OPPORTUNITIES IN TECHNOLOGY-ENHANCED LANGUAGE LEARNING (TELL) CLASSROOM ENVIRONMENTS

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Abstract

This study explores opportunities that English as a Foreign Language (EFL) teachers have created to help students meet English language literacy goals in technology enhanced language learning (TELL) classroom environments. This qualitative study examines opportunities in two TELL classroom environments based on interviews, observation, and document collection for two months. To evaluate the environments, a framework of eight conditions for optimal language learning proposed by Egbert (1993) is used. The data show various opportunities that students and teachers experienced in the TELL classroom environments.

Literature review

Very recently, the influences of classroom environments started to be recognized in Computer-Assisted Language Learning (CALL) research. Until now, most CALL empirical studies have focused on the effectiveness of the medium itself, particularly in comparison with conventional teaching tools and have narrowed down to very specific linguistic features. In short, in many CALL studies, technology is seen as a treatment or as "a magic pill" applied to the language learner, and the effect of the treatment on language learning is then measured. Therefore, it is really hard to get the fuller view of technology-enhanced language learning (TELL) classroom environments. Besides, examination of a single lesson rarely reveals that it is good for every purpose or every student. Hence, many researchers (Chapelle, 1997, 1998; Doughty, 1991; Salaberry, 1996, 2000; Salomon, 1991; Warschauer, 1995, 2000, 2002) present the limitations of this kind of technocentric research and underscore the importance of language learning environments rather than technology itself.

Before discussing the need to study language classroom environments more holistically, this review will present CALL studies in three areas: (1) those that investigate CALL in comparison with traditional methods, (2) those that look at instructional strategies, and (3) those that examine attitudes and interactions through CALL. Studies in these categories, which Chapelle and Jamieson (1998) use to characterize CALL research in general, clearly underscore the need for studying language learning classroom environments with more than one environment component.

First, numerous studies across disciplines were carried out to attempt to discover whether students with computer learned better and faster than students with traditional methods. The typical research design provided CALL materials for experimental groups and traditional

instruction for a control group (Chapelle & Jamieson, 1998). However, the studies of this type ignore the nature of the learning tasks, the characteristics of the learners, and the characteristics of technological application when the research is designed and interpreted. Without an understanding of specific attributes of the situation, it is difficult to know what learning effects ought to be attributed to (Clark, 1995). For instance, Johns (1991) and Dodd (1997) examined the practice with the aid of computer software to understand meaning and grammar. Their studies found that the teacher facilitates students to research into the language without knowing in advance what rules or patterns are used, so students are encouraged to make one up in their own terms. Fernandez-Villanueva (1996) emphasized that the concordancing program provides more input and motivation than regular classroom exercises in her German language classrooms.

Another study compared dialogue journals written via email with dialogue journals written on paper (Wang, 1993). Compared with the paper-and-pencil group, the email group wrote more per session, asked and answered more questions, used a greater variety of language functions, applied these functions more frequently, and was less formal and more conversational with the teacher. Sullivan and Pratt (1996) found that all the students in an ESL study participated in electronic discourse and only half of the students in face-to-face discussions. These studies examined the effectiveness of technology itself without considering classroom environment factors for learning.

Although the findings from these studies are not consistent, the results have prompted greater analysis of the methods used to assess effectiveness. However, both CALL materials and language learners differ from one another in ways that affect learning (Chapelle & Jamieson, 1998). We cannot observe students' learning effectively by focusing on technology as treatment. Many other elements such as the nature of learning tasks, the learner characteristics, and the characteristics of technological application should be put together when the research is designed and interpreted.

Second, some CALL studies focused on comparison of learning strategies. These studies on learning strategies provide an important first step toward empirical support for principles from theory and research that can offer general suggestions for student learning (Chapelle and Jamieson, 1998). However, learner-specific suggestions and consideration of multiple factors in classroom environments are needed. For instance, Toyoda and Harrison (2002) examined the negotiation of meaning that took place between students and native speakers of Japanese over a series of chat conversations and attempted to categorize the difficulties encountered. The data showed that the difficulties in understanding each other did indeed trigger negotiation of meaning between students even when no specific communication tasks were given. Blake's study (2000) demonstrates that incidental negotiations commonly occurred in networked discussions as well, especially with respect to their lexical confusions. Fifty intermediate Spanish learners were asked to carry out networked discussions in pairs during their lab time using a synchronous chat program. The results show that the tasks appear to lead the way in promoting negotiations with greatly increased possibilities for access outside the classroom.

Gonzalez-Bueno (1998) analyzed the effectiveness of using e-mail as a tool to promote foreign language learning in and out of the classroom. The study identified the following features of the

foreign language generated through e-mail: (a) greater amount of language; (b) more variety of topics and language functions; (c) higher level of language accuracy; (d) more similarity with oral language; (e) more student-initiated interactions; (f) more personal and expressive language use. In sum, these studies on learning strategies are notable because they examine the related theories or approaches that apply to classrooms. However, different classroom environmental factors should be considered.

Third, some CALL research studies address the attitude and interaction through CALL. These studies of attitudes and interaction through CALL are limited in data analysis and interpretation because lesson, tool, or learner variables are easily disregarded. Nevertheless, the analysis of data in these studies may help clarify some questions about the learning processes. For example, several such studies (Chun, 1994; Kelm, 1992; Kern, 1995; Sullivan and Pratt, 1996; Warschauer, 1996) found a greater amount of student participation according to three measures: (a) percentage of student talk versus teacher talk, (b) directional focus of student talk (toward other students or toward the teacher), and (c) equality of student participation (Liu et al., 2003). Focusing on learners of French (Kern, 1995) and Portuguese (Kelm, 1992), it was found that some students said nothing in person, while all participated online. Warschauer (1996), in an experimental study comparing small-group ESL discussion online to discussion face-to-face, found that the online groups' participation was increased twice because the silent students increased their participation online.

In another example, Sotillo (2000) investigated discourse functions and syntactic complexity in ESL learner output obtained via two different modes of computer-mediated communication (CMC): asynchronous and synchronous discussions. Two instructors and twenty-five students from two advanced ESL writing classes participated in this study. The results showed that the quantity and types of discourse functions present in synchronous discussions were similar to the types of interactional modifications found in face-to-face conversations deemed necessary for second language acquisition. Discourse functions in asynchronous discussions were more constrained than those found in synchronous discussions and similar to the question-response-evaluation sequence of the traditional language classroom. Concerning syntactic complexity, the delayed nature of asynchronous discussions gives learners more opportunities to produce syntactically complex language. However, in this study, other classroom environment factors were ignored.

Although attitudes and interaction are important factors to clarify some of questions about the learning processes, they cannot represent solely language learning because they ignore some other variables such as goals, tool, teacher or students. Hence, to adequately evaluate students' language learning, we need to include environmental factors that interplay in learning environments.

As we can note from the study examples discussed above, a technocentric approach provides outcomes from CALL applications in very specific linguistic features and we can know the result in the specific areas by using a specific tool. However, this approach has proven limited primarily due to inattention to the central role of the learning process and the corresponding influence of learner characteristics. To clarify the effectiveness of the technology and understand language learning, it requires the evaluation of classroom environment with multiple

environmental elements based on empirical observations.

Classroom Environment Conditions

It is clear that the study of classroom environments is important to understand learning atmosphere, perceptions, goals, and interaction for optimal language learning. Besides, classroom environment provides various opportunities for students to learn and interact in the learning context. In Spolsky (1989) and Chapelle's views (1997), opportunities from learning environments refer to classroom members' experiences from interactions between teachers, students, tools, instructional strategies, or goals in classroom environment. Spolsky (1989) claims that the interplay between language learner and learning opportunities determines the learner's success in achieving the linguistic outcomes (linguistic and communicative competence of a variable nature) and non-linguistic outcomes (including changes of attitude).

Then, we need to have a framework to evaluate opportunities from language learning classroom environments. As discussed earlier, we need to explore multiple conditions to understand language learning classroom environments. Egbert (1993) proposed a set of environmental conditions for language learning classroom environments:

(1) interaction: learners have opportunities to interact and negotiate meaning;

(2) authentic audience: learners interact in the target language with an authentic audience;

(3) authentic tasks: learners are involved in authentic tasks;

(4) opportunities for exposure and production: learners are exposed to and encouraged to produce varied and creative language;

(5) time/feedback: learners have enough time and feedback;

(6) intentional cognition, learning style and motivation: learners are guided to attend mindfully to the learning process;

(7) atmosphere: learners work in an atmosphere with an ideal stress/anxiety level;

(8) control: learner autonomy is supported.

Each element of optimal language learning in some way affects the others. For example, authentic task may increase students' motivation and trigger more peer interaction. Naturally, more feedback and less stress cause excitement for learning, and these conditions cannot present all aspects to be considered for language learning. In particular, Moos (1979) notes that different subject areas need and have different environments. However, each condition is supported by many empirical studies and is described a lot in learning theories or approaches. Therefore, for this study, these eight conditions proposed by Egbert (1993) were used as a framework to understand opportunities from TELL classroom environments.

The Study

Research groups

One English classroom from each of two different schools was selected; a 5th grade EFL classroom and an 8th grade EFL classroom. Both schools are located in the same local city in South Korea.

The 5th Grade EFL Language Classroom. The 5th grade EFL students came to the language classroom twice a week (every Wednesday and Friday). The EFL classroom observed for this study was composed of 22 boys and 20 girls. They speak Korean as their first language and learn English as a foreign language. Students' English levels in the classroom varied due to extra-curriculum or private tutoring systems. While some students had just started to learn English in this classroom, some students could speak English almost like native speakers.

The teacher specializing in English education at a teacher education college taught 5th graders English as a foreign language in the elementary school. Like her students, she spoke Korean as her first language and learned English as a foreign language. She did not have any chance to take a class related to CALL or educational technology, however, she took some teacher training sessions at a local ministry of education (MOE) workshop. She had taught English for two years in the elementary school and had used technology since she started her teaching career in this elementary school.

The students' English journals, alphabet cards, and vocabulary cards were displayed on the walls. Similarly to other classrooms in the school, it was equipped with a networked computer, a scanner, printer, camcorder, overhead projector, 45-inch television, and video. Each student had a computer monitor on his/her desk and there was a control system for students' computer monitors on the English teacher's desk. Six or seven students' desks made one small group in the lab, so there were a total of six small groups. The teacher used software and the Internet as technological applications to teach English. The MOE had developed software for each grade, and EFL teachers were required to use the software in the language classrooms. Also, the local MOE had developed and provided materials and programs for each grade level that EFL teachers could download from the MOE website

The 8th grade EFL classroom. While the 5th grade EFL class focused mainly on speaking and listening, the 8th grade EFL classroom focused on all four language skills (speaking, listening, reading, and writing). Also, grammar and structure were important parts of the lecture because they helped to prepare learners for the English exam and for university entrance exams.

The classroom was composed of 15 boys and 25 girls, all with Korean as their first language learning English as a foreign language. They had learned English since third grade and had taken national English exams twice a semester since 7th grade. After school, 32 out of 40 students attended private English institutions or had private tutoring to learn English structures (grammar) to get a higher grade in English.

The English teacher had received his qualification to teach English from colleges of education

and had taught English for five years. He spoke Korean as his first language and learned English as a foreign language. He did not have any chance to take a CALL class or an educational technology class before. However, he attended some workshops and studied by himself. Having a rich background in computers, he was skillful in repairing hardware and in using multimedia software, performing also the function of a school technician to fix the computer applications when needed.

In the 8th grade EFL classroom, there was one networked computer, a 45-inch television, a video player, and an overhead projector. The students had a 45-minute English class every Monday, Wednesday, and Friday, but, unlike the elementary school, students stayed in the classroom and each subject teacher moved to the classroom depending on the time schedule. The students did not have their own computers in that classroom and they watched a big projection television for the computer screen. The English teacher used software, the Internet, and the class website to teach English, carried his own laptop computer for each class and also created and managed the class website. Like the elementary school, the ministry of education (MOE) developed the software that the teachers must use in the classrooms, as well as supplemental materials or programs for teachers.

Data Collection

To enhance the integrity and trustworthiness of the data collected in the two classrooms for two months, the process of triangulation was employed by using semi-structured interviews with students and teachers, observation of learning environments with technology and document analysis.

Student Interviews. The individual interviews were conducted after each class observation. A total of 10 students (five 5th graders and five 8th graders) were interviewed and tape-recorded. The 5th graders were interviewed after the English class and the 8th graders were interviewed in the early morning because of students' class schedules. Based on their academic performance levels, I interviewed both students who did and did not do well in EFL class, to get their opinions about their language learning environments. The interviews, lasting 25-40 minutes, were performed in Korean because the interviewees were not fluent in English and interviewing in their first language provided much richer data by making them more comfortable. The responses from some students were relatively shorter than others because some of them did not want to talk much or were not interested in their English classes. The 5th graders were willing to share more opinions for their TELL classroom than the 8th graders. Interviews were tape-recorded and additional observations were noted during the interviews.

Teacher interviews. The interviews were conducted twice with each EFL teacher: at the beginning and end of the data collection period. Before starting the observations, questions about their goals of English literacy and instructional strategy were asked. The interview time was set up in the different date and time based on the teachers' convenience. The first interview with the 5th grade teacher was about 30 minutes and the interview with the 8th grade teacher was 50 minutes. Both interviews were tape-recorded and notes were taken.

The second interviews with the teachers, focused on their experiences in the TELL classrooms, occurred after all classroom observations were complete. Sometimes, I needed to explain certain

terms that they did not understand in the interview questions. To support their answers, they provided many examples, materials, and websites that they used in their classrooms. The second interviews lasted 60 minutes for the 5th grade teacher and 80 minutes for the 8th grade teacher. Also, additional questions were asked during the observation to clarify issues such as classroom management strategies and group projects. To answer the follow-up questions that arose during the data analysis, I used member checks, contacting participants through email.

Observations. Language classroom observation would help understand the language-learning contexts and discover how the learning environments carried out goals of language learning in the classrooms. During the observations of the two classrooms for two months during the 2002-2003 academic year, essential records were kept while in and out of the field. During fieldwork as an observer, the majority of time was spent observing and recording the interactions, tasks, and behaviors of the EFL students and teachers. After school, the teacher was asked about the preparation of the classroom such as how the teacher made lesson plans, got supplements, and shared ideas with other teachers. Also, the class website was observed by focusing on how the 8th grade teacher and students communicated and how the website worked for the language learning environment.

Documents. During the observations and interviews, materials that could be helpful to understand the classroom environments such as lesson plans, handouts, and curriculum guidelines and Information & Communication Technology (ICT) guidelines for EFL classrooms were collected, as well as students' products such as activity sheets, journals, and assignments

Data Analysis

For the purpose of this study, the elements of analysis originated from all three sources of data, the tape-recorded interviews, observational notes, and documents transcribed, organized, and read to reveal relevant categories. As a first step for analysis and an opportunity for rewriting and reorganizing my rough observation notes, interview tapes were listened to and transcribed (Maxwell, 1996). As Patton (1990) suggests, the next step was reading the interview transcripts, observational notes, or documents that were to be analyzed, to develop tentative ideas about categories and relationships regarding the research questions. After this, coding of all the data was executed to rearrange the data into categories that facilitated the comparison of data within and between categories and aided the development of theoretical concepts.

To discuss the TELL environments, a framework of eight conditions (interaction, authentic audience, authentic task, opportunities for exposure and production, time/feedback, motivation, atmosphere, and control) developed by Egbert (1993) was employed. Three data sources (observations, interviews, and documents) were used to explore each condition in the TELL classroom environments.

Condition 1. Learners have opportunities to interact and negotiate meaning

Both teachers said that they invested their efforts and time in finding interactive activities because they believed that opportunities to interact made their students negotiate meanings between Korean and English, and their students demanded these opportunities. The 8th grade teacher mentioned:

If I just use the English textbook in the classroom, it will be easy and save my energy. However, I will be less proud of myself because I pay no attention to what the students want. My students want to have something they can interact and thus they can learn English. Providing the chances is my role. Sometimes, I am too busy to find and modify activities with technology. Whenever I enter the classroom without some activities, the class time is too long even for me, and I can see that my students get bored.

In both classrooms, the teachers used software to answer questions and complete dialogues because it supported the students' learning process with native speaker pronunciation, colorful display and activities. With software, students saw different situations that sentences or expressions could be used and guessed the situations without knowing the exact dialogue.

Additionally, students practiced speaking with and listening to other classmates by using resources from the Internet and completing group projects. For example, Figure 1 shows a group report of their project. In the 8th grade classroom, the group "Go Go English!" demonstrated how to make Mandu (a Korean dish) using pictures. The teacher required that each student had one role in a group project, and they needed to make a report of the project in English. Students prepared resources, made pictures, translated to English, and made the final report by a computer program. All student interviewees liked this collaborative project because they interacted with group members in their interest areas as well as learned English to make the report during the project. To make the final report, they composed sentences in English and checked their grammatical mistakes. Thus, it was observed that the group project provided interactive opportunities for students to negotiate meanings in English to complete projects.

Figure 1. A report of a collaborative project. A group "Go Go English" made the report of "How to make Mandu." http://jkrajka.webpark.pl/issue19/fig1.htm

Besides, the teachers claimed that they did not depend only on technology to provide interactive opportunities. According to the 8th grade teacher, "one tool cannot support all needs of my classroom to achieve the class objectives. Some tools are good for listening and some tools are good for speaking." They also used conventional tools (e.g., picture cards or blackboard) to provide opportunities that they believed interactive. For example, the 5th grade teacher used various picture cards that described vocabulary words or the situations because these tools (e.g., picture cards, charts or objects) sometimes saved class time and gave more students chances to present. In the teachers' perception, conventional tools and technologies were complementary with each other to provide opportunities to interact and negotiate meaning in these learning

environments.

However, it was observed that using the software as a primary tool caused reducing chances to interact with classmates. Although software was able to provide samples of meaningful and realistic communication to interact for meaning negotiation and assist understanding of cultures and norms of native speakers, it was difficult to skim or flip easily from front to back thus more difficult to have a comprehensive overview of the content. A 5th grade student complained:

> Sometimes, I miss group work. Because she focuses on software too much, it takes a lot of time, so we lose many chances to do group work. After we watch the software for today's lesson, not much class time is left. Learning with group work or games is much more fun and is more helpful to learn English for me.

Similarly, another student mentioned:

> When we learn chants or songs, it is really hard to control the speed. When we use tapes, we can slow down and repeat certain sections. But with software, we cannot. We should review the whole thing again, not the section that we want to review. That is why we do not have enough time to do other activities.

In other words, it took considerable time to go through the possibilities and the materials that were available for the students because of the many loops, branches, and paths that were built in the software program. As a result, some students believed that they lost chances to interact with other classmates that they more prefer than using software to learn English.

In summary, the teachers attempted to provide various chances to interact and negotiate meaning in their classrooms. Their practice with other classmates and the teachers during the classes and the group projects helped the students interact in English. Also, the teachers believed the interaction between technology and their students helped their students learn English. In other words, while technology is just a tool to provide ways to interact with other students rather than it interacts with students directly, it was realized that the teachers believed that the technologies interacted with their students in their classrooms.

Condition 2. Learners interact in the target language with an authentic audience

It is impossible for all EFL classrooms to provide chances to communicate with native speakers. In the TELL classrooms in this study, it was found that the technology supported the teachers and students to be authentic audiences, when students listened to native speakers from the software and the Internet and they practiced dialogues. The software and the Internet provided dynamic and realistic situations with native speakers' speaking. Through the interactions with their classmates and teachers, they became audiences who communicate in English with proper body language and eye contacts.

However, the teachers did not integrate any chance to communicate with native speakers, audiences through communication technology such as chat programs or emailing. The technology in the classrooms gave only opportunities to practice native speaker's pronunciation. In other words, the technology in the TELL classrooms did not provide opportunities for human interactions. One of the students complained:

> I know that practice with computers give us more various chances. We can see places and various characters with computers. However, they are programmed. So I should just follow the exact order to complete a dialogue. Also, the computer cannot catch my mistake. They just keep speaking as programmed. In real communication with Americans, we can speak something what is not in the dialogue and they will correct our mistakes.

I observed both teachers trying to rectify this problem. When the students made mistakes, the teachers pointed them out and corrected them. Also, in practice with classmates, the students checked each others' mistakes and the teachers assisted them.

However, the teachers claimed that technology could interact with the students because they believed that computers provided the quality of interactions that native speakers do. The 8th grade teacher told:

> Authentic audience is necessary for the interactions in language learning. We cannot have native speakers as our audiences due to money, time, and curriculum. To overcome this problem, my students interact with software and the Internet. Also, interactions with classmates and me help students to practice more active and realistic communication in the target language.

Indeed, the students listened and practiced the native speaker's pronunciations in the various programmed places that were impossible in the traditional classroom. But computers cannot be audiences due to the lack of spontaneous human interactions; instead, computers can be tools to provide various chances to communicate with other audiences through communication programs. The teachers did not use any communication programs to make their students interact with other students or native speakers.

Nevertheless, the quality of interactions between classmates and teachers was improved with the aid of technology because their understandings were supported by dynamic visualizations that led to better interactions. Also, through technology, they practiced native speakers' pronunciations that usually cause problems in learning speaking and listening in EFL classrooms.

Condition 3. Learners are involved in authentic tasks.

Authentic tasks help students learn a target language in realistic and practical situations. In the TELL classrooms, the teachers claimed that they tried to include the tasks that the learner was likely to encounter outside the classroom based on the lessons. For example, in the 5th grade EFL classroom, to practice the lesson "This is a bedroom," the teacher gave the students an assignment to draw their house structure on a big paper to introduce to other classmates. In the next class, the students brought their big house structure drawings. Each student attached his/her drawing to the blackboard and presented it to their classmates in English. With this task, the students learned how they could introduce their houses to others. As another example, in the 8th grade EFL class, the teacher printed a menu chart from a fast food restaurant from the Internet. With the chart, they did a role-play. One student acted as a cashier and the other as a customer. The teacher claimed that the practice of ordering in fast food restaurants gave the students ideas about what they needed to know and what expressions to use in fast food restaurants.

To select sources that they could use in their classrooms, it was noted that they considered school environments such as school events and holidays as well as their classroom environments such as students, time, space, and objectives. For example, in the middle school observed, the students needed to select their clubs for the semester. Around the school, the students could see advertisements that introduced each club. Thus, the 8th grade teacher gave a writing assignment that the students needed to make a club advertisement in English. The students required using at least three sentences. As shown in Figure 2, each student presented a club advertisement in the class. The students used what they learned in the class to complete the writing assignment. According to one of the student interviewees, they enjoyed the assignment because it was relevant to their current issues and school events.

In addition, the students learned English by doing in the TELL classrooms - to learn a word "dancing," the students danced all together with their teacher. They did not just repeat through their mouths to learn a word, but learned words or expressions by doing in various situations. Especially in the 5th grade classroom, their curriculum was focused on simple actions or daily dialogues. So the students always moved around to practice with their classmates.

Sports Club

What's your favorite team sport? Football, basketball, or soccer?

Look up more information at http://www.sports.net

You will love it

Art Club

Did you see the sunset yesterday? Did you want to paint it?
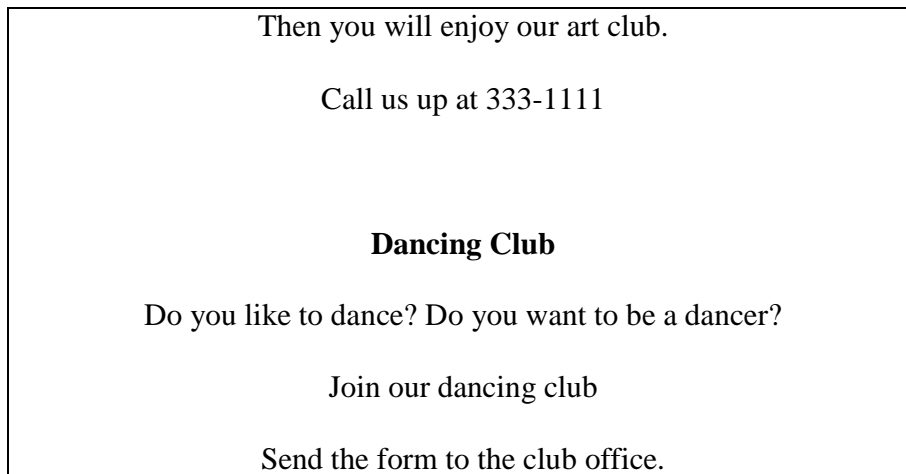

Figure 2. Examples of students' advertisements for clubs.

In the 8th grade EFL classroom, the teacher stated that activities were more group-oriented and were mostly after-school projects because they did not have much spare time during the class. To plan their group projects, the students usually had meetings during the lunch break or after school. Figure 3 shows a handout that the 8th grade EFL teacher provided as a guideline for a group project, taken from the *Teacher's Club* in a local MOE site. For this project, the students collaborated with their group members to design a menu chart. After that, they practiced a role-play during class. With these collaborative projects, the students claimed that they were more motivated to learn English due to practice with their group members.

Figure 3. A group project handout. Each group designed a fast-food restaurant and did a role-play, with menu charts displayed around the classroom.
http://jkrajka.webpark.pl/issue19/fig3.htm

To be more authentic in the EFL classrooms, the teachers tried to make their tasks closer to authentic with the aid of technology and other resources. With the aid of software and the Internet, the students were able to be in certain places and experience foreign cultures in pictures and movies. The TELL classroom environments made the learning enriched by overcoming the limitations of time, money and resources. Although it was not perfectly authentic, it was close to being so because the students sensed the culture and situations with the aid of technology and the teachers attempted to include the tasks close to students' lives.

However, the teachers sometimes focused on the completion of tasks as an end in themselves and overused technology without considering proper learning goals. For example, the 8th grade students had an Internet-based research assignment. To complete it, they input the name of animals they were researching and worked their way aimlessly through the list of sites brought up by this online search without consideration for accuracy or relevance of their topics. They then cut and pasted text from one of the sites they visited into a word processing document, not willing to read the content. Although it could be said that the students were performing the task of searching for material in the Internet, they did not develop any of the cognitive, interactive, or information literacy skills that such a task would normally involve. Such skills should

include selecting the right search engine, determining the best search terms, scanning search results for appropiacy and relevance, and interpreting and summarizing information on the located sites. However, these inauthentic activities in the classroom discouraged students from learning English.

Furthermore, the teachers claimed that it was difficult to flexibly adjust their curriculum for authentic activities. According to the 8th grade teacher, if she were going to be consistently authentic, meaningful activities with technology would require a tremendous amount of flexibility to adjust to the inconsistencies and uncertainties of school and class schedule. The 5th grade teacher claimed that most teachers had little authority to really shape learning according to the needs of their students and themselves. Especially, in the 8th grade classroom, it was found that the teacher did not have much flexibility to integrate larger projects or extended activities in his classroom because he needed to finish up certain amounts of the content and prepare for the national English exams, which restricted the teachers' creativity and freedom to design their learning environments.

Condition 4. Learners are exposed and encouraged to produce varied and creative language

The textbooks were designed to repeatedly expose students to the subject matter. For example, each lesson for 5th graders includes 11 different sections, and each lesson for 8th graders includes 14 subsections. Although each section focused on different discrete skills, the students were taught the lesson contents in all the sections with different activities and thus they could learn the lessons. Even the combination of textbook and technology in the classrooms exposed the students to more varied language input and output. The teacher claimed that they attempted to provide their students with opportunities to listen, speak, write, read, see, touch, and interact to learn English. The 5th grade teacher mentioned:

> Practice is really important because it gives students input and output to learn English. But elementary students pay attention to something for a short time and they get bored easily. So, to make my students listen and speak one expression five times, I need to use five different activities.

For instance, to teach, " I am dancing," the teacher danced in the class and used picture cards, a movie clip, a chant, a song, and a game to make her students understand the meaning.
Also, the MOE was enthusiastic in providing technical tools or programs to expose students to everyday English. For example, in Korea, a local MOE developed a dialogue book entitled "Everyday English 365." The book, renewed every year, was composed of 365 sentences or dialogues that students had to study every day. The local MOE office also developed "Everyday English 365 multimedia materials" (see Figure 4 below), posted on the official website and the school homepage for students to access . The 8th grade teacher asked his students to review that every day with the multimedia. Furthermore, in the class tests, the 8th grade teacher wrote approximately five questions related to "everyday English 365" to examine how well the students studied them every day. The 8th grade teacher mentioned that the students attempted to open the dialogue book and programs more often when they could get some kinds of rewards such as exam scores or certifications.

Figure 4. Everyday English 365 Flash Program. Students can see a dialogue text and the

interpretation and listen to the dialogue with native speakers' speaking in the program.
http://jkrajka.webpark.pl/issue19/fig4.htm

However, they sometimes concentrated on the features of technology, rather than their learning objectives in the TELL classroom. Visualization of images or situations in the TELL classrooms sometimes caused the students to focus only on the screen. One of the biggest advantages of the TELL classrooms was that the students could see and practice with realistic visual aids. However, there were also disadvantages. Some students only paid attention to what was on the screen without focusing on what native speakers said. For example, some students laughed because of the looks of the characters rather than the conversation on the screen. Some students danced or clapped their hands without singing or chanting because they only saw the motions. As another example, the 8th grade EFL teacher assigned a *PowerPoint* presentation for the final reports of the students' group projects. The students focused on using fancy fonts, sounds, and animations. In the real world, the use of multiple fonts and animations is not professional and distracts audiences. However, I noted that the teacher and students looked only at various features of the *PowerPoint* software program. The assignment did not apparently teach the students to develop an effective presentation of their projects.

In summary, in the TELL classrooms, the students acquired English through various activities. During the activities, the teachers asked the students to keep using the expressions and vocabulary words in each lesson. However, I noted that the students became fancy activity-holic in the TELL classrooms. The students always expected some fancy and dynamic activities in their classes. The 8th grade teacher said that student expectations caused him stress in preparing for his classes. I realized that the students were used to participating in the new activities using technology. Thus, returning to the conventional activities inevitably resulted in a feeling of boredom and disinterest. The students became addicted to big activities, and in order to keep them engaged, classes had to be conducted with stimulating multimedia presentations.

Condition 5. Learners have enough time and feedback

During the interviews, while the teachers believed that they provided enough time and feedback for their students, none of the student interviewees agreed with this. In the 5th grade class, it was observed that the teacher's feedback was only provided in the TELL classroom. For example, during the practice sessions, she walked around to check the students' wrong pronunciation. Although her students did not do well in class activities, she said that she always praised them to encourage and not to embarrass them. Sometimes, she assigned short homework such as writing vocabulary words or sentences. To check assignments, she asked her students to open their notebooks and walked around the classroom. Sometimes, she corrected mistakes on students' assignments. However, one of the students complained, "She missed my mistakes a lot. She is not really careful to check assignments." The teacher responded, "I do not focus on assignments much because writing is not important for 5th graders and I have too many students. I just want to have a chance to remind them what they learned in the class."

The software in the 5th grade EFL classroom also provided feedback. The students learned

where they needed to give accent or when they should use the expressions through the native speaker's pronunciation and the situations. However, the feedback from the software in the classroom was indirect. In other words, the software did not respond directly to each student, and thus the students needed to catch their mistakes on their own. I observed that the teacher tried to give the feedback that technology cannot catch for each single student. Also, whenever the teacher believed that some explanations or corrections were needed, she paused the software to explain. But it did not approach all the students in that classroom; some of the students still made the same mistakes and did not know what they were supposed to do.

In the 8th grade class, the teacher's feedback was varied and rich compared to the other teacher's feedback. The 8th grade teacher's virtual office was open for 24 hours a day with the class website and emailing. The students asked questions any time by emailing or posting to the bulletin board, without having to wait for the teacher's office hours or the class. The students claimed that they liked to communicate with the teacher through the website because he was accessible any time and they could contact the teacher individually. It seemed that the students' learning space and time were expanded with the support of technology in the 8th grade classroom.

However, like the 5th grade class, the 8th grade teacher did not want to give many assignments that required the students a lot of time. To check assignments in the 8th grade classroom, random students presented their short essays, performed a dialogue, or explained a project with partners during the class. After the students turned in the assignments, they never received any feedback or grades from the teacher. As a result, the students said that they did not pay much attention to their assignments and even copied what their classmates did because the teacher did not care much and did not give any feedback. They just wished that they were not the one who needed to present during class. I wondered why the teacher kept giving assignments that he would not check. The teacher claimed:

I wanted to check students' assignments. However, I do not have time to check all the assignments. But I keep assigning the homework because I believe that the students will be reminded of what we learned for the moment. Also, some assignments give my students chances to work with other classmates and to enjoy language learning. During the process, the students learn English.

I noted that the 8th grade teacher's reason was the same as the 5th grade teacher's. Although both teachers were busy for their class preparations, checking assignments is an effective way of noticing students' learning progress and find out students' needs. Especially, for the students who are invisible in the class, the assignments will be one way to communicate with their teacher about their problems or progress in the class.

Condition 6. Learners are guided to attend mindfully to the learning process.

For the mindful learning environment, the teachers claimed that they tried to fit their instruction and materials to meet the students' academic level. In the 5th grade EFL class, the teacher tried to use easy words or instructions. To explain the content, or vocabulary, she used motions, objects, pictures, or movies rather than only explain verbally. Although the MOE recommended speaking only English in the EFL class, she spoke Korean and English together in her classroom. She pointed out:

I understand that if a teacher speaks English in the class, students will be exposed more to English. But to do this, the teacher needs to be qualified to speak English first. I cannot speak English fluently. Furthermore, my pronunciation and structures are wrong. Young students follow easily whether I make mistakes or not. I do not want to teach wrong English. So I use Korean and English together in the class. But I speak English for the sentences or vocabulary words that I taught in the class to remind them. The software is a big helper to check my pronunciation and sentence patterns before I use them in the class.

Moreover, both teachers used various supplements for their students and parents so that the students could practice mindfully what they learned and know more details. Figure 5 is an example of a handout that explains various helpful sites to understand each lesson. With such a supplement, the 8th grade teacher claimed that language learning took place at home and led to the parents' participation because the parents visited the site with their children at home and thus the students learned English at school and at home by using supplemental information. As a result, the students learned intentionally and were engaged in the learning process.

Figure 5. A helpful site collection for the 8th grade English lessons, developed by a local MOE containing site addresses and contents of the site for each lesson.
http://jkrajka.webpark.pl/issue19/fig5.htm

However, the exam seemed to negatively affect the ability to create meaningful learning environments. Halfway through the observation period of this study, the 8th grade EFL teacher began focusing on readings and structures. Noticeably, I found out that focusing on reading and grammar induced students' boredom. One student mentioned:

> To keep up with the exam schedule, he does everything nowadays. He gives us questions, and he answers. I think that that is all we do in the class. But if the English exam is far away, we do a lot of fun things. We practiced with partners to practice scenes that we watched from the software and did group projects. Of course, we still do some. But not much! Because we had many school holidays this semester, we missed many classes. We need to be hurry to finish several chapters for the next exam.

In short, exams were the obstacle for intentional cognition that facilitated the students to learn English mindfully. However, the teacher said that he could not do anything for that because he could not control the exam schedule and chapters and also added that testing scores were really important for him and the students because it is the only way for school administrators and the

MOE to evaluate the teacher's ability.

In summary, to guide the students to attend mindfully to the learning process, both teachers claimed that they consider the students' levels and design the class to fit their levels. To make an interactive language learning environment, the teachers believed that they included various activities to catch students' attention. For the design of class activities, the technology opened more options for the teachers. However, I realized the factors beyond the teachers' control such as time, money, and exams, made the learning tedious and inefficient at times.

Condition 7. Learners work in an atmosphere with an ideal stress/anxiety level

In the 5th grade classroom, the teacher described her classroom as a playground with English. She said that she focused on motivation and confidence rather than accuracy and fluency. She noted:

Young learners need to have confidence and be interested in learning first. If a teacher focuses on trivial grammar or structure, students will lose their interest to learn language. I think that is the reason that the MOE prohibits teaching English structure for young students. I try to focus on understanding the dialogue situations. I hope that my students feel that they play with English in my classroom, not study English.

All 5th grade student interviewees said that they did not get stress in their TELL classroom. They agreed that one reason was that there are many different activities in the classroom. Also, the teacher added that the students might enjoy the class because they did not have external pressures such as exams or grading. Besides, in the 5th grade classroom, the class content was not tight. The teacher needed to teach approximately seven sentences in each lesson for four hours. Thus, the teacher can have time to include many different activities to teach the content.

However, it was observed that some of the students looked bored with the repetitious learning. In each classroom, there are over 40 students who have different English levels due to private tutoring and institutions. The 5th grade teacher mentioned:

I know that one third of my students in this classroom have already learned these lessons in the private institutions. Some of the students lived in the English-speaking countries for a while or some of them visited the countries during vacation. They can speak English like native speakers. However, I do not want to focus on these rich students. I want to focus on the students who are behind and cannot afford private tutoring because the rich students can learn English from others who are well qualified in English like native speakers. But for other students who cannot afford expensive tutoring, I want my classroom is to be the place to learn English and to catch up to other students.

Therefore, the students who have already passed the English level of the grade felt the lessons

were tedious and wanted to learn something new or difficult. In other words, some students sometimes learned English in the simple and boring classroom atmosphere. During the data collection, I learned that private tutoring systems and the school curriculum did not support each other.

In the TELL classrooms, technology broke down the formal and strict relationship between the teacher and the students. In the interactions between students and students and between the teacher and students through the class Web site, the students and the teacher used the bulletin board to post very often including questions, jokes, stories, and suggestions. They often used symbols that normally young generations use to chat. Their writings were friendly and informal. Also, the teacher's replies were fast. As shown in Figure 6, with the interactions in the bulletin board, the teacher functioned as a facilitator, a learner, an advisor, and a friend to the students.

> Wow, Cute Bomin! Will you really pay attention to your study from now on? I cannot believe that. Is it true? Do I have to believe? If you give me any evidence, I will give you the answer of your question.
>
> But, before that, look at the book and find answer by yourself!!
>
> If you really cannot find it, visit my office anytime.
>
> Trying to find the answer is the real learning.
>
> Do you know who said that?
>
> The answer is ….(see below)
>
> E.T.

Figure 6. The 8th grade EFL teacher's reply to the students' question in the bulletin board from the 8th grade English class website. The replies are very friendly and close, often with symbols used to communicate (Translated to English).

Also, the students liked to visit the website because they could get news about what is happening around school. In addition, the students were more willing to freely participate because the website was accessible anytime and anywhere. One of the students mentioned that:

> I like his Web site because he always updates his site fast. Also, I can ask some questions easily without meeting him. Asking questions on the Web site is comfortable and fast because I am very shy. Before when I had any question, I just memorized the answers without comprehension because I was afraid of asking the question to the teacher and I did not want to waste class time because of my stupid question.

Additionally, the students sent the teacher emails to convey something private. It built close relationships between the teacher and students. It was a way to give chances to know hidden students who were not notable in the classroom. The teacher commented:

> I invest more time to reply to emails than on the bulletin board because the students' emails are deeper and more sincere. They send emails when they need somebody to talk to. When they have questions about class, usually students post on the bulletin board. Students discuss about their family or his/her concerns via email. At that time, I am a counselor. During the exchange of emails, I am getting closer to my students. In the classroom, I cannot pay attention to every single student. But modern technology gives me chances to know my students more.

The relationship between the teacher and students was informal and intimate because technology provided more chances to interact and share their ideas. Through these interactions, the students could see the teacher as their friend and counselor who can talk about many different concerns. As the 8th grade teacher mentioned, the technology gave the teacher chances to understand his students and to communicate frequently.

However, external factors affected the classroom atmospheres. In the 8th grade class, I saw tensions related to the exams. Whenever the teacher emphasized something for an exam, the students took notes in their textbooks. All student interviewees agreed that they were stressful because of the English exams. When the teacher focused on the exam, the students said that they felt more stress and tension. Unlike the 5th graders, the 8th graders received numbered grade reports after each exam and at the end of semester. The student interviewees agreed that grade reports represented everything for their English skills and furthermore decided which university they could enter. These factors seemed to affect to increase stress and anxiety.

Condition 8. Learners' autonomy is supported

The 5th grade students agreed that their classroom was teacher-centered because the teacher determined the course content and methods. However, three out of five interviewees in the 5th grade EFL classroom preferred the teacher-centered classroom. The comments from the students were "I like teacher-centered because it will be mess up if students decide because each single student has different ideas," "It will be hard to control. One day, my teacher was not in the school. It was really horrible. Everybody wanted to do what he/she wanted. I did not like it," "I will not remember what I learned because it is not organized." Two students who preferred the learner-centered classroom stated that "learner-centered will be better because we can learn what we want to learn" and "The class is simple because the teacher decides order and she always keeps the order. It is sometimes boring because I know what is next. If we decide, we will have more ideas, so it will be more fun."

Like the 5th graders, the 8th grade students agreed that their class was teacher-centered because the teacher decided most things, and he did everything when he needed to finish up. However, all student interviewees believed that the teacher needed to be teacher-centered. One of the students mentioned:

> It will not be easy to be learner-centered because there are so many students in one

classroom. It is impossible that one teacher can check all students and reflect students' ideas within limited class time. We cannot waste time for every single student because the teacher needs to finish certain chapters in the limited time.

During the interviews, the teachers knew that the learner-centered classroom would be ideal. However, they claimed that it was hard to be learner-centered in a big classroom. They argued that learner-centered classrooms were considered an unrealistic setting for the teachers. The 8th grade teacher added that teachers had little flexibility in their curriculum and schedule because the MOE decided how many lessons teachers needed to finish in a semester and guidelines they needed to follow.

However, it was discovered that although both teachers and students considered their classrooms as teacher-centered, selecting activities and materials were toward learner-centeredness. Although the students believed that their classrooms were teacher-centered, I noted that the teacher considered their students primarily to design and develop their classes. Whenever I asked questions about "why," they always started with students' interests or preferences on the activities or tools. Moreover, in the 5th grade classroom, I observed that the learning more often took place by doing, not just listening and the students were not only receptive any more. In short, the classrooms observed were teacher-centered, but the students impacted their teachers' decisions actively in their learning classrooms.

Discussion

During the interviews, it turned out the teachers understood what conditions should be considered to encourage students' learning in their classrooms. But the teachers' intentions were not fully reflected in their classrooms because some concepts that they believed were misunderstood or contradictory to the language learning theories. For example, although the teachers believed that technology interacted with the students as a participant and provided interactive opportunities to learn English, they did not understand that computers were still an artificial means for language leaning. Also, to describe authenticity in their classrooms, the teachers talked about various interesting topics and the related activities. However, the topic alone cannot make the activities authentic; instead, the way of conducting the activities make learning authentic.

Furthermore, to discuss the TELL classroom environments, it was really hard to categorize the examples into the eight conditions because all these eight conditions were in force simultaneously. The exploration of the TELL classrooms with eight conditions shows that all components in TELL classroom environments should be composed as a whole. For example, the 8th grade group project for the cooking instruction of Korean food gave the students the chance to interact and negotiate meaning in English. During the project, the students communicated with other classmates who were their audience to engage in the task. According to the students, the activity reduced stress and motivated students to participate mindfully in the project that led them to learn English. In short, during this learning activity, multiple conditions worked together exercising impact on one another. Also, when the classroom environments met more conditions for optimal language learning, students were more actively engaged in the language learning.

Conclusion

Before starting this study, it had not been expected to observe any notable change in language learning environments through integrating technology. Rather, it was expected for the findings to prove how technology misled learning environments and how our fantasy about technology was unrealistic. However, during the study, I was amazed that technology was naturally accepted into the language learning classrooms, and the students and teachers explored various opportunities in the environments. In other words, whether intentionally or not, the teachers accepted technology and started to investigate how they could integrate better for students' learning.

Additionally, during this study, I realized that while researchers disputed about CALL theory without any experience in language classrooms, teachers tried to integrate technology into their classroom environments without any concrete theoretical background. In other words, it seemed that researchers and teachers were not connected well. Therefore, researchers need to open their eyes to language classrooms and work with teachers to develop more approachable and reflective scheme of CALL, rather than isolated CALL theory.

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