

Web-based Cyber Instruction for EFL Learning

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Abstrac

The aim of this study is to examine the effects of web-based cyber instruction on EFL learning from the viewpoint of learners' perceptions and needs. Data was collected through a questionnaire survey that was carried out with 709 undergraduate students enrolled in three cyber English courses offered at N university during the second semester in 2004. The results of the study indicated that the learners exhibited a positive attitude towards web-based cyber instruction and considered it a proper educational method in the cyber age. However, the students perceived that web-based cyber instruction was not greatly satisfactory in terms of cultivating their English communicative competence or improving the language skills they needed. It was also found that cyber instruction was still teacher-dominant, lacking in interaction, which made the students passive recipients of information presented. In comparison with off-line instruction, cyber instruction was not particularly better in enhancing their motivation, interest or concentration on class. To be more effective, cyber instruction needs to be equipped not only with a large variety of contents and class activities, but also with more exposure to authentic language by native English speakers. The findings of the investigation yield some implications for the design and development of web-based cyber EFL programs.

Key words : EFL, Web-based cyber instruction, Cyber Learning Environments

1. Introduction

There have been a number of endeavors to develop more effective teaching methods since ESL/EFL pedagogy appeared. Thanks to the rapid development of computer technology, second / foreign language(L2) educators have attempted to explore the role that computer technology can play in the language learning process. With the advent of the cyber age, web-based cyber instruction has been increasingly considered as a pedagogical method by which one can create innovative language experiences for L2 learners (Lee, 1997).

Since the emergence of the Internet and the Web as an instructional means in the mid '90s, many educational institutions that have adopted these technologies in language education. Language teaching practitioners have become interested in the benefits of web-based instruction for its educational value, interactive support,

reduced costs, knowledge management, and so forth.

In recent years, cyber instruction has made its way into the curriculum of conventional educational institutions. An increasing number of conventional tertiary education institutions have introduced cyber English programs for the purpose of cultivating English communicative competences and enhancing language learning.

Although some research has been done on the use of specific Internet tools for L2 language learning (Dugan, Hubbard & Cline, 1994; Oliva & Pollastrini, 1995), the empirical research addressing various aspects of cyber instruction for language learning is still in its infancy. It would be then desirable to examine the effectiveness of web-based cyber instruction from the standpoint of learners' perceptions and needs in designing and developing more satisfying and effective online English pedagogy as Peterson (1998:349) notes, "an important factor influencing the design

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and development of a web-based EFL program is the requirement of meeting learner needs."

The research questions formulated based on the purpose of this study were as follows:

- 1) Do learners perceive cyber instruction to be effective for English learning?
- 2) Do learners benefit from cyber instruction in improving English skills they need?
- 3) How do learners evaluate cyber instruction as compared to offline instruction?
- 4) How much are learners satisfied with cyber instruction?
- 5) What are the learners' attitudes towards web-based cyber instruction?

2. Theoretical Background

2.1 Characteristics of Cyber Instruction

Web-based cyber instruction¹⁾ is a new paradigm of instructional system that utilizes a wide range of technologies such as computer, web, multimedia, information, and communication technologies, to create cyberspace in which teaching and learning can take place without temporal and spatial limits. Web-based cyber instruction has distinctive features: As compared to the traditional class, it can facilitate more various kinds of interaction between the teacher and the learner or among learners synchronously or asynchronously, enable learners to develop ideas, share information and construct new knowledge, and using hypermedia, provide learners with easy access to limitless integrated resources. In cyber instruction the roles of the teacher and the learner are redefined. For the learner, a more active attitude initiating self-directed learning is required, and for the teacher, the role of a facilitator or guide who can promote learning is needed (Jung & Choi, 1999).

On the other hand, cyber instruction has also some disadvantages. As cyber instruction takes place through the computer, learners who are unable to deal with the computer properly might

feel insecure. In addition, because of individual learning in cyberspace, the learner's sense of belonging may be less strong than in the traditional classroom. Besides, the learner might not be able to achieve positive outcomes if he is not actively engaged in interaction with the teacher or with other learners. Therefore, the teacher and the learner who participate in cyber instruction should be well aware of its characteristics and understand its potential for language learning to maximize outcomes from cyber learning environments.

2.2 Cyber Learning Environments

A number of studies have shown that web-based cyber instruction has great potential and positive effects on language learning (Khan, 1997; Relan & Gillani, 1997; Shotsberger, 1996). One of the positive effects of cyber instruction on language learning is that it can create meaningful learning environments that can be characterized as follows(Kramsch,1994): 1) Non-linear learning: Cyber instruction enables learners not only to approach the contents from various angles beyond the limits of the linearity paradigm, but also to enhance their cognitive abilities through non-linear learning as they may go through temporary stages in the learning process. 2) Context-bound learning: It allows learners to learn for various purposes in real contexts, and helps them make use of learning in other situations. 3) Recursive learning: It does not reinforce rote learning, but creates meaningful learning and makes it recursive that the learner can reinterpret, reorganize and restructure new information in connection with prior knowledge. 4) Constructivist learning: It provides the learner with opportunities for constructivist learning that knowledge can be constructed through interaction between the learner and outside world. 5) Learner-directed learning: It facilitates learner-directed learning by utilizing hyperlink function of the Internet that enables the learner to select the appropriate media such as text, graphic, sound, picture, image etc, for learning and to choose the content through an information search.

1) The term 'cyber instruction' is interchangeably used with virtual instruction, web-based instruction, online instruction or e-learning (Lim, 2001).

As empirical learning that the learner can actually use the target language in real situations is of the primary importance in English education, cyber instruction can make up for the shortcomings of traditional English instruction by providing learning environments in which the learner can opt for the language input and methods according to his needs and level. However, the advantage of the web that provides a dynamic learning environment could be a burden for the learner who is unable to understand the problem-solving task because the learner is required to search for information to solve the task by himself in cyberspace.

2.3 Effects of Cyber Instruction on English Learning

Cyber instruction has been used for all aspects of English learning: speaking, listening, reading, writing, grammar, vocabulary, pronunciation as well as culture learning. Some studies (Kim, 2001; Shin, 1999) summarized the characteristics of cyber instruction for English learning as follows:

- 1) Cyber instruction offers opportunities for real communication with native English speakers in virtual space;
- 2) It promotes the learner's interest, motivation and active attitude towards English learning;
- 3) It creates various kinds of interaction;
- 4) It enables the learner to construct the environment of individual learning or learner-directed learning;
- 5) It facilitates understanding and memorizing the contents by utilizing various multimedia resources; and
- 6) It provides much language input that is crucial for language learning.

In sum, since the web is the technical environment that has various possibilities, the effects can be varied according to the ways and purposes of its application. Various and limitless instructional resources the web provides can be useful only when used appropriately for English learning. Therefore, more endeavors are needed in designing and developing the contents of cyber English programs to maximize its potential.

3. Research Design

3.1 Participants

The participants of this study were 709 students who took the three cyber English courses English Conversation / TOEIC / English Writing -offered at N university during the second semester in 2004.

Table 1. Grades of Participants

Grade	No. of Participants(%)
Freshman	10 (1.4%)
Sophomore	128 (18.1%)
Junior	231 (32.6%)
Senior	340 (47.9%)
Total	709 (100%)

The participants consisted of 266 male and 443 female students ranging from first to fourth year. The number of participants in each grade and in each of the three cyber courses were shown in Table 1 and 2, respectively

Table 2. Participants in Three Cyber Courses

Course	No. of Participants(%)
English Conversation	265 (37.3%)
TOEIC	223 (31.5%)
English Writing	221 (31.2%)
Total	709 (100%)

3.2 Instruments

A two-part survey questionnaire consisting of 50 questions was used for this study. Its first part was comprised of 19 general questions seeking the participants' background information, experiences and perceptions of cyber instruction, and English learning and use, while the second part contained 31 five-band Likert-type (from 'Strongly Disagree' to 'Strongly Agree') questions examining their overall evaluation, satisfaction and attitudes towards cyber instruction.

The questionnaire was prepared in Korean and distributed at the end of the semester to the 890 students enrolled in the three cyber English

courses. Among 890 students, 709 responded to the questionnaire, and those responses were investigated for an analysis. Percentages of the 19 general questions and the mean and standard deviation of the 31 Likert-type questions were then obtained and displayed in tables.

4. Results and Discussion

4.1 Experiences with Cyber Instruction

The major motives that the majority of the students chose the cyber English class were its convenient nature that they could participate in class at their convenient time, and no attendance to school was required. Some students also showed their preference for the cyber class as it would allow them to study at their own pace.

Table 3. Experiences with Cyber Instruction

Category	No. of Participants(%)
Motives	
Study at a Convenient Time	355 (50.0%)
No Attendance to School	154 (21.7%)
Places of Studying	
Home	562 (79.3%)
Hours/week of Studying	
1-2 hours	350 (49.4%)
2-3 hours	195 (27.5%)
Useful Activities	
Peer Feedback	178 (25.1%)
Announcement	157 (22.1%)
Teacher's Feedback	143 (20.2%)

A large number of the students tended to take the class at home and spend one to three hours per week studying the cyber class. Among the class activities, the peer feedback given by other students was perceived to be most useful, and the teacher's announcements were ranked the second.

The main findings of experiences with cyber instruction were spread in Table 3.

4.2 English Learning and Use

The results showed that many students had learned English for about 7-8 years, and they considered their English proficiency levels to be of lower intermediate or elementary. More than half

of the participants had so far taken two or three cyber English courses on an average. At the time of the research, about a half of the students were not taking any English courses other than the present class. In addition, a large number of the students were found to use English only once a week or a month mainly for the purpose of listening practice or TOEIC / TOEFL test preparation. The results of the participants' English learning and use were shown in Table 4.

Table 4. Participants' English Learning and Use

Category	No. of Participants(%)
Total Period of English Learning	
7-8 years	199 (28.1%)
Less than 5 years	169 (23.8%)
English Proficiency Levels	
Lower Intermediate	271 (38.2%)
Elementary	204 (28.8%)
Cyber English Courses Taken so far	
Two	212 (29.9%)
Three	193 (27.2%)
No. of Other English Courses taken	
None	339 (47.8%)
One	203 (28.6%)
Frequency of English Use	
Once a week	284 (40.1%)
Once a month	240 (33.8%)
Purposes of English Use	
Listening practice	287 (40.5%)
TOEIC/TOEFL preparation	211 (29.8%)

4.3 Effectiveness of Cyber Instruction for Language Skills

(1) Needs for Language Skills

It is interesting to note that while the English skills the students needed to improve most were speaking and reading skills, cyber instruction was most effective for enhancing listening skills and grammar and vocabulary. From this viewpoint, cyber instruction was not practically beneficial for their learning purposes as it was least effective for speaking and reading skills. The students gave a reason for this noticeable phenomenon that the cyber class was still mostly teacher-dominant, lacking in interaction and they were just engaged in learning in a rather passive way with few opportunities to practice their speaking skills even in English Conversation class.

Table 5. Needs for Language Skills

Category	No. of Participants(%)
Participants' Most Needed Skills	
Speaking	277 (39.1%)
Reading	162 (22.9%)
English Skills Cyber English Class is Most Effective	
Listening	247 (34.9%)
Grammar & Vocabulary	201 (28.4%)
English Skills Cyber English Class is Least Effective	
Speaking	281 (39.6%)
Reading	169 (23.8%)

(2) Pros and Cons of Cyber Instruction

Repetitive study is important not only in language learning, but also in any learning, and the learners seemed to know this well. A great majority of the learners perceived the nature of repetitive study as one of the advantages of cyber instruction in language learning. That is, the cyber class enabled them to repeatedly take the lessons whenever they wanted.

Table 6. Pros and Cons of Cyber Instruction

Category	No. of Participants(%)
Pros of Cyber Instruction	
Repetitive listening to class	539 (76.1%)
Cons of Cyber Instruction	
Lack of interaction	183 (25.8%)
Teacher's one way instruction	172 (24.2%)
Short class-time	140 (19.7%)

On the other hand, a lack of interaction between the teacher and the students or among the students was listed as one of the major disadvantages of the cyber class in language learning. In addition, the teacher's one-way instruction was another shortcoming of cyber instruction in language learning. Pros and cons of cyber instruction in English learning were summarized in Table 6.

(3) Suggestions for Improvement

The learners perceived that the present cyber English programs offered at the university left a lot to be desired. They made some suggestions to make the cyber English courses more effective for language learning. They pointed out that cyber instruction needed more diverse class contents and more exposure to the authentic language by native speakers of English. In addition, some

participants expected more interaction and increase in class activities.

Table 7. Suggestions for Improvement

Suggestion	No. of Participants(%)
More interaction	142 (20.0%)
Increase in class activities	142 (20.0%)
Large variety of class contents	245 (34.6%)
More exposure to native English	161 (22.7%)
Extension of class-time	19 (2.7%)
Total	709 (100%)

4.4 Evaluation and Attitude towards Cyber English Instruction

(1) Management of Cyber Instruction

The results indicated that as a whole, the students were found to possess the ability to deal with the computer and the Internet to take the cyber class and to use Email for communication purposes. The students positively responded to class participation on a regular basis, whereas they were not assisted with immediate help when facing technical problems during the class.

Table 8. Evaluation and Attitudes to Cyber Instruction

Ability to deal with Computer/Internet	M	Std
Having proper computer sets for online class	3.34	1.08
Having easy access to computer/Internet for class	3.38	1.04
Being able to get information through the Internet	3.75	1.08
Using E-mail	3.81	1.09

Management of Cyber Class	M	Std
Listen to guidelines before starting	3.39	1.12
Utilize activity programs	3.22	.98
Receive help for technical problems	3.08	1.00

Class Participation	M	Std
Regularly participate in class	3.61	1.05
Repetitively study at my own pace	3.09	.95

Class Contents	M	Std
Class contents are useful	3.61	.94
Class materials are effective	3.52	.95
Multimedia are properly used	3.21	.96

Amount & Level of Contents	M	Std
Amount of contents is appropriate	3.43	.92
Level of contents is proper	3.18	.84
Level of contents is higher	3.62	.91

Satisfaction with Cyber Class	M	Std
Class objectives are achieved	3.20	.91
Contents are fully understood	3.05	.90
Class is overall satisfactory	3.13	.92

Effectiveness of Cyber Class	M	Std
Motivation for English learning increased	3.09	.81
Interest in English learning increased	3.06	.80
English skills are improved	2.96	.80
Cyber class facilitates English learning	3.07	.82
Cyber class is effective for practical English use	3.04	.82

While the amount of the content was considered to be appropriate, its level was rather higher than the students' understanding levels. Consequently, the students' responses were negative about whether the contents were fully understood.

Comparison with Off-line Class	M	Std
Higher interest than off-line	3.05	.92
More participation & efforts than off-line	3.02	.90
Higher concentration than off-line	2.95	.90
More helpful for self-directed study than off-line	3.11	.87
More effective for English learning than off-line	3.02	.94

Attitude towards Cyber Class	M	Std
Cyber instruction is the proper educational method in the Information-based society	3.56	.94
I will continue taking cyber English class	3.53	.95
It should be the major method for future English education	2.72	1.03

(2) Satisfaction with Cyber Instruction

The results showed that while the students expressed positive reactions to usefulness of the contents and the class materials, the degree of the students' satisfaction with cyber English instruction was comparatively low. Besides, in comparison with off-line instruction, the students disagreed that cyber English class was better or effective for boosting their interest, motivation, class participation and efforts they made for the learning. In particular, among the five questions in the category, concentration on class was ranked the lowest. One of the possible explanations to account for such negative perceptions might center on the nature of the cyber learning environment

in which the students' self-directed learning on their own initiative would be more required with no direct guidance or control of the teacher during the class.

(3) Attitudes towards Cyber Instruction

In evaluating the effectiveness of cyber instruction on facilitating English learning or aiding practical use of English, the students were not greatly positive, especially their responses to whether their English skills were improved was even negative. The students considered cyber instruction a proper educational method in the Information-based society, and they would continue to take cyber classes. They disagreed, however, that English should be mainly taught and learned through cyber instruction in future.

5. Conclusion

English education has witnessed a multitude of changes in its methods and modes according to the social and educational needs in the society. Many different approaches, methods and techniques that utilize various technological tools have been applied in the teaching practice. Most important in language education is to stimulate the students' interest and motivation for learning and to boost the dynamic engagement in the learning process. With the advent of the information era, web-based cyber instruction has emerged as one of the dominant methods of English pedagogy because of its convenient and distinctive nature. This study intended to investigate the effects of cyber instruction on English learning from the viewpoint of the learners' perceptions, needs and attitudes. On the basis on the findings, a number of conclusions can be drawn: Most of the students were found to possess the ability to deal with the computer and the Internet to take the cyber class and to use E-mail for communication purposes. Cyber instruction was perceived to be still teacher-dominant, lacking in interaction, which made the students passive recipients of information presented by the teacher or the

textbook. As a whole, the students considered the contents of cyber instruction rather difficult beyond their understanding levels. The students were not greatly satisfied with cyber instruction in terms of meeting their learning needs. They indicated cyber instruction was not highly useful in cultivating their communicative competence or improving the language skills they needed. While they needed to improve speaking skills, the cyber class was most effective for listening skills. In comparison with the off-line class, cyber instruction was neither particularly better in facilitating language learning, nor enhancing their motivation, interest or concentration on class. To be more effective, cyber instruction needs to be equipped not only with a large variety of class contents and activities, but also with more exposure to authentic language by native speakers of English. Finally, although the students considered cyber instruction a proper educational method in the cyber age, they opposed that English should be taught and learned through mostly cyber instruction in future.

The findings of this study yield some implications for the design and development of cyber EFL programs. In general, technology-based teaching emerged from advances in communication technology, not from innovative changes in pedagogy. Institutions that introduced cyber instruction tended to be based on their conventional pedagogical principles, that is, the authoritative knowledge of the instructor who shares information with passive students through the use of audiovisual aids. However, to maximize outcomes from the cyber environment for language learning, a shift in pedagogy is needed. Designs of effective online learning need to empower participants' engagement in the learning process and encourage collaboration. Online learning should not be limited to the mere transmission of information, but should be used to build relationships among learners.

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