당하기 때문에, 기존의 모든 선행연구들을 통합 분석하고자 했던 목표와 비교해 아쉬움이 남는다.

둘째, 이론적 메타분석은 영어교육에서 다양한 학습 환경에 따른 효과 차이를 분석하기 위해서는 선행연구들이 공통적으로 활용하는 도구들이 있어야 하고, 그 논문편수가 분석에 유의미한 결과를 줄 수 있을 만큼 확보되어 있어야 한다. 본 연구에서는 그 기준을 5편으로 하였는데 세부적인 분석을 할수록 이 기준을 충족시키기 못해 통계 처리를 하고도 결과 제시에 포함되지 못한 자료들이 있었다. 앞으로 연구물의 수가 더 많이 축적되고 연구들간의 학습도구에 대한 공통분모가 보다 형성된다면 훨씬 다양하게 활용방법에 대한 분석을 제시할 수 있을 것이다.

셋째, 메타분석은 선행논문들이 필요한 내용을 얼마나 구체적으로 서술했는가에 영향을 받는다. 한 선행연구에서 서술의 구체성이 떨어진다고 실험의 절차도 설명되면 것은 아님에도 실험의 절차가 제대로 기술되지 않은 논문은 실험의 결과를 반영하여 메타분석하는 과정에 연구의 정확성을 떨어뜨릴 수 있다. 특히 통제집단에 대한 서술은 더 빈약하여 집단 간의 차이에 대한 차이를 자세히 알고자 할 때 한계가 있었다.
넷째, 본 연구에 제시된 메타분석 자료는 선행연구들을 통합하여 전반적인 평균 효과크기를 제시한 것으로 개별 논문의 특성에 따른 결과의 차이를 설명하는 데는 못한다. 따라서 향후 양적 분석과 함께 질적 연구나 사례 분석 등이 이루어지면 보다 풍부한 분석 자료를 제시할 수 있을 것으로 보인다.

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Lawrence Erlbaum Associates.

Key words: e-Learning, English education, meta-analysis
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I. 서론

외국어교육에 멀티미디어를 적절히 활용하는 것이 교육성과를 극대화하는데 효과적이라는 것은 주지의 사실이다. 그 예로 keypal을 활용한 학습자 중심의 작문 활동이 대학생 학습자의 작문 능력을 극명히 증진시켰다는 연구 보고가 있다(Song, 2006). 또 다른 예로는 멀티미디어 영어 동화책을 활용한 영어교육은 아동들의 영어 습득에 있어서 보다 긍정적이고 적극적인 학습 태도를 갖게 함으로써 학습 동기를 강화시키며 학습 효과를 크게 향상시킨다는 연구 결과도 있다(이지은, 최수영, 2010). 또한 화상교육의 경우 전통적인 면대면(face-to-face) 교육 방식보다 학습자의 불안 정도를 더 낮추어주고, 화상회의는 면대면 면접과 유사한 경험을 제공하면서 타당도는 더 높으며 동시에 경제적 및 행정적인 부담을 감소시켜준다는 연구 결과도 있다(Craig & Kim, 2010).

외국어교육 현장에 멀티미디어를 활용한 교수 방법을 효과적으로 적용하기 위해서는 소프트웨어적인 측면과 더불어 하드웨어적인 측면을 동시에 고려하여야 한다. 현재 기능이 다양하고 완성도가 높은 소프트웨어들이 지속적으로 개발되고 있는데 반하여, 소프트웨어의 멀티미디어적 요소들을 효과적으로 구현할 수 있으면서 동시에 실제 외국어교육 현장에 적용하기에 적절하고 편리한 하드웨어는 상대적으로 다양하지 못한 것이 현실이다.

최근 교육 현장에서 주로 활용되는 멀티미디어를 활용한 교육 활동들은 대체로 시청각자료(audio-visual materials), 전자칠판(cyber computer board), 실시간 생방향 원격화상교육(real-time video conferencing), 동영상 녹화, 영상합성(chromakey), 노래방(karaoke), 실물화상기(visual presenter) 등을 통해 이루어지고 있다. 그리고 이러한 다양한 멀티미디어 요소들을 교육 현장에 구현하기 위하여 설치되는 기본적인 하드웨어에는 컴퓨터, 마이크, 앰프, 스피커, 전자칠판, 화상교육시스템, 동영상녹화장비, 영상합성시스템, 노래방시스템, 실물화상기 등이 있다. [그림1]은 이러한 기자재들을 포함하고 있는 대표적인 멀티미디어 학습실의 예이다.
위 학습실의 예는 얼핏 보기에는 효과적인 학습 환경처럼 보이지만 실제로 교수 활동을 하는 데 있어서 몇 가지 문제점을 안고 있다. 첫째, 멀티미디어를 활용한 활동이 전체 교육 활동의 중심이 되도록 구성되어 있다. 외국어교육에 있어 멀티미디어적인 요소들은 교육 성과를 촉진하는 것이 아니라 교육 활동의 전체가 될 수는 없다. 둘째, 기자재가 주로 교실 전면부에 설치되어 있어 공간 활용이 원활하지 않다는 것이다. 최근 외국어교육에서는 학습자의 참여가 더욱 중요시되고 이를 촉진하는 것이 교사의 주된 역할이 되고 있는데, 기자재들이 자칫 학생들의 원활한 학습 활동 참여에 장애가 되지 않도록 유의해야 할 것이다. 셋째, 기자재가 분산되어 설치되어 있으므로 교사가 쉽게 여러 기자재를 동시에 작동하면서 적절히 적용하는 데에 번거로움이 있다는 점이다. 교사는 필요한 교수 활동을 하기 위하여 각 하드웨어들을 따로 조작해야하는데 각각의 기능을 통합적으로 원활히 활용하기 위해서는 상당한 기계적 지식과 조작 훈련이 필요하다.

위에서 지적한 문제점들을 해결하면서 외국어교육 환경에서 멀티미디어 요소들을 적절하고 편리하게 활용할 수 있도록 새롭게 개발된 티처랑 시스템(TeacherLang System, 이하 TeacherLang)은 기존 외국어교육 환경에서 훈련 환경과 동일하게 활용되고 있는 전자칠판, 컴퓨터, 앰프, 스피커, 마이크, 영상합성, 원격화상통신, 노래방기기, 실물화상기 기능을 통합하여 제작된 이동식(movable) 일체형(all-in-one) 실시간(real-time) 화상멀티미디어 기자재이다(그림 2 참조).
Ⅱ. TeacherLang에 탑재된 하드웨어 시스템


1. 컴퓨터

일반 컴퓨터의 기능을 모두 구현하기 위하여 DVD(CD) Rewriter를 탑재하고 있으며, USB장치를 연결할 수 있으며, 유/무선 인터넷 접속 환경을 제공하고, 기존에 설치되어 있는 대형전자칠판 및 프로젝터 등 각종 디스플레이와의 병렬연결이 가능하도록 RGB, DVI, HDMI 단자를 제공한다.

2. 음향장비

교실 및 강당에서의 수업이 가능하도록 충분한 용량의 앰프와 스피커를 탑재하고 있으며, 유/무선마이크를 연결시키는 단자와 마이크 블룹, echo 및 성량을 조절하는 버튼 및 외부 음원과의 연결이 가능한 단자를 포함한다.

3. 전자칠판

42-55인치 LCD 터치모니터와 판서소프트웨어가 탑재되어 조작 및 판서를 간단한 손동작으로 할 수 있다.

4. 쌍방향 화상통신

VoIP(Voice over Internet Protocol) 기반의 화상통신이 가능하도록 화상카메라와 소음제거 마이크 및 관련 소프트웨어를 탑재하고 있다. 구체적으로 원격지의 교사가 일반 pc나 스마트폰을 사용하여 여러 명의 학습자들을 동시에 실시간으로 지도할 수 있도록 고성능 마이크와 화상카메라를 탑재하고 있다.

5. 영상합성(Chromakey, 크로마키)

학습자들이 가상의 공간속에 들어가 활동하는 장면을 녹화하기 위하여 영상합성에 필요한 카메라, 마이크, 소프트웨어를 탑재하고 있다. 특히 크로마키 제작에 사용되는 소프트웨어는 즉각적으로 간편하게 사용할 수 있는 소프트웨어이다.

6. 실물화상기

장착된 화상카메라를 이용하여 간단한 실물화상 기능을 구현하도록 카메라 거치대를 포함한다.
구체적으로 자동초점렌즈가 장착된 카메라를 거치대에 장착하여 사용자가 간편하게 교재나 실물들 을 학습자에게 직접 보여줄 수 있다.

[그림 3] TeacherLang System 각 부분의 명칭

[표 1] TeacherLang System Specification

<table>
<thead>
<tr>
<th>구분</th>
<th>성능</th>
</tr>
</thead>
<tbody>
<tr>
<td>개요</td>
<td>전자칠판, 컴퓨터, 앰프, 스피커, 마이크 및 영상합성(Chromakey) 장비들이 탑재되어 화상교육 및 다양한 멀티미디어 교육을 할 수 있는 이동식 일체형 실시간 멀티미디어 기기 제조</td>
</tr>
<tr>
<td>프로세서</td>
<td>Intel Core 2Quad CPU 2.33GHz 이상</td>
</tr>
<tr>
<td>메모리</td>
<td>4GB RAM(2GB * 2 EA)</td>
</tr>
<tr>
<td>시스템보드</td>
<td>Intel Chipset M/B</td>
</tr>
<tr>
<td>저장장치</td>
<td>500 GH HDD 이상</td>
</tr>
<tr>
<td>ODD</td>
<td>Super Multi DVD Rewriter</td>
</tr>
<tr>
<td>영상출력단자</td>
<td>RGB, DVI, HDMI</td>
</tr>
<tr>
<td>OS</td>
<td>MS Windows XP 이상</td>
</tr>
<tr>
<td>앰프</td>
<td>SA-2-A.MC 20W+20W</td>
</tr>
<tr>
<td>스피커</td>
<td>2Channel 50W+50W</td>
</tr>
<tr>
<td>마이크</td>
<td>Full Duplex / Echo&amp;Noise Cancellation</td>
</tr>
<tr>
<td>외합재질</td>
<td>스틸 외</td>
</tr>
<tr>
<td>입력전원</td>
<td>220V</td>
</tr>
<tr>
<td>크기(가로<em>세로</em>폭)</td>
<td>910mm<em>1850mm</em>700mm</td>
</tr>
<tr>
<td>무게</td>
<td>70kg</td>
</tr>
</tbody>
</table>
Ⅲ. TeacherLang을 활용한 학습 방법 및 기대 효과

1. 화상교육(Video Conferencing)

화상교육 시 교사가 주로 개인용 pc를 사용하고 있다는 사실을 감안하여, VoIP 방식의 모든 화상통신방식을 수용한다. 즉, 세계인들이 일반적으로 많이 사용하는 Skype, MSN, ooVoo, Gmail Voice and Video Chat등의 상용 서비스를 활용하여 각 지역의 네트워크 사정에 크게 영향을 받지 않도록 일반적인 화상카메라를 사용하고, 고성능 화상통신 마이크를 탑재하여 별도의 장비 없이 그룹으로 수업이 가능하도록 되어 있다. 특히 교재를 스크린에 띄워놓고 실제로 판서가 가능하도록 하여 실제 수업과 큰 차이가 없는 교육 환경을 제공한다. 유/무선 인터넷과 전원이 연결되는 어떤 장소에서나 화상수업이 가능하도록 되어 있다(그림 4와 [그림 5] 참조).

특히, Skype의 경우 최근 스마트폰과의 영상통화 서비스를 제공하고 있으므로, 전세계 WiFi 존에서 교사는 스마트폰으로 원격지 교실의 여러 학습자들과 영상으로 통화하며 실시간 교육을 실시.
할 수 있다. 실제 교육현장에서 활용 가능한 학습 방법의 예 및 기대 효과를 좀 더 구체적으로 살펴보면 다음과 같다.

1) Teacher-to-Class

원어민교사가 학생들과 같은 장소에 있지 않은 경우에도 실제 함께 있으면서 지도하는 것처럼 언어교육을 할 수 있을 것이다. 예를 들어 원어민의 직접지도가 용이하지 않은 도서산간벽지 지역의 학생들에게도 원어민의 실시간 언어교육을 실시할 수 있을 것으로 기대된다. 특히 mime 등을 통해 의미를 명확히하거나, 비언어적(non-verbal) 동작을 학습할 때에 효과적일 것으로 예상된다.

2) Student-to-Student

원격지에서 목표언어를 사용하는 학생들과 실리적인 부담을 덜면서 언어를 연습하고, 상대 문화를 흥미롭게 학습할 수 있을 것이다. 또한, 채팅창에 짧은 단문을 교환하며 작문 능력을 배양할 수도 있을 것이다. 상호간에 관심 있는 과업이 주어졌을 때 좀 더 적극적인 언어사용을 촉진할 수 있을 것으로 기대된다.

3) Class-to-Class

원격지의 두 교실에서 TeacherLang처럼 그룹미팅이 가능한 장비가 갖추어졌을 때 두 교실 간의 학습의 공유가 실현될 수 있을 것으로 본다. 학생들의 활동은 주로 상호간 프리젠테이션 위주로 진행될 수 있을 것이며, 공식적인 언어구사(public speaking)의 연습에 효과가 있을 것으로 본다.

2. 전자칠판(Cyber Computer Board)

실제 교육현장에서 TeacherLang에 탑재된 전자칠판을 활용하여 구현할 수 있는 학습 방법 및 기대 효과는 다음과 같다.

1) 참여학습

시청각(audio-visual)뿐만 아니라, 촉각(tactile)까지 적극적으로 활용할 수 있으므로 학생들이 직접 참여하는 학습에 큰 도움이 될 것으로 예상된다. 한 예로 상호작용이 가능한 게임 형식의 학습소프트웨어가 효과적으로 사용될 수 있을 것이다.

2) 읽기·문법지도

텍스트를 스크린에 띄워놓고 의미를 명확히 하기위해 구조적인 설명을 도식으로 설명하거나, 문법 설명을 그림으로 설명하기에 편리할 것이다.

3) 쓰기지도

학생들의 작문을 참조지도하기가 용이할 것이고, 그 과정에서 전체 학생들의 주의를 집중시킬 수 있을 것이며, 동료간의 협업활동을 촉진시킬 수 있을 것으로 기대된다.

My name is Mia Tynne Lindstrom. I am a pianist. I began studying the piano when I was three years old. I am Ten years old now. I play the piano in the junior orchestra at the community college. We give a concert twice a year. I am always practicing new music for the next concert.

During the school year, I take four piano lessons every week from my piano teacher, Mrs. Taylor. Mrs. Taylor teaches piano lessons at the college. In the summer, I take two lessons every week. I practice playing the piano about ten hours every week.

I practice very hard because I want to learn everything about playing the piano.
3. 영상합성(Instant Chromakey)

영상합성 기법이란 녹색의 배경 앞에서 학습자가 활동하는 것을 컴퓨터 그래픽으로 만들어낸 이미지나 동영상으로 배경을 대치하여 3차원의 영상 화면을 재현해 내는 것인데, 외국어교육 현장에서 학습자가 가상의 상황 속에서 마치 실제처럼 활동하도록 도와준다. TeacherLang에 탑재된 Instant Video Presenter는 녹색의 배경 앞에서 간단하게 크로마키 제작을 할 수 있도록 해준다. 교사는 컴퓨터 그래픽에 대한 전문적인 지식이 없어도 몇 번의 손동작으로 학생들이 가상의 공간 속에서 활동하는 것처럼 느낄 수도 있고, 활동 장면을 녹화할 수도 있다.[그림 9 참조].

[그림 9] TeacherLang에 탑재된 Instant Video Presenter의 기능

실제 교육현장에서 TeacherLang에 탑재된 Instant Video Presenter의 기능을 활용하여 구현할 수 있는 학습 방법의 구체적인 예 및 기대 효과는 다음과 같다.

1) 역할극(Role-play)

다양한 상황별로 이미지나 동영상을 선정하고, 그것을 배경으로 적절한 역할극을 하는 데 도움이 될 것이다. 예를 들어, 외국 명소의 사진을 배경으로 학생들이 마치 실제 그곳에서 대화를 나누어
듯이 수업을 흥미롭게 진행할 수 있을 것이고, 자연스럽게 수업에 대한 학생들의 집중도가 높아질 것으로 예상된다.

2) 발표(Presentation)

학생들이 자신이 준비한 이미지, 동영상, 혹은 기타 문서 등을 배경으로 다양하고 흥미로운 영상물을 제작하여 발표함으로써 참여도 높은 수업을 할 수 있을 것으로 예상된다.

3) 학습자료 개발

교사가 파워포인트나 워드 등 문서로 작성된 교육 자료를 활용하여 그것을 직접 설명하는 음성과 교사의 모습이 동장하는 영상물을 제작함으로써 또 다른 형식의 학습 자료로 활용할 수 있을 것이다.

4. 원터치 동영상 녹화

학습자들의 학습 활동 장면을 녹화하고 재생하여 함께 보는 것은 학습에 대한 피드백 제공 측면에서 중요한 가치를 가져가고 있을 뿐 아니라 활동 그 자체가 학습의 홍미를 자극하여 교육의 효과를 높일 수 있다. 활동 장면을 녹화하여 사용하는 기존의 방식은 교사가 별도의 카메라로 학습자들의 활동을 녹화하여 저장하고 그것을 다시 컴퓨터에 옮겨 사용하던 방식이다. 그러한 방식은 교사가 카메라의 조작에 신경을 쓰게 되어 학습 활동이 자칫 산만해지기 쉽고, 녹화된 파일을 컴퓨터에 옮겨 재생해야 하는 번거로움이 있다. TeacherLang은 탑재된 화상카메라의 소프트웨어를 활용하여 학습자의 활동 장면을 음성과 함께 간단한 손동작으로 녹화할 수 있고, 즉시 재생하여 보면서 학습의 홍미를 높이거나 평가의 자료로 삼을 수 있다. 실제 교육현장에서 활용할 수 있는 학습 방법의 구체적인 예 및 기대 효과는 다음과 같다.

1) 단막극

학생들이 직접 구성한 짧은 드라마를 간단하게 촬영하여 다시 봐서 학생들의 참여도가 높은 수업을 진행할 수 있을 것이다.

2) 디지털 스토리텔링(Digital storytelling)

학생들이 둘 이상의 멀티미디어적인 요소들(예. 텍스트, 소리, 음악, 비디오, 사진, 및 기타 디지털 자료들)을 결합하여 효과적으로 이야기를 만들어 내는 영상을 쉽게 촬영할 수 있을 것이다.

3) 평가 및 피드백

촬영된 영상은 평가 및 기타 자료로 활용될 수 있고, 학생들은 자신들의 활동을 다시 관찰하고 평가함으로써 스스로 언어적 발전을 기할 수 있는 자기주도적 학습 과정을 경험할 수 있을 것으로
기대된다.

5. 실물화상기

한국적 상황에서의 외국어교육에서는 텍스트 위주의 독해 활동이 많은 부분을 차지한다. 이 경우 텍스트를 영상으로 비추고 그 위에 첨삭이나 부가적인 설명을 하게 되면 학생의 집중력 및 학습 효과를 향상시킬 수 있다. TeacherLang에 탑재된 화상카메라를 실물화상기로 사용하면 학습자들은 자신들의 교재가 아닌 커다란 모니터를 응시하면서 교사의 교육 내용을 좀 더 정확하게 이해할 수 있게 된다. 이 때 교사의 카메라 조작이 용이하도록 자동초점기능(auto-focusing)을 제공하는 것이 중요하다.

![TeacherLang의 화상카메라를 사용하여 교재에 판서하는 장면](image)

실제 교육현장에서 TeacherLang의 화상카메라를 사용하여 구현할 수 있는 학습 방법의 구체적인 예 및 기대 효과는 다음과 같다.

1) 읽기・문법지도

책 내용을 즉각적으로 촬영한 다음, 구조적인 설명을 첨삭하여 교재 내용에 대한 이해도를 높일 수 있을 것이다.

2) 실물(Realia)

신문, 잡지, 그래픽, 광고 등의 목표문화와 직결된 교재를 손쉽게 교육에 활용할 수 있게 해줌으로써 문화와 긴밀한 유대관계를 유지하는 언어교육을 수행하는 데 도움을 줄 수 있을 것으로 기대한다.
6. 팝송노래방(Popsong Karaoke)

팝송을 영어교육에 활용하는 것은 학습의 흥미를 자극할 뿐만 아니라 문화를 지도하는 데에도 아주 효과적이어서 많은 교사들이 팝송을 교육에 활용하고 있다. TeacherLang은 팝송노래방 시스템을 탑재하여 즐겁게 영어를 공부하고 사용할 수 있게 해준다. 사용 방법은 일반적인 노래방과 마찬가지로 노래를 번호로 선택하고 부르면 점수가 화면에 나타나는 방식이다.

[그림 12] TeacherLang에 탑재된 팝송노래방 시스템

7. 기타 활용 예

TeacherLang은 마이크와 스피커를 비롯한 음향장치를 탑재하고 있으므로 영상합성가라오케 인 Yoostar나, 개인용으로 사용되는 음성인식소프트웨어(예, RosettaStone) 등을 교실 환경에서 여러 명이 함께 사용하며 학습 효과를 높일 수 있다. 영상합성가라오케 Yoostar는 헤리우드 영화 장면을 사용하여 학습자가 실제 배우 대사를 주고 받을 수 있는 일종의 영상합성 소프트웨어이다. 학습자는 수준에 따라 길거나 짧은 대사를 받아 실제 배우와 동일한 영상 속에서 함께 연기를 하
고 그 영상을 녹화할 수 있다. 학습자들은 TeacherLang으로 간단한 Yoostar 영상의 제작을 즐기면서 그 과정을 통하여 구어체 영어를 자연스럽고 흥미롭게 연습할 수 있다. 음성인식 소프트웨어인 RosettaStone은 원래 개인학습자용인데, TeacherLang이 자체에 고성능 마이크를 탑재하고 있어서 교실 환경에서 여러 학생들이 함께 사용할 수 있다. 그리고 스크린의 터치기능은 상호작용 활동의 효과를 배가하는 역할을 하게 된다([그림 13] 참조).

Ⅳ. 결론 및 제언

외국어교육에 주로 활용되는 멀티미디어의 종류에는 첫째, 교사들과 학생들이 편하게 활용할 수 있는 이동식 컴퓨터, 둘째, 원격화상교육에 필요한 화상통신 장비, 셋째, 앰프, 스피커 및 마이크 등의 음향시스템, 넷째, 영상합성장치(Chromakey), 다섯째, 교재나 실물을 스크린 위에 보여줄 수 있는 실물화상기 등이 있다. 이러한 멀티미디어 기자재의 기능을 구현하기 위해서는 개별 시스템들을 각각 구매하여 설치하여야 하는데 그러기 위해서는 예산이 많아 소요되고, 설치된 장비들이 제한된 학습 활동 공간을 많이 차지하여 자칫 학습 활동에 방해가 되고, 무엇보다도 교사들이 다양하고 복잡한 기능들을 보유한 각각의 시스템들을 이해하고 그 조작법을 숙지하여 교육 현장에 적절히 적용해야하는 어려움이 있다.

본고는 이러한 문제점을 해결하기 위하여 개발된 이동식 일체형 실시간 화상멀티미디어 시스템인 TeacherLang의 특징과 학교 현장에서 구현 가능한 학습 방법, 그리고 그로 인해 기대되는 학습 효과를 살펴보았다. 첫째, TeacherLang은 '사용의 편리성'이 강조되는 기자재로 판단된다. 기자재의 활용이 복잡하면 사용이 꺼려지는 경향이 있어 무용화되기 쉬운데, TeacherLang은 교육 활동에 많이 활용되는 개별 장비들(전자칠판, 컴퓨터, 앰프, 스피커, 화상카메라 등)의 기능을 하나로 통합하여 사용이 간편하고 필수적인 기능만 초점을 맞추었다. 둘째, '교육 현장에서의 실제 활용 가능성'을 염두에 두기 위하여 개발된 이동식 일체형 실시간 화상멀티미디어 시스템인 TeacherLang의 특징과 학교 현장에서 구현 가능한 학습 방법, 그리고 그로 인해 기대되는 학습 효과를 살펴보았다. 첫째, TeacherLang은 '사용의 편리성'이 강조되는 기자재로 판단된다. 기자재의 활용이 복잡하면 사용이 꺼려지는 경향이 있어 무용화되기 쉬운데, TeacherLang은 교육 활동에 많이 활용되는 개별 장비들(전자칠판, 컴퓨터, 앰프, 스피커, 화상카메라 등)의 기능을 하나로 통합하여 사용이 간편하고 필수적인 기능만 초점을 맞추었다. 둘째, '교육 현장에서의 실제 활용 가능성'을 염두에 두기 위하여 개발된 이동식 일체형 실시간 화상멀티미디어 시스템인 TeacherLang의 특징과 학교 현장에서 구현 가능한 학습 방법, 그리고 그로 인해 기대되는 학습 효과를 살펴보았다. 첫째, TeacherLang은 '사용의 편리성'이 강조되는 기자재로 판단된다. 기자재의 활용이 복잡하면 사용이 꺼려지는 경향이 있어 무용화되기 쉬운데, TeacherLang은 교육 활동에 많이 활용되는 개별 장비들(전자칠판, 컴퓨터, 앰프, 스피커, 화상카메라 등)의 기능을 하나로 통합하여 사용이 간편하고 필수적인 기능만 초점을 맞추었다. 둘째, '교육 현장에서의 실제 활용 가능성'을 염두에 두기 위하여 개발된 이동식 일체형 실시간 화상멀티미디어 시스템인 TeacherLang의 특징과 학교 현장에서 구현 가능한 학습 방법, 그리고 그로 인해 기대되는 학습 효과를 살펴보았다. 첫째, TeacherLang은 '사용의 편리성'이 강조되는 기자재로 판단된다. 기자재의 활용이 복잡하면 사용이 꺼려지는 경향이 있어 무용화되기 쉬운데, TeacherLang은 교육 활동에 많이 활용되는 개별 장비들(전자칠판, 컴퓨터, 앰프, 스피커, 화상카메라 등)의 기능을 하나로 통합하여 사용이 간편하고 필수적인 기능만 초점을 맞추었다. 둘째, '교육 현장에서의 실제 활용 가능성'을 염두에 두기 위하여 개발된 이동식 일체형 실시간 화상멀티미디어 시스템인 TeacherLang의 특징과 학교 현장에서 구현 가능한 학습 방법, 그리고 그로 인해 기대되는 학습 효과를 살펴보았다. 첫째, TeacherLang은 '사용의 편리성'이 강조되는 기자재로 판단된다. 기자재의 활용이 복잡하면 사용이 꺼려지는 경향이 있어 무용화되기 쉬운데, TeacherLang은 교육 활동에 많이 활용되는 개별 장비들(전자칠판, 컴퓨터, 앰프, 스피커, 화상카메라 등)의 기능을 하나로 통합하여 사용이 간편하고 필수적인 기능만 초점을 맞추었다.
어 활용)을 포함하고 있다.

넷째, '간편한 이동'이 가능한 제품이다. 현재 교육 현장에는 고가의 장비가 교실마다 중복되어 설치되어 있는 경우가 많아 그 효율성이 떨어지고 있다. 모든 장비들이 동시에 활용되는 것이 아니기 때문에 간편하게 이동 가능한 일체형 기자재를 사용하면 교육기관의 예산을 절감시키고 기자재 활용상의 효율성을 높일 수 있다.

이와 같은 점에서 TeacherLang은 교육 현장에서 분산되어 사용되고 있는 여러 기자재들의 기능을 하나로 통합하여 사용상의 효율성을 높이고, 이동식으로 제작되어 공간 활용을 자유롭게 하며, 조작이 간편하여 외국어교육 현장에서 매우 효과적으로 활용될 수 있는 장점이 있다고 판단된다.

학교 현장에서 멀티미디어를 활용한 외국어교육은 CAI(Computer Assisted Instruction)의 발전과 더불어 교육 효과를 촉진시키는 중요한 역할을 해오고 있다. 그러나 일부 교육 현장에서의 멀티미디어 기자재에 대한 지나친 의존은 언어교육을 자칫 기계적인 활동에 치우치도록 하는 경향도 초래해왔다. 멀티미디어의 활용은 원활한 외국어 습득을 도와줄 수 있도록, 학습에 흥미를 주고 언어사용을 촉진하는 역할을 해야 한다. 이런 점에서 외국어교육 현장에 투입 될 멀티미디어 학습 기자재들은 언어 습득 및 학습 원리에 대한 친절한 이해를 바탕으로 고안되어야 하고, 실제로 사용하는 교사들이 편리하게 활용할 수 있도록 교실 현장의 물리적인 상황에 대한 충분한 이해가 있어야 한다.

현재 학교 현장에 투입된 많은 기자재들이 그 자체로 기능적 우수성에도 불구하고 교실 상황과 학습 원리에 대한 몰이해로 남용 및 오용되고 있는 것이 현실이다. 교육 현장에서 좀 더 효과적인 멀티미디어 교육기자재가 도입되기 위해서는 먼저 현장 교육자들이 교육이론과 경험, 그리고 현장 상황에 대한 이해를 바탕으로 장비 개발자들에게 필요한 교수기능을 포함하여, 사용을 편리하게 할 수 있는 아이디어를 제공하는 것이 바람직하다. 이와 관련하여 산학협력을 통한 멀티미디어기자재의 개발은 성공적인 기자재 도입이라는 소미의 목적을 달성할 수 있는 좋은 대안이 될 수 있다.

정보통신 분야의 급속한 발전과 더불어 멀티미디어를 활용한 교육은 웹기반의 e-learning과 스마트폰의 확산과 더불어 u-learning으로 활성화되고 있는 추세이다. 외국어교육에서도 웹과 무선단말기를 활용하여 언제 어디서든지 맞춤형 교육이 가능한 방향으로 발전될 전망이다. 그러므로 청중 외국어 학습을 위한 멀티미디어 교육은 학생 개인별 무선단말기와 상호작용하며 실시간으로 쌍방향 언어사용을 더욱 촉진할 수 있는 방향으로 교육방법을 계속 개발해나가야 할 것이다.

멀티미디어를 활용한 언어교육의 성패는 기자재의 우수성을 전체로 하고, 이를 현장에서 활용하는 교사의 역량에 달려있다고 할 수 있다. 성공적인 외국어교육을 위한 멀티미디어기자재 활용에 대한 다양한 아이디어와 정보의 교류, 그리고 많은 관련 연구가 지속되기를 기대하는 바이다.
REFERENCES


Key words: video conferencing, chromakey, hardware, multi-media,
Applicable levels: all levels

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편집위원회 규정

제1장 총칙

제1조 본 위원회는 한국멀티미디어언어교육학회 편집위원회라 한다.
제2조 본 위원회는 한국멀티미디어언어교육학회 회칙 제13조에 의거하여 학회 내에 둔다.

제2장 구성

제1조 편집위원회는 전공 분야별로 안배하여 20명 내외로 구성하고, 위원장과 이사, 위원 및 간사를 둔다.
제2조 편집위원장은 수석 부회장이 겸임하고, 임기는 부회장의 임기와 같다.
제3조 편집위원은 투고 논문을 세부 전공별로 심사할 수 있도록 각 영역 전문가를 고루 선정하며, 학술 연구 실적이 뛰어난 회원 중에서 학회 회장이 추천하여 이사회의 인준을 얻어 임명한다. 임기는 학회 임원의 임기와 같다.

제3장 기능

제1조 편집위원회는 학회지의 체제, 발간 횟수, 분량, 논문 심사 기준 및 투고 규정을 정한다.
제2조 편집위원장은 학회에 접수된 논문의 심사위원을 선정 의뢰하고, 편집위원회는 심사 결과를 참조하여 논문 게재 여부를 최종적으로 의결한다.
제3조 논문 게재 심사 이외의 편집위원회가 의결한 사항은 이사회의 인준을 거쳐 발효한다.
제4조 편집위원회는 학술지 투고 논문의 심사를 위해 심사위원의 선정과 게재 논문 결정을 위해 학술지 발간 기간에 맞추어 정기적으로 소집한다.
제5조 편집위원회는 편집위원장의 소집과 과반수 이상의 출석으로 성립되며 출석을 바탕으로 의결한다.

제4장 논문 심사 기준

제1조 내용의 적절성: 논문은 멀티미디어를 활용한 언어교육의 이론과 실제에 관한 비판, 실험 분석, 새로운 제안 등의 내용이어야 한다. 인접 학문에 관한 논문은 멀티미디어를 활용한 언어교육적 내용을 포함한 것이어야 한다.
제2조 내용의 독창성: 논문의 내용은 국내외 학술지에 게재되지 않은 새로운, 창의적 것이어야 한다.
특히 표절, 연구부정행위 등에 위배되는 내용이 없어야 한다.

제3조 전개의 논리성: 내용의 구성과 전개는 멀티미디어 언어 교육 이론을 근거로 논리적이고 명료해야 한다.

제4조 연구 방법론의 타당성: 논문은 연구 문제 제기, 연구의 활용성 및 효과의 기대성 등에 대한 분석과 과정이 각각의 연구 방법에 적절해야 한다.

제5조 학문적 기여도: 논문의 내용은 멀티미디어 언어 교육의 이론과 실제를 창출하거나 발전시키는 데 기여할 수 있어야 한다.

제6조 형식적 적합성: 논문은 본 학술지 투고 규정에 적합한 형식을 갖추어야 한다.

제5장 심사 절차

제1조 접수: 논문 투고 규정에서 명시한 마감일까지 논문을 접수하고, 편집위원장은 투고 논문 도착 즉시 "접수 확인서"를 작성해서 저자(들)에게 전자우편으로 발송한다. 다만, 논문투고 규정 이나 작성요령을 지키지 않은 논문은 접수하지 않고 반송한다.

발행 예정일: (1) 봄호-4월 30일, (2) 여름호-8월 31일, (3) 가을호-12월 31일

제2조 심사위원 선정: 편집위원장은 접수된 논문을 언어별, 전공별로 분류하고 회장단 및 편집이 사와 협의하여 심사위원을 선정한다. 심사위원은 해당 언어 분야에서 학술 활동이 뛰어난 회원 중에서 3인을 선정한다. 이때 당해호의 투고자는 제외하는 것을 원칙으로 한다.

제3조 심사의뢰: 편집위원장은 접수된 논문을 언어별, 전공별로 분류하고 회장단 및 편집이 사와 협의하여 심사위원을 선정한다. 심사위원은 해당 언어 분야에서 학술 활동이 뛰어난 회원 중에서 3인을 선정한다. 이때 당해호의 투고자는 제외하는 것을 원칙으로 한다.

제4조 심사: 각 심사위원은 배당된 논문을 심사하고 '게재', '수정 후 게재', '수정 후 재심사', '반송'의 4등급으로 판정하고, 심사평 난에 판정의 근거를 구체적으로 기술한다.

제5조 심사 보고서 제출: 각 심사위원은 심사 결과를 KAMALL 심사보고서 양식에 구체적으로 작성하여 수정이 표기된 파일을 전자우편으로 편집위원장에게 보낸다. 수정을 제의하는 경우에는 수정할 곳과 방향을 구체적으로 지시한다.

제6조 편집위원 회의: 편집위원장은 편집회의를 소집하고 이 편집회의를 통하여 심사내용을 검토한다. 3인의 심사위원 중에서 2인 이상이 '게재' 혹은 '수정 후 게재' 이상을 부여하면 '게재 가'로, 2인 이상이 '반송'으로 부여하면 '게재 불가'로 판정한다. 2인 이상의 '수정 후 재심사'로 판정하면 수정 후에 다시 심사위원의 심사를 받아 '게재 가'의 판정을 받아야 한다.

제7조 결과 통보: 편집위원장은 심사결과 보고서와 수정 요구사항이 제시된 파일을 전자우편으로 투고자에게 송부한다.

제8조 기타: 게재하기로 결정되었거나 게재된 이후라도 다른 학술지에 게재된 적 있는 논문이나 표절, 연구부정행위가 밝혀진 논문에 대해서는 편집위원회의 의결에 따라 게재를 취소하고 일정 기간 동안 논문 제출을 제한한다.
논문 투고 규정

제정 1997년  4월 23일
개정 2000년  9월  5일
개정 2003년  9월 10일
개정 2008년  2월 20일
개정 2008년 12월 10일

1조 논문의 내용

멀티미디어 언어교육의 이론 및 실제에 관한 내용, 즉 멀티미디어 외국어교육 교과과정, 멀티미디어를 활용한 교수 및 학습 방법, 멀티미디어 외국어교육 수업 모형, 멀티미디어 어학실 구축과 활용 방안, 교사 교육, 코스웨어 및 소프트웨어 설계, 코스웨어 및 소프트웨어 비평 등에 관한 연구로서 교육적인 내용이 함축되어 있어야 한다. 또한 국내외의 학회지에 게재되지 않은 논문으로서 창의적인 내용이어야 한다.

2조 원고 제출

1) 심사용 논문은 “아래아 한글(沔倉)”로 작성된 파일을 전자우편으로 편집위원장에게 제출한다. 별지에 투고자의 논문 제목, 성명, 주소, 전화번호(집, 근무처 및 휴대폰), 택스 번호, 전자우편 주소를 명기한다. 특히, 동일한 내용의 심사용 논문은 국내외 학회지에 중복투고 할 수 없다. 중복 투고가 밝혀진 논문에 대해서는 편집위원회의 의결에 따라 심사를 취소하고 일정기간동안 논문 투고를 제한한다.

2) 수정 보완을 요구한 논문의 최종 본은 “아래아 한글(沔倉)”로 작성된 파일을 전자우편으로 편집위원장에게 제출한다.

3) 최종 교정을 위한 편집 원고는 출판사에서 저자(들)에게 전자우편으로 전송하며, 저자(들)는 이를 인쇄하여 완벽하게 교정한 교정지를 우편으로 정해진 기한 내에 출판사에 등기 송달로 우송한다.

4) 논문의 저작권

Multimedia-Assisted Language Learning (MALL) 학술지에 게재되는 모든 논문의 저작권은 한국멀티미디어 언어교육학회가 소유한다.

5) 마감 일자는 다음과 같다.

(1) 봄 학술지:  1월 31일까지
(2) 여름 학술지: 5월 31일까지
(3) 겨울 학술지: 9월 30일까지

6) 원고 보내는 곳:

446-701 경기도 용인시 기흥구 서천동 1번지 경희대학교 영미어학부
성기완 교수 (수석부회장/편집위원장)
3조 논문의 체제

1) 논문의 전체 길이는 학회지 기준 25쪽 이내로 한다.
2) 논문은 A4 용지 크기에 작성한다.
3) 논문의 위, 아래 여백은 42mm로, 왼쪽, 오른쪽 여백은 35mm로 미리말, 꼬리말은 12mm 한다.
   줄 간격은 제목은 130%, 영문 초록은 160%, 본문은 160%, 참고 문헌은 160%로, 각 주는 145%
   %로 한다. 본문의 장평은 영문, 한글 논문 모두 95%, 자간은 영문 논문은 -2, 한글 논문은 -8
   로 한다. 기타 자세한 것은 논문의 체제의 예를 참조한다.
4) 논문의 제목은 결명조 16으로, 장 제목(I, II, III...)은 결명조 13, 절 제목(1., 2., 3., ...)은 중고
   닥 11, 소 제목( 1), 2), 3), ...)은 중고딕 11, 제목 (1.), 2.), 3.), ...)는 신명조 10.5로 한다. 본문과 초록은 신명조 10.5로 한다. 상위 제목부터
   하위 제목은 아래와 같은 기호로 나눈다.
   예 : I., I, 1), (1), ①
5) 논문의 제목 길이는 가급적 2행 이내로 한다.
6) 초록(Abstract)은 영문으로 180~200 정도로 작성한다. (괄호 안에 단어 수를 명기한다.)
7) 모든 제목은 들어 쓰기를 하지 않는다.
8) 본문의 각 문단은 국문 2자, 영문 3자를 들어 쓰기 (indentation)를 한다.
9) 참고 문헌, 표, 그림 등은 본 학회가 APA의 양식을 토대로 만든 학회지 양식을 따른다.
10) 한글 논문에는 영어 단어를 혼용하지 않는다. 영어 용어는 논문 전체에서 처음 한번만 괄호
    안에 제시한다. 영어 단어나 문장의 예는 이탤릭체로 하고 한글 작은따옴표 (‘ ’)로 표시한다.
11) 영어 논문은 제시되는 국문의 예 및 참고 문헌은 로마자화 한다.
12) 영어 논문에 제시되는 영어 단어나 문자의 예는 이탤릭체로 한다.
13) 한글 논문, 영어논문 공히 논문 마지막에 제시하는 주제어와 적용 수준, 저자 정보 (저자구분
    [제1저자, 제2저자], 소속, 이메일)는 영어로 명기한다.
14) 논문 체제의 예는 다음과 같다.

This article begins by exploring benefits associated with using computers in language testing in such areas as test preparation and test delivery, ...

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**I. INTRODUCTION**

Over the years various techniques and innovations in language testing....

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**II. 장 제목**

Certain features of the computer ...

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1) 소제목

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REFERENCES (혹은 참고 문헌)

APPENDIX 혹은 APPENDICES (혹은 부록)

Key words: CALL, Internet-based language learning, text-chat
Applicable levels: secondary education

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논문 투고 규정

4조 기 타

1) 영어 논문 제목에는 이름과 성의 순서(예: Min-Su Kim)로 하며, 영문 초록 및 표지 목차에는 성과 이름 순(예: Kim, Min-Su)으로 통일한다. 단, 논문 투고자의 특별한 요청이 있을 시에는 투고자가 정한 철자법을 따른다.
3) 개재로 결정된 원고의 교정은 투고자가 책임을 지고 행한다.
4) 투고자는 논문 개재 시 소정의 개재료를 납부하여야 한다. 기준 쪽수 초과 시에는 한 쪽 당 1 만원을 추가로 부담하여야 한다.
5) 회원으로 가입한 후 논문을 투고하여 개재할 수 있다.
6) 개재된 논문의 투고자에게는 학회지 3부를 증정한다.
7) 개재 예정 증명서는 편집 위원회에서 ‘개재 가’로 결정된 이후에만 발급 받을 수 있다.
Information for Contributors

Purpose

Multimedia-Assisted Language Learning, the journal of the Korea Association of Multimedia-Assisted Language Learning (KAMALL) is devoted to the application of technology to foreign language teaching and learning. Multimedia-Assisted Language Learning is a refereed journal and publishes articles, research studies, reports, book and software reviews, and professional news and announcements related to media technology, especially Computer-Assisted Language Learning (CALL), Multimedia-Assisted Language Learning (MALL) and Web-Based Instruction (WBI).

General

- Multimedia-Assisted Language Learning is published three times a year, in Spring (April), Summer (August, International Issue), and Winter (December).
- The language of the International Issue is normally English.
- Papers previously published or accepted for publication elsewhere will not be considered.
- Papers should be submitted to the Editor-in-chief:
  Prof. Kiwan Sung
  School of English Language & Culture
  Kyung Hee University
  1 Seocheon-dong Giheung-gu
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Submission of Manuscripts

- Submission Date: the spring issue, January 31
  the summer issue, May 31
  the winter issue, September 30
- Manuscript Length: No more than 25 double-spaced pages preferred (including abstract, references, notes, figures, and tables).
- Manuscript Format: MS-Word or HWP (Hangul Word-processing) format.
- Submission Requirements: Authors should submit their manuscript including an abstract of no more than 200 words through e-mail. Please include a cover sheet containing the title of the manuscript, name, affiliation, address, home, office, and mobile phone numbers, e-mail address, and key words of the manuscript.
연구 윤리에 관한 규정

제정 2007년 6월 22일
개정 2009년 2월 28일

제1장 총칙

제1조 (목적) 이 규정은 한국멀티미디어 언어교육학회의 학술지에 학술 연구 결과를 게재하고자 할 때 논문 투고와 심사 및 학술지 편집 과정에 있어서 논문의 저자, 학술지의 편집 위원회 및 심사위원이 지켜야 할 윤리를 규정함을 목적으로 한다.

제2조 (적용 범위) 이 규정은 한국멀티미디어 언어교육학회 학술지인 Multimedia-Assisted Language Learning에 적용된다.

제2장 논문 저자 윤리규정

제1조 (표절) 논문 저자는 자신이 수행하지 않은 연구의 일부분을 자신의 연구 결과인 것처럼 논문에 제시하지 않는다. 타인의 연구 결과를 참조할 경우에는 반드시 출처를 명시해야하며, 그 일부분을 자신의 연구 결과이거나 주장인 것처럼 제시하는 것은 표절이 된다.

제2조 (연구업적) 저자는 자신이 실제로 수행하거나 공헌한 연구에 대해서만 저자로서 책임을 지며 업적으로 인정받는다. 논문 저자의 순서는 연구에 기여한 정도에 따라 정확하게 반영한다. 직책상 이유로 제1저자로서 업적을 인정받거나, 연구에 기여했음에도 공동저자에서 배제되는 것은 정당화될 수 없다.

제3조 (중복 게재) 저자는 국내외를 막론하고 이전에 출판된 자신의 연구물이나 또는 계체 예정이거나 심사 중인 연구물을 새로운 연구물인 것처럼 투고하지 않는다. 이미 발표한 연구결과를 다른 언어나 다른 독자체를 대상으로 다시 출판하기 원하는 저자는 논문을 게재한 학술지와 앞으로 논문이 게재될 학술지의 편집인 모두에게 중복 게재 여부를 확인한 후 양측의 동의를 구해 이차 출판 형식으로 논문을 게재하도록 한다.

제4조 (인용 및 참고 표시) 공개된 학술 자료를 인용할 경우에는 정확하게 기술하고 상식에 속하는 자료가 아닌 반드시 그 출처를 명확하게 밝힌다. 논문 및 연구계획 심사 시 또는 개인적인 접촉을 통해 얻은 자료의 경우에는 그 정보를 제공한 연구자의 동의를 얻은 후에만 인용해야 한다. 타인의 글을 인용하거나 타인의 아이디어를 차용할 경우에는 반드시 인용여부 및 참고여부를 밝히며, 어디까지가 선행연구의 결과이고 어디서부터 본인의 독창적인 생각이나 해석언지를 독자가 알 수 있도록 해야 한다.

제5조 (연구 자료의 진실성) 논문 저자는 연구 결과에 중대한 영향을 미칠 수 있는 데이터 및 분석 결과를 왜곡 또는 조작하지 않고, 연구 결과를 진실하고 공정하게 제시한다.

제6조 (논문의 수정) 저자는 논문 심사 과정에서 제안된 편집위원과 심사위원의 의견을 가능한
한 수용하여 논문에 반영되도록 노력해야 하며 이들의 의견에 동의하지 않을 경우에는 그 근거와 이유를 상세하게 적어서 편집위원회에게 알려야 한다.

제3장 편집위원회 윤리규정

제1조 편집위원회는 투고된 논문의 게재 여부를 결정하며 결정 과정에서 저자의 인격과 학자로서의 독립성을 존중한다.

제2조 편집위원회는 투고된 논문을 심사하는 데에 있어서 저자의 성별, 나이, 소속 기관, 선입견, 친분관계를 바탕으로 논문의 질적 수준과 논문 심사 규정에 근거하여 공정하게 취급해야 한다.

제3조 편집위원장은 투고된 논문의 심사를 해당 분야의 전문적 지식과 공정한 판단 능력을 지닌 심사위원에게 의뢰하며 가능한 한 객관적인 평가가 이루어질 수 있도록 노력해야 한다.

제4조 편집위원장은 투고된 논문의 게재가 결정될 때까지는 저자에 대한 사항이나 논문의 내용을 공개해서는 안 된다.

제4장 심사위원 윤리규정

제1조 심사위원은 학술지의 편집위원장이 의뢰하는 논문을 심사규정이 정한 기간 내에 성실히 평가하고 평가 결과를 편집위원장에게 통보해야 한다. 만약 자신이 논문의 내용을 평가하기에 적임자가 아니라고 판단할 경우에는 편집위원장에게 지체 없이 그 사실을 통보한다.

제2조 심사위원은 논문을 개인적인 학술적 신념이나 친분관계를 떠나 객관적 기준에 의해 공정하게 심사해야 한다. 심사 대상의 논문을 충분히 검토한 다음 심사해야 하며, 충분한 근거를 일제하게 명시하여 심사 보고서를 작성해야 한다.

제3조 심사위원은 전문 지식인으로서 저자의 인격과 독립성을 존중해야 한다. 심사 보고서에는 논문 등에 대한 자신의 판단을 밝혀서 수정 보완이 필요하다고 생각하는 부분에 대해서는 상세하게 설명해야 한다. 가급적 정중하고 부드러운 표현을 사용하고 저자를 비하하거나 모욕적인 표현은 삼간다.

제4조 심사위원은 심사 대상 논문에 대한 비밀을 지켜야 한다. 논문 게재가 최종적으로 결정되기 전에 논문을 다른 사람에게 보여주거나 논문 내용에 대해서 다른 사람과 논의하지 말아야 한다.

제5장 윤리규정 시행 지침

제1조 (윤리규정 서약) 한국멀티미디어 언어교육학회 학술지의 Multimedia-Assisted Language Learning에 논문을 투고하는 모든 사람은 윤리규정의 발효시 윤리규정을 준수하기로 서약
한 것으로 간주한다.

제2조 (윤리규정 위반의 보고) Multimedia-Assisted Language Learning 발행 학술지 게재논문에서 이중출판, 이중게재, 표절, 조작, 모방 등과 같이 연구 윤리 규정 위반 사례가 드러날 경우 즉시 학회 임원회에 보고하여 사실 여부를 확인한다.

제3조 (학회 임원회의 권한) 임원회는 윤리규정 위반으로 보고된 연구 논문에 대하여 충분한 점토와 철저한 조사를 실시한 후, 윤리 규정 위반이 사실로 판명된 경우에는 회장에게 적절한 제재 조치를 건의할 수 있다.

제4조 (임원회의 조사 및 심의) 윤리규정 위반으로 보고된 논문 저자는 임원회에서 행하는 조사에 협조해야 한다. 또한 윤리규정 위반으로 보고된 논문 저자에게 충분한 소명의 기회가 주어져야 한다. 학회의 최종적인 징계 결정이 내려질 때까지 임원회는 해당 논문 저자의 신원을 외부에 공개해서는 안 된다.

제5조 (징계의 절차 및 내용) 회장은 임원회를 소집하여 징계 여부 및 징계 내용을 최종적으로 결정한다. 연구 윤리 규정을 위반했다고 판정된 논문 저자에 대해서는 징고, 해당 논문 게재 취소 (내용 첨거), 회원자격 정지 내지 박탈 등의 징계를 할 수 있으며 이 조처를 다른 기관이나 개인에게 알릴 수 있다.

제6조 (윤리규정의 수정) 윤리규정의 수정 절차는 본 학회 회칙 개정 절차에 준한다.

제7조 (윤리규정의 공포) 모든 윤리규정은 학회 회원들에게 정기적으로 공포한다. 비정기적으로도 윤리규정의 개정 및 필요에 따라 학회 회원들에게 공포한다.
한국멀티미디어언어교육학회지 중요 양식 안내


1. 본문 속에서의 인용이나 괄호 안의 문헌 표기

1) 직접 인용 1: They stated, “The meanings of ‘audience’... tend to diverge in two general directions: one toward actual people external to a text, the audience whom the writer must accommodate; the other... listeners” (Kirsch & Roen, 1990, p. 14).

* 위와 같이 인용문은 “ “아 놓고, 그 안에서 다시 인용이나 강조를 할 때는 ‘ ’를 쓴다. 인용의 문장이 끝나도 마침표는 괄호(참고 문헌의 정보)가 끝난 후에 써는다. 괄호 안에는 보기처럼 저자, 연도, 쪽수를 쉼표로 분리하여 표기하고, p.(한 쪽의 경우) 혹은 pp.(여러 쪽의 경우) 뒤에 한 칸을 띄고 쪽수를 쓴다. 한글 논문도 이에 준한다.

2) 직접 인용 2: Kirsch and Roen (1990) pointed out that “The meanings of ‘audience’... tend to diverge in two general directions: one toward actual people external to a text, the audience whom the writer must accommodate; the other... listeners” (p. 14).

3) 직접 인용 3:

According to Kirsch and Roen (1990):

The meanings of ‘audience’... tend to diverge in two general directions: one toward actual people external to a text, the audience whom the writer must accommodate; the other... listeners (p. 14).

* 위와 같이 직접 인용한 문장은 본문 기준으로 왼쪽 및 오른쪽 각각 5ch 들여쓰기를 한다.

4) 간접 인용:

(1) 한글 논문: 조세경과 이충현(1998)은 멀티미디어는... 멀티미디어는 외국어 교수 및 학습에서... (조세경, 이충현, 1998).

(2) 영어 논문: Ellington (1998) stated that multimedia is defined as...

Multimedia is defined as... (Ellington, 1998)

5) 1명의 저자: Ellington (1998) stated that multimedia is defined as...

6) 2명의 저자: 본문이 영어이면 “and”로, 한글이면 “과/와”로 연결하고, 영어는 괄호속에서
“&”를 사용한다.

(1) 한글 논문: Tomlinson과 Henderson(1995)은 그들의 선행연구(Tomlinson & Henderson, 1991)에서 ...
(2) 영어 논문: Tomlinson and Henderson (1995) reported that their previous study (Tomlinson & Henderson, 1991) showed ...

7) 3~5명의 저자: (1) 처음 언급할 때는 모든 저자의 이름을 표기하고, (2) 그 다음부터는 영어 논문에는 “et al.”로, 한글 논문에는 “등”이나 “외 3인”이라는 식으로 표기한다.

(1) 한글 논문: Ahmad, Corbett, Rogers, 와 Sussex(1985)는 ...
    영어 논문: Ahmad, Corbett, Rogers, and Sussex (1985) found that ...
(2) 한글 논문: Ahmad 등(1983)은 컴퓨터는 ... 혹은 Ahmad 외 3인(1983)은 컴퓨터는 ...
    영어 논문: Ahmad et al. (1985) stated that computers should be used for ...

8) 6명 이상의 저자: 처음 언급할 때부터 영어 논문에는 “et al.”로, 한글 논문에는 “등” 혹은 “외 5인”으로 표기하고, 참고 문헌(References)에는 이름을 모두 표기한다. et al.은 라틴어 et alii (and others)의 약어이므로 al.에만 점을 사용하고, 이탤릭체로 표기하지 않는다.

9) 여러 저자를 괄호 안에 소개: 여러 저자를 소개할 경우, 알파벳순으로 배열하고, 세미콜론(;)으로 분리한다. 동일 저자의 것은 연대순으로 배열하고, 쉼표로 분리한다.

    Hill (1988, 1990, 1995) reported that some research studies (Ahmad et al., 1985; Bangs, 1987; Higgins, 1988; Windeatt, 1990) dealt with a network-based ...

10) 동성 이명(同姓異名)의 저자들: 본문에서는 이름의 약자를 사용하여 혼동을 피한다. 비록 연도가 다르더라도 이름의 약자를 사용하여 표기한다.

   (1) 외국인 저자: F. R. Jones (1993) and G. Jones (1986) pointed out that ...
   (2) 한국인 저자: 한국인들은 성만으로는 혼동이 많으므로, 원 저자의 영문 이름 표기 방식에 따라 성 앞에 이름의 머리글자(Min-Su Kim ⇒ M-S. Kim)를 쓴다. 한글 논문에서 한국인 저자는 성명을 다 쓴다.

2. 표(Table)나 그림(Figure) 자료를 그려 넣는 경우

표나 그림 자료는 편집하는데 제한점이 많이 있으므로 다음 크기에 준하여 넣는다.

1) 표: 한 면에 넣을 수 있는 표의 최대 한도의 가로 크기는 14cm, 세로의 크기는(표의 태이틀을 포함하여) 20cm로 한다. 표의 제목(테고딕 9.5, 줄간격 150%)은 표의 위쪽 중앙에 위치하며 다음 보기와 같이 쓴다.
<table>
<thead>
<tr>
<th>Table 1</th>
<th>The Subjects 또는 [표 1] 실험 대상</th>
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<td>Cognitive strategies</td>
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</tr>
<tr>
<td>Comprehension level strategies</td>
<td>98</td>
</tr>
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</table>

2) 그림이나 출력 화면: 한 면에 넣을 수 있는 그림의 최대 한도의 가로 크기는 14.5cm, 세로의 크기는(그림의 타이틀을 포함하여) 21cm로 한다. 그림의 제목(테고덕 9.5, 줄 간격 150%)은 그림의 아래 중앙에 위치하며 아래 보기와 같이 쓴다.

![그림 1] The Main Screen of Dave Sperling’s Internet Guide

또는 Dave Sperling의 인터넷 가이드의 주화면

3) 영상 자료: 영상 자료는 컴퓨터에서 편집이 안 되므로 가장 화질이 좋은 것으로 별도로 출력하여 수정본과 함께 제출하여야 한다.

3. 참고 문헌 목록(References) 표기

참고 문헌에는 논문에 언급된 것만을 빼짐 없이 저지 성의 알파벳순으로 싣는다. 한글 논문의 참고 문헌 목록에 한글 문헌과 영어 문헌을 실을 경우, 한글 문헌을 먼저 가나다순으로 싣고, 영어 문헌을 저지 성의 알파벳순으로 싣는다. 한국어 참고 문헌 표기 방법은 영어에 준한다. 단 논문을 영문으로 쓰 경우, 참고문헌에 실을 한국어 저작은 필자와 논문 및 책제목을 Yale 표기법의 로마자로 표기하고 [ ] 안에 영어로 번역을 넣는다.
1) 학술지의 논문(Journal Article)

2) 책(Book)

번역서(Translation)

3) 편집된 책에 실린 논문이나 장(An Article or Chapter in an Edited Book)
Stevens, V. (1989). A direction for CALL: From behavioristic to humanistic courseware. In M. C. Pennington (Ed.), *Teaching languages with computers* (pp. 31-44). La Jolla: Athelstan.

* 책 혹은 논문의 저자, 연도, 제목 등은 저널이나 책에서의 표기 방법과 같다. 그러나 편
저자(Ed., 혹은 Eds.)의 성명은 책 혹은 논문의 저자의 표기 방법과는 달리 이름의 약자를 먼저 쓰고 성을 뒤에 쓴다.

4) 잡지(Magazine Article)


* 잡지 기사는 월간일 경우에는 출간 달까지 표기하고, 주간일 경우는 두 번째 보기와 같이 달과 일까지 표기한다.

5) 뉴스레터(Newsletter)


6) 신문기사(Newspaper Article)


* 신문 기사는 날짜까지 표기한다. 또한 기사가 비연속적으로 분리된 경우에는 위와 같이 해당 면을 표기한다.

7) 연구 보고서(Report)


* 보고서의 제목을 이탤릭체로 한다. 연구보고서를 ERIC에서 입수한 경우 위와 같이 ED 번호를 괄호 안에 뒤에 표기한다.
8) 학회 발표 논문(Proceedings of Meetings and Symposia)


* 발표 논문집이 출간된 경우 논문 제목은 보통체, 논문집의 이름은 이탤릭체 표기한다. 이와 반대로 미 간행 발표 논문집일 경우에는 논문 제목은 이탤릭체, 논문집의 이름은 보통체로 표기한다.

9) 학위 논문(Doctoral Dissertations and Master’s theses)


10) 인터넷 자료(Internet Resources)
(1) 온라인 저널(On-line Journal)


(2) 전자우편(E-mail)

Lunn, F. (1996, June 18). Summary of reponses to request for CALL lab info. *TESLCA-L* [Discussion list]. Retrieved December 18, 1996, by e-mail: listserv@cunyvm.cuny.edu

(3) 웹사이트(Website)


* 인터넷 자료는 자료를 수집한 년, 월 및 일자까지 표기한다. 그리고 URL을 표기한 후 마침표를 넣지 않는다.

11) 컴퓨터 프로그램, 소프트웨어 혹은 프로그래밍 언어(Computer program, Software, or Programming language)


* 컴퓨터 프로그램, 소프트웨어 혹은 프로그래밍 언어는 이탤릭체로 표기하지 않는다. 이름 뒤 대괄호([ ])에 [컴퓨터 소프트웨어] ([Computer software])라고 표기한다. 저자가 없는 경우에는 컴퓨터 프로그램 명을 저자의 위치에 표기한다.
한국멀티미디어언어교육학회

The Korea Association of Multimedia Assisted Language Learning (KAMALL)

446-701 경기도 용인시 기흥구 서천동 1번지
경희대학교 영미어학부 이상민(총무이사)
Tel: 031-201-3632, CP: 010-3455-7537
Email: kamallinfo@gmail.com 홈페이지: http://www.kamall.or.kr
※홈페이지에서 온라인으로 가입할 수 있습니다.

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** 회원 입회 원서 **

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| 연구/관심분야 |

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멀티미디어언어교육학회 활동목적에 동의하여 회원입회원서를 제출합니다.

201 년 월 일

신청인:

한국멀티미디어언어교육학회장 귀하
The Korea Association of Multimedia Assisted Language Learning (KAMALL)

Prof. Sangmin Lee, Secretary General
School of English Language & Culture, Kyung Hee University
1 Seocheong Giheung-gu Yongin-si Gyeonggi-do 446-701, Korea
Email: kamallinfo@gmail.com Homepage: http://www.kamall.or.kr
※ Membership application is available online.

MEMBERSHIP APPLICATION FORM

<table>
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<th>Name in Korean</th>
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- CD-ROM

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  - Use
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I hereby agree with the goals of KAMALL and submit this application.

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