Project-based CALL Class: Linking the Theory and Practice*

Eun-Mi Yang
(Hyundo University of Social Welfare)

This paper introduces a class model based on a course, Internet English, offered by an English department at a university. The course has dual purposes of developing students' English skills and Internet using skills at the same time. In support of using the Internet for language learning, the advantages of project-based language learning and constructivist le[1]arning in relation to CALL are explored. The activities in this course, which are basically project-based under the paradigm of constructivist learning perspective, are explained in detail to show the relationship between second language learning theory and teaching application. The way how the four language skills – speaking, listening, reading, and writing – are integrated in this class is described as well. Finally, judgmental evaluation of the course by the students is noted. The results show that a project-based CALL class could be a promising class model to realize an integrative, constructivist, and authentic learning.

[CALL/constructivism/project-based learning/Internet, 컴퓨터 활용언어교육/구성주의/ 과제중심학습/인터넷]

I. INTRODUCTION

The Internet has been impacting every aspect of our everyday life since about a decade ago. It was considered a cyberspace which seemed a little distanced from our real life in the past. However, the Internet is no longer just an unreal imaginary world but a real life itself. People all around the world are connected through the Internet using email, web boards, and instant messengers. If they do not use the Internet effectively, they feel lagged behind the modern society.

We have taught English using the Internet for the students to use English in the real world mainly in the view that the Internet is not a real world and is just a tool. However, when we accept the view that the Internet is not just an unreal world, we can have a different consequence in English teaching. People not only need to use the Internet to develop English skills but also need to develop English skills to use the Internet effectively. In this respect, the course, 'Internet English' was established. So the goal I set when I started this course was to develop a class model where students in an EFL situation could develop integrated English skills and the Internet skills at the same time. A project-based CALL class was planned to achieve this goal under the hypothesis that it could provide a suitable class model under the current second/foreign language teaching and learning theories.

Therefore, the purpose of this study is on the one hand to suggest an example of a project-based CALL class model, and on the other hand to explore if the project-based CALL class worked positively in enhancing the students' English skills with the Internet skills and their interests.

In the following section, I will briefly summarize the development of computer assisted language learning (CALL) related to the technology development and the current state of the language learning theory. The course I designed and taught will be described in detail in regard to the current second language learning theory under the constructivist learning principle. A judgmental evaluation about this course from the students' point of view will be followed.

II. THEORETICAL BACKGROUND

1. The History of Language Teaching Theory and CALL

CALL has developed in line with the development of computer technology and language teaching/learning theory (Kern & Warschauer, 2000). When the computer technology was at the beginning stage around 1970s to 1980s, grammar-translation and audio-lingual methods were the main trend of language learning/teaching theory. Computer which had only limited functions was suited for language exercises such as drills and repetitions on the basis of this language teaching theory. It originated on the mainframe as a tutor that delivers language drills or skill practice.

In the 1980s and 1990s with the view of language as a cognitive mechanism, communicative language teaching theory flourished (Kern & Warschauer, 2000). Classroom activities were designed to develop students' communicative competence not just for grammatical accuracy. Along with this development of the communicative language teaching theory, personal computers helped learners to achieve this language goal with communicative exercises in target language only in a limited area. With the advent of multimedia technology on the personal computers, they served as a space to explore and creatively influence micro worlds.

Around the end of the 1990s with the development of the Internet, computer technology began to have a huge influence on people's life. Now a large number of people are connected through email and the Internet, and they have access to inexhaustible information. With the prevailing sociocultural view of language, social aspects become to be more emphasized in the communicative language teaching theory. By virtue of the rapid development and utilization of computer networks, the Internet now became to serve as a leading medium of local and global communication and a source of authentic materials all around the world (Kern & Warschauer, 2000). The classroom interaction at this stage is not just for communication's sake, but for entering new communities and familiarizing themselves with new genres and

discourses (Warschauer, 2000). Many research results by teachers and researchers generally argue for the following reasons for using the Internet in language teaching (Choi & Kang, 2002; Shin, 1999; Warschauer, 1995).

(1) The linguistic nature of online communication is desirable for promoting language learning.
(2) It creates optimal conditions for learning to communicate, since it provides authentic materials and audiences for communication.
(3) It can enhance students' positive attitude, motivation and interest.
(4) Learning computer skills is essential to students' future success; this reason suggests that it is a matter of learning English to be able to function well on the Internet as well as using the Internet to learn English.
(5) Teachers can get teaching materials easily and students can have access to the Internet anytime, anywhere providing themselves with student-centered individualized learning environment.
(6) Students can be exposed to abundant target language speaking cultural environments.

2. Constructivist Learning Perspective and CALL

Constructivism is not just a perspective for language learning. The cognitive and social constructivism, having roots in Vygotskyan sociocultural psychology (Vygotsky, 1964), comprises a complex of philosophies and beliefs about the way that learning and experience are internalized and transferred (Chapelle, 2001). In this perspective students' learning experience is crucial to what they learn and how they can use it (Duffy & Jonassen, 1992). That is, students learn by constructing new knowledge on the basis of their previous knowledge and experience and through social interaction. This constructivist perspective encompasses diverse disciplines, and many language educators these days follow this perspective about the nature of learning as well.

It is quite natural that constructivist perspective, which is basically about learning, induces language educators to find matching teaching implications. In view of this perspective, teachers need to facilitate individualized learning environment providing students with self-discovering opportunities since each student has his/her own background knowledge and way of learning. The more the students are motivated, the more they are actively involved in the activities and learn new things. Teachers also need to create cooperative and interactive learning environment where students can be exposed to diverse views of others. Cho (2001) argues for the advantages of problem-based learning as this learning increases the learners' motivation, intelligence, interest, and the use of metacognitive strategy.

CALL is a well-suited way of learning when we think of a learning environment proper for the constructivist teaching as suggested above. A course offered in a teacher education program, entitled Using Computers in the Language Classroom, introduced by Kamhi-Stein et. al. (2002) relies on the premise that an optimal learning environment is one that allows for self-paced interactions. They argue that interactive web sites seem to provide language learners with such an environment allowing for teacher-learner, learner-learner, and learner-computer interactions. In his study on English language writing class and the Internet, Jung (2002) argued that the Internet helped to create learner-centered cooperative learning environment in writing classes bringing more class participation of the students. Kim (2002), introducing web-based activities for developing reading strategies, addresses that these activities are appropriate for growing students' self-initiated learning ability and reinforcing students' concentration and interests because of its nature of active learning method.

3. Project-based Learning and CALL

Project-based learning has long been used widely by many teachers in many subject lessons. The crucial point of a project-based learning is the student's engagement in investigation. They ask questions, collect

and analyze data and information to pursue solutions to problems, to report about problems, or to create artifacts such as a videotape, a computer program, a book, or a report (Blumenfeld et al., 1991). In this framework the learning process as well as the outcome of the project is *equally important*. Students can do the work individually or collaboratively with other students in groups. Blumenfeld et al. (1991) stress two essential components: the project must start with a central question that organizes and drives activities and the project must culminate in a series of artifacts or products that address the central question.

Now the information technology (including computers, the internet, and multimedia) has been integrated into the project-based learning and contributed to enhancing learning effects. Moursund (1999) proposes six purposes of using an IT-assisted project-based lesson for students as follows:

(1) To learn in an authentic, challenging, multi-disciplinary environment.
(2) To learn how to design, carry out, and evaluate a project that requires sustained effort over a significant period of time.
(3) To learn about the topics on which the project focuses.
(4) To gain more IT knowledge and skills.
(5) To learn to work with minimal external guidance, both individually and in groups.
(6) To gain in self reliance and personal accountability.

Moursund further suggests three purposes of using an IT-assisted project-based lesson for teachers:

(1) To learn information technology alongside their students.
(2) To gain skills in creating a constructivist learning environment.
(3) To facilitate the creation of a highly motivating learning environment.

As Moursund (1999) and Westrom (2001) argue, the use of the

Internet in teaching well fits with the project-based learning activities. In the process of project-based activities, the Internet provides a source of authentic materials, means for synchronous/asynchronous communication with others and a place for storing artifacts/products, as well as makes it easy to manage the project collaboratively. These ideas on using the Internet with the project-based learning activities can be applied to the language teaching under the constructivist framework.

Chong (2003) used the approach of research projects in a computer-assisted language learning environment. In his study to find out whether the CALL project promoted learner autonomy, Chong (2003) concluded that the CALL project was proved to be a promising approach for autonomous learning in a network-assisted environment.

What follows is an overview of the method including setting, participants, and procedures of this study.

III. METHOD

1. Setting

The setting for this study was a course titled Internet English in a university in Korea. 'Internet English' is a course which the present author designed and taught in 2001 for fourth-year university students mainly majoring in English. This course was designed in keeping with constructivist paradigm providing students with individualized but collaborative learning environment. The course activities were designed to manifest the advantages of the IT-assisted, project-based learning that Moursund (1999) suggested. The technological tools including the computer are not able to give rise to improvements in learning or acquisition directly. However, among the technological tools the Internet which has multi-attribute can furnish an optimal learning environment when used effectively and appropriately in a context. So it is necessary to investigate particular practices of use in particular contexts and

evaluate them in relation to their specific context. The course information is to be provided according to the questions which Warschauer (2000) proposes to ask when we describe a CALL class: about the learners, the work in their class, the purpose of the course, the setting of the course, the kinds of language use, the patterns of social interaction, and the particular outcomes in terms of quantity/quality of language use, attitudes, and motivation.

The main activities in this class were to carry out research projects which were designed to integrate four language skills (reading, writing, speaking and listening). Common reading materials were selected to get information and broaden the students' knowledge base to conduct their projects and give presentations of their projects. Therefore, the reading activities were content-based in its nature, and most of the class activities were closely related to proceed the projects except listening and grammar activities. Separate listening and grammar exercises were added to the project activities to fulfill the students' need and supplement the project activities. The exercises students did in class or outside of class were also selected from the Internet sites.

The classroom for this course was equipped with personal computers with the Internet hooked up and a beam projector. Each student and the teacher could access the Internet at their desks whenever necessary during the class time. Since the course activities were mostly Internet-based, they could help the students to be exposed to diverse realistic and authentic materials which compose the essential part in the constructivist environment.

2. Participants

'Internet English' is an Internet-based English course for intermediate learners. It is an elective course for 4th year English major students at a university in Daejeon, and 25 students enrolled in this class. The students had 3 hours of class time every week meeting twice a week for one semester.

Since most of the students were to get a job after graduation, they

wanted to develop practical skills during this course work. It was designed to allow students to pursue their particular preferences and interests through the use of the Internet as a classroom resource. Throughout this course, students developed basic information technology skills (e.g., word processing skills, web-browsing skills, E-mail skills) and English at the same time.

3. Procedures

The detailed description of the class activities to develop four language skills and computer skills is presented. On the basis of the class activities a project-based CALL class model could be derived. At the end of the semester a survey was conducted to examine students' evaluation of the effectiveness of the course. The questions in the survey were asked in three different aspects: 'integration of four skills with computer skills', 'constructivist learning environment', and 'authentic learning', which are considered core aspects of current ESL/EFL teaching methodology. Students responded to the survey questions marking on a five-scaled answers: strongly agree, agree, neutral, disagree, and strongly disagree.

IV. PROJECT-BASED CALL CLASS MODEL

1. Class Activities

1) Activities for Integrating Four Language Skills

The first thing we did in class was learning about web search process, web directories, search engines, and citing online sources. The web materials for this learning were searched in advance by the author and introduced to the students. The students read them together and learned how to apply the skills into researching about given topics. The

first project the students were asked to do was writing about their 'favorite famous person.' They were asked to research about their favorite famous person using the Internet, post their writing onto the web board which was linked in the author's homepage, and give a group presentation on their research products. While the students were researching, they were taught the way how to post their writings onto the web board with making links and uploading various images and sound. The class web board had a form as shown in Figure 1.

FIGURE 1
Class Web Board

The individual writings on the web board were checked by the teacher and a list of sentences with common errors which were picked from the students' writings was posted on the web board and the students with the teacher corrected the wrong sentences in the class.

The second common reading was about 'giving a presentation.' The reading materials on this topic were also selected by the author from the web. Since the students were required to give group presentations on their projects for mid-term and final exam, they chose two among the three web research projects (favorite famous person, famous school, and favorite movie) they completed. Usually three students formed a group for giving a presentation. They had to make presentation materials together with group members making smooth connection of the three different writings written by each student. They used Microsoft PowerPoint to present their projects and the teacher and the audience (their classmates) evaluated the presentation on an evaluation sheet provided by the teacher according to the guideline they learned beforehand (see Appendix A). Even though the common reading materials were about the overall method to carry out projects of research and presentation, the individual students had to go through various other reading materials to complete their research projects on the given topics.

The class was conducted mainly in English for speaking practice. Free interactive web sites for listening and grammar practice were selected and used for the students' class work and self-study. Two web sites for listening (http://www.esl-lab.com, http://www.dailyenglish.com) and one for grammar practice (http://cctc2.commnet.edu/grammar/) were kept being used throughout the semester. One (http://www.esl-lab.com) of the two listening sites was used by the students outside the classroom as assignment and they were checked through in-class quizzes. The other one (http://www.dailyenglish.com) was used in class for the PBS Headline News listening. The teacher prepared a vocabulary list and news script in advance with some blanks for the students to fill in. Grammar items they studied throughout the semester are clauses, sentence types, sentence fragments, agreement, and verb forms which are essential points to write proper sentences. The students took quizzes on a regular basis to have their self-study on listening and grammar points they were assigned to study at home be checked.

2) Computer Skill Building through Researching, Publishing, and Presenting

The use of the Internet with English skills as well as English skills with the aid of the computer skills is being considered essential survival skills in our real life. In this sense, the computer skills with the effective use of the Internet were taught in class. For example, the students learned about web search process and search engines for carrying out research projects effectively. The learning materials were also selected from the Internet and listed with being hyper-linked on the web board of the author's homepage. Other than the reading directly related to the computer skills, the students had to read a lot of reading materials they chose in the process of researching to get appropriate information to carry out the projects.

The completion of a student's project was a form of a text posted on the web board. To have the best publishing effect on the web board, the students learned several html tags, such as using different fonts or colors, and adding links, photos, pictures, sounds, and even marquee effect. The web publishing on the web board is a new form of literacy since it includes various multimedia components with aural and visual effects. Everybody could have chances to read the other students' writings on the web anytime anywhere. After the students edited their web writings with Microsoft PowerPoint, they gave final group presentations. Since the students were already familiar with the use of Microsoft PowerPoint, it was not necessary to learn how to use it in this class. A few students who are not so good at using this program could get help from their group members. They had an opportunity to experience the meaningful use of the program through this presentation process.

2. Project-based CALL Class Model

The project-based CALL class can be classified as a hybrid of content-based or theme-based model in which language and content

learning are combined. According to the students' language ability, age, and the purpose of studying English, the teacher can choose different types and levels of content or theme for the class. All of the students in this class study the same content to learn the general method of carrying out the projects successfully. They also study different content individually or cooperatively for carrying out their own projects. Thus, the content is incorporated through a means of project. The project-based CALL instruction provides a rich context for teaching language skills. Especially CALL environment provides rich and authentic resources for the students and teachers. The self-initiated and cooperative learning is important since the class proceeds with student-driven learning. Students control their learning choosing the topic and materials by themselves so that self-initiated and individualized learning is available. As a result, the class naturally furnishes learners with constructivist and integrated learning environment through project-based CALL activities. The final outcome of their project is a written text on a web board. Finally, they have to do the final task, giving a presentation, with their group members cooperatively. The teacher grades the student's project outcome.

  Table 1 shows the class activities which constitute the four different learning activity categories under the integrated and constructivist learning environment. The authentic learning category, which is represented under the constructivist learning environment, might belong to both integrated and constructivist learning environment. Actually, the distinctions of the activity category can be blurred since the activities might belong to any categories.
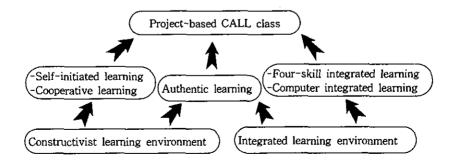
TABLE 1

Class Activities in Different Categories

Class paradigm	Learning environment	Activity category	Detailed activities*
Project-based CALL	Integrated learning	Four skills & computer learning	General and individualized reading, class interaction, writing, presentation, listening, grammar
	Constructivist learning	Self-initiated learning	Individualized reading, writing, presentation, listening, grammar
		Cooperative learning	Group presentation
		Authentic learning	Reading, writing, presentation

*Detailed activities were mostly done for carrying out projects.

The procedure of the activities in each class is not presented here and it is not fixed but rather flexible. That is, the teacher can have a flexible lesson plan for each class under the class paradigm of project-based CALL.

Based on the class goal and activities, the mechanism of the project-based CALL class is represented as in Figure 2.

FIGURE 2

Mechanism of Project-based CALL Class

In the sections that follow, examination of the evaluation result about the class activities which could suggest more varied and improved activities and teaching implications under this mechanism is described.

V. EVALUATION OF THE COURSE AND DISCUSSION

In this section the result of judgmental evaluation of the class activities is noted, though both judgmental and empirical evaluation are necessary in order to get a thorough course assessment. Judgmental evaluation becomes possible and acceptable when the researcher keeps close and constant contact with students, and understandings through which can be a valuable resource in an effort to investigate what goes on in an English classroom.

At the end of the semester a survey was conducted to investigate students' attitudes towards project-based CALL class (see Appendix B). The survey asked a range of questions to investigate the students' judgmental evaluation of the class. It constitutes 10 items to be answered on a five-point Likert scale, with 5 being the highest score. Twenty out of 25 students submitted the response to the survey questions. For the sake of convenience, I divided the students' answers into three categories as positive (scores of 5 and 4), neutral (score of 3), and negative (score of 2 and 1).

I described and evaluated the class in three different aspects and they are explained in three sections below. The three sections are 'integration of four skills with computer skills', 'constructivist learning environment', and 'authentic learning environment', which are considered core aspects of current ESL/EFL teaching methodology.

1. Integration of Four Language Skills with Computer Skills

In this section I assess the class in the area of integration of language skills with computer skills. The questions in the survey are to confirm the judgmental evaluation of the effectiveness of the class

activities. Students' responses in relation to four language skills and computer skills (item numbers: 3, 4, 5, 7, 8) are summarized in Table 2.

TABLE   2
Students' Evaluation on the Class Activities (N=20)

Survey item	Positive	Neutral	Negative
Project-based activities were effective for reading. (item #3)	13 (65%)	7 (35%)	0 (0%)
Project based activities were effective for writing. (item #4)	14 (70%)	2 (10%)	4 (20%)
Class activities were effective for listening. (item #5)	20(100%)	0 (0%)	0 (0%)
Class activities were effective for speaking. (item #7)	16 (80%)	4 (20%)	0 (0%)
Class activities were effective for computer skills. (item #8)	8 (40%)	12 (60%)	0 (0%)

The activities in this class integrated four skills of reading, writing, speaking and listening in their nature. Brown (1994) argues that within a communicative, interactive framework, the integration of the four skills is the only plausible approach to take. The five models of the integrated-skills approaches Brown suggests are content-based teaching, theme-based teaching, experiential learning, episode hypothesis, and task-based teaching. The activities we had done in this class included some aspects of Brown's five models. For example, general reading activities were the weak form of content-based teaching since they were meaningful learning to acquire practical and useful knowledge to carry out the research projects. The general reading topics were about Internet search, research method using the Internet, and giving a presentation. The individualized reading activities for individual research project were rather task-based than content-based as they focused on a set of real-world tasks using a variety of authentic web sources. The

research topics were 'favorite famous person', 'favorite movies', and 'famous school', and the students searched necessary web materials for carrying out their own research on their own.

In addition to these project activities, separate listening exercises which were also Internet-based were added as in-class and outside-of-class activities to compensate for the relatively insufficient listening exercises in the project activities. Grammar exercises were also added separately to provide the students with proper knowledge on basic sentence structures. These separate listening and grammar exercises were offered considering the students' need who were eager to have some confidence and feeling of achievement in their language skills and desperate in getting satisfactory jobs after graduation with proper English ability. Additionally, these activities could help students be more autonomous since students could acquire the knowledge how to choose and use the Internet sites effectively and efficiently for self-study.

Although the result of this course was considered positive in integrating four skills, a limitation was noted in terms of the writing activity. The students' writings on the web board were supposed to be the final draft after several revisions. However, because of the limited time we could not go through enough revising sessions. As a result, the language in final drafts and presentation was not perfect enough in a linguistic aspect.

2. Constructivist learning environment to the students

Three questions (item numbers: 1, 9, 10) were picked to evaluate the constructivist learning environment of the class as in Table 3. Students' responses in overall show that they perceived the class activities positively.

TABLE 3
Students' Evaluation on the Constructivist Learning Environment (N=20)

Survey item	Positive	Neutral	Negative
The project-based class was effective for studying English. (item #1)	13 (65%)	7 (35%)	0 (0%)
I could develop autonomy through the class activities. (item #9)	5 (25%)	15 (75%)	0 (0%)
Class activities raised my interest in studying English. (item #10)	17 (85%)	3 (15%)	0 (0%)

Even so, they marked mostly on neutral in developing autonomy in studying English. It was found through an interview that the students wanted to be introduced more web sites for their self-study. They did not seem to have sufficiently been aware of whether they developed self-studying skills through this course. This result is not congruent to the one by Chong (2003). In his study Chong found the CALL project a promising approach for the enhancement of students' autonomous learning through the questionnaire responses of the students.

The project-based activities provided students with self-initiated learning experiences in searching the areas which they were interested in. Since the project topics were 'favorite famous person,' 'favorite movie,' and 'studying abroad,' students could search and read materials they liked to read. It raised students' interests and motivation. In addition, when they published the results on the web board, they could feel confident in themselves since they knew that they were the professional in the area they researched. When the students presented their projects to the class members using PowerPoint slides in the middle and at the end of the semester, they included a narrative description of their research projects with various multimedia effects of images and sounds in their group presentation. Three students of a group had to work together to come up with some integrated connection among three different research projects to present them in one presentation. The students shared their ideas, revised the writing

through peer corrections, and acquired linguistic and technological knowledge through the process of collaboration. Most of them engaged in the activities actively enjoying each other's work. These Internet activities were especially satisfactory in developing the students' learning skills and communication skills at the same time.

3. Authentic Learning Environment

All of the students (20 out of 20 students) responded positively to the question (item number: 2) if they could have accessed the authentic materials through the project-based class activities.

The project-based activities themselves facilitate the learners an authentic learning environment. The students could use authentic materials and develop researching skills using World Wide Web, and they published and posted their authentic hyper texts on the web board having a large authentic audience. Because the Internet is a part of the real world and because artifacts on the Web can readily be placed in the world beyond school, project activities have a scope for authenticity not usually found in the school environment (Westrom, 2000). In an authentic learning environment, students build their case by looking at the learning of language. Students who learn language through active participation and interaction normally learn language rapidly and learn language more efficiently and more effectively in context. Freeman and Freeman (1998) say when students complete assignments that they perceive as meeting a real need, the quality of their work is superior to what they typically produce.

An activity becomes more authentic when it is a part of the students' real lives and connected to their prior experience. Since the project topics were related to the students' real lives and experience, the activities offered enriched authentic experience for the students.

VI. IMPLICATIONS AND CONCLUSION

   The project-based CALL course I introduced in this paper is a class
where I attempted several learning activities under the constructivist
learning theory. The project-based CALL class is considered to have
offered many benefits for language learners. It allowed a constructivist
learning environment for learners in which self-initiated learning,
cooperative learning, authentic learning and integrated four-skill learning
were available. Especially the Internet provided the language learners in
this course with new dimensions of experience. Students could get
information from the Web by using searching and reading skills to
complete their projects and post their project results on the web board
by using their writing skills. So the Internet provided a good source of
authentic learning materials and made it available to have collaborative
learning.
   Students' reaction to this course was quite positive, when judged by
the survey result. even though it leaves something to be desired. More
thoroughly planned survey could have been helpful to evaluate the
course. One point to consider when offering a similar course in the
future is to allow more time for one-on-one interaction and personal
feedback. Web board discussion could be a useful tool for this. If the
web board had been used not just for publishing the research products
but for exchanging opinions as well in this course, students and
teachers could have had more asynchronous communication chances and
shared opinions on the project results more actively.
   It was considered that learning with online or Internet materials helps
develop   learner   autonomy   (Chong,   2003).   However,   unlike   my
expectation, 75% (15 out of 20 students) marked on neutral about the
survey item if they could develop learner autonomy through this class.
One plausible reason for this result is that the students did not realize
that they could learn something about learning by themselves according
to the finding in an interview afterward. Students also expressed their
desire that they wanted to learn more varied kinds of web sites they
could use anytime by themselves. Teachers' evaluation and introduction

of various web sites would be appreciated by the students for their self-study. Survey on student types and learning styles will also better inform teachers as to project-based CALL instruction and its capability of drawing students' positive attitudes as Lee & Yang (2003) reported.

Another thing to be mentioned is the computer skill. In the survey many of the students (12 out of 20 students) marked on neutral for the question if they could acquire computer skills through the class activities. These days a lot of students are already good at computers, so they do not feel they learned something new about computer through this kind of class activities. It is desirable that teachers and program developers examine the students' needs about the kinds of computer skills before designing a class.

Though this study introduced the students' reaction to the course, investigating students' English level empirically throughout the course will be a valuable research task. Further investigation of the students' actual growth in their English could provide teachers with more confident evidences in adopting a project-based CALL class model.

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APPENDIX A
Presentation Evaluation Sheet

Content		Language		Style		Use of Visual Aid	Time	General	Total
organi-zation	logical ness	clari ty	pronunci ation	voice	eye contact	power point, etc.	time		
3	3	3	3	3	3	3	3	6	30

(score / student)

APPENDIX B

Survey Sheet on Internet English

Answer the questions by choosing and marking one of the numbers below.
5= I strongly agree   4= I agree   3= neutral   2= I disagree   1= I strongly disagree

<Project, Reading, Writing>
    1. Carrying out the project was effective for studying English.
    2. Internet provided authentic materials to carry out the project.
    3. Using the Internet to carry out the project was effective for reading and learning vocabulary.
    4. Using the Internet to carry out the project was effective for writing.
<Listening>
    5. Listening practice through the Internet was more effective than listening through other methods.
<Culture>
    6. Authentic materials on the Internet helped me understand other various cultures.
<Speaking>
    7. Giving presentation was effective for speaking.
<Computer skill>
    8. I could learn computer skills and knowledge through this course.
<Learner autonomy>
    9. I could develop autonomy through the class activities.
<General evaluation>
    10. Class activities increased my interest in studying English.

예시언어(Examples in): English
적용가능 언어(Applicable Languages): English
적용가능 수준(Applicable Levels): College/Higher

Eun-Mi Yang
Division of General Education
Hyundo University of Social Welfare
387 Sangsamri, Hyundo-myun, Chongwon-gun, Chungbuk 363-823, S. Korea

Tel: (043) 270-0141
Fax: (043) 270-0120
Email: emyang@kkot.ac.kr