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Graduate Students' Perspectives on Real-Time Videoconference Classes at a Cyber University*

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The purposes of this paper are to examine students' perspectives on real-time videoconference classes at an online graduate school, and to determine effective ways to conduct videoconference classes in order to supplement online courses. For these purposes, a questionnaire and an informal group interview were conducted. The participants in this study were 37 graduate students in the M.A. TESOL program at Cyber H University. Each student participated in at least six real-time videoconference classes over the course of a semester. The students responded positively in general. The participants indicated that they felt greatly inspired because of the sense of collective consciousness achieved by studying together in the videoconference classes. However, they also pointed out that technical difficulties, such as audio and video problems, should receive more attention, and that the discussion and feedback activities needed to be supplemented. The opinion was also expressed that if many people participate in the class, it might be desirable to divide the class into two groups, one of speakers and the other of observers. If the technical aspects were improved and good class management strategies were employed, videoconference classes could develop a high level of interaction and mitigate the limits of online courses.

**[videoconference classes/cyber university/online graduate courses/
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I. INTRODUCTION

Computers have become efficient tools for education, and online learning based on computers and the Internet has become more and more popular. Online classes have become incorporated into offline courses at universities, and the number of cyber universities providing online courses has been increasing. More and more students are choosing to take online courses to reap the benefit of learning using the Internet. Thus, advances in Internet technology challenge the traditional paradigms of education (Corbett, 2003; Curran, 2008; O'Dowd, 2007; Simonson, Smaldino, Albright & Zvacek, 2009; White, 2003; Wu, Yen & Marek, 2011).

There are many advantages to online education. First of all, online learning allows learners to study at their own pace and obtain necessary information at a time that is convenient to them. Second, online education creates a learner-centered and less stressful environment because the learning process depends on learners' styles, abilities and attitudes. Online learning also reduces the cost of education because a lot of students can take an online course together in cyberspace. Although there are many advantages to online learning, there are also some limitations. The lack of direct and spontaneous interaction between instructors and learners as well as among learners, may be one of the most serious drawbacks of online education (Palm, Brallier, Gilbert & Darrone, 2007; Rivera & Rice, 2002).

A variety of technologies can be used in online education to enhance the learning process and promote interaction. For example, synchronous technologies such as instant messaging and chat rooms, as well as asynchronous technologies such as e-mail, short message service (SMS), blogs and social networking sites including Facebook, enable learners and instructors to interact with each other even across international boundaries. Recently videoconferencing has also been used to support online courses by increasing direct synchronous interaction between instructors and learners and among learners themselves.

Videoconferencing is a synchronous form of technology that can link learners and instructors at the same time, anytime and anywhere, providing enriched interaction through textual, vocal, environmental and nonverbal cues, and instant feedback (Kupritz & Daniel, 1999; Patcha & Scales, 2005). Through the Internet streaming media infrastructure, learners in remote places are able to attend learning events such as lectures, take part in synchronous visual and aural interactions, and engage in text chatting. Videoconferencing can be one-to-one, one-to-many, or many-to-many. In the one-to-one setting one person is communicating with another, whereas in the one-to-many setting one person is talking to many people. In the many-to-many setting or multi-point connection, several parties are

involved in the conference, and everyone can see and hear everyone else. The recent videoconference technologies allow many-to-many communication.

Although real-time videoconference classes are in the spotlight as a form of media which promotes the mutual interaction of students to the same extent as face-to-face classes, their application in education has not yet reached a wide scope due to technical and cost-related problems. Furthermore, research on the implementation of videoconference classes in actual educational environments, especially in combination with online classes, has not yet been sufficiently conducted.

This paper focuses on real-time videoconference classes used as a part of online graduate courses at Cyber H University. The students' perspectives on videoconference classes incorporated into online courses will be examined through an in-depth questionnaire and a group interview in an informal setting. Furthermore, effective ways to conduct real-time videoconference classes in order to supplement online courses will be discussed. In other words, the roles, limitations, and ideal directions of videoconferencing as an aid to the teaching and learning in online graduate courses will be examined based on a questionnaire and an interview.

II. LITERATURE REVIEW

1. Videoconferencing as a CMC Tool

Computer-mediated communication (CMC) has been reported as a useful tool for promoting learners' language development (Beauvois, 1992; Blake, 2008, 2009; J. Han, 2004; Sullivan & Pratt, 1996). A large number of studies support the belief that videoconferencing is able to foster language learning as an effective CMC tool (S. Jung, 2010; H. G. Lee, 2006; H. J. Lee, 2011; S. Lee, 2010, 2011; M. Song & Ahrndt, 2010; Y. Wang, 2004, 2007). Moreover, some studies suggest that videoconferencing can be used to reduce anxiety in language learning contexts (Craig & J. Kim, 2010; Xiao, 2007).

J. Han (2004) compared the effectiveness of voice chat, text chat and videoconferencing involving 53 first-year female university students, and found that only videoconferencing enhanced oral communicative competence, and triggered the use of various communicative strategies such as meaning negotiation and turn-taking. Y. Wang (2007) proposed a set of criteria for evaluating videoconferencing-based tasks, and reported that videoconferencing with a text-based chatting tool was effective in improving participants' language proficiency. In that study, the participants also felt that the videoconferencing-supported mode of distance teaching and learning was a very rewarding experience.

S. Jung (2010) reported that videoconferencing enhanced students' meaning negotiation ability in English. During videoconference classes, it was observed that the students employed various kinds of negotiation signals, and the teachers also often used text-chat to negotiate meaning and provide feedback. M. Song and Ahrndt (2010) explored the effects of a joint course using videoconferencing incorporated into content-based college classrooms at three off-line universities in Korea, the U.S., and Canada. The undergraduate students from three universities discussed various culture-related topics through instant messaging and videoconferencing. M. Song and Ahrndt found that Korean students not only developed their English communication skills but also gained an understanding of new cultures and perspectives. H. Lee (2011) studied the process of intercultural communication through one-to-one videoconferencing in English education, and found that the students' intercultural communication skills steadily developed. The students' willingness to engage and their interest in intercultural communication have also been facilitated by videoconferencing. S. Lee (2011) investigated a videoconference English program as an alternative English program to promote students' English abilities in four community study centers with 41 students and 11 teachers. The results from observation, interviews, questionnaires, and pre and post test revealed that the program provided the students with authentic communication opportunities, increased students' motivation and satisfaction, and promoted their overall English proficiency.

Previous studies also revealed that videoconferencing might decrease the levels of stress and anxiety in language classes. Xiao (2007) compared Internet-based videoconferencing instruction with 10 native-nonnative dyads and traditional face-to-face instruction with 10 nonnative-nonnative dyads, and found that the Internet-based videoconferencing created a comfortable and non-threatening environment for second language (L2) learners. Craig and J. Kim (2010) examined the relationships between interview mode (videoconferencing vs. face-to-face), anxiety and performance with 40 Korean university students. The interview was a one-on-one form. The results demonstrated that although there was no significant difference in participants' performance between the two modes, there were lower levels of anxiety for the videoconferencing mode than for the face-to-face mode.

With recent developments in technology and simplification of equipment, videoconference classes have been on the rise, and much research on the effectiveness of videoconferencing as a CMC tool in L2 classrooms has been done. However, little has been researched concerning real-time videoconference classes used to support online courses.

2. Videoconferencing as a Supplementary Tool for Online Courses

As the use of computer technology is becoming an important long-term strategy in education, an increasing number of learners are receiving education via online courses. Although there are many advantages of online courses in terms of flexibility of time and place, and the content level of online courses is considered similar to that of courses involving face-to-face learning (Tallent-Runnels et al., 2006; Zen, 2008), insufficient synchronous interaction and collaboration are the major limitation of online education. In order to supplement the lack of direct interaction, videoconferencing has been introduced recently. Real-time videoconferencing seems to be an effective tool for enhancing extensive authentic interaction in online education (S. Jung, 2009; S. Jung & S. Cheon, 2007).

S. Jung and S. Cheon (2007) presented the effectiveness of an online English speaking program, *SpeakENG*, which consisted of video sessions and live videoconference sessions with American public school teachers for Korean speakers learning English at an online university. The responses from the participants in the program with one-to-one live talk sessions were very positive due to the fact that they were able to receive authentic language input and practice English with native speakers. According to S. Jung (2009), a majority of students who attended an online university believed one-to-one videoconferencing would enhance speaking fluency. In her study, the students also thought that videoconferencing could be used as an alternative to face-to-face interaction with native English speakers because videoconferencing provided non-verbal elements such as gestures and facial expressions of the participants.

Many previous studies on videoconferencing have focused on improving communication abilities in foreign languages and fostering intercultural awareness. However, research on videoconferencing as a part of a regular course at an online graduate school has not yet been conducted. The present study investigates online graduate students' perspectives on videoconferencing based on an in-depth questionnaire and informal group interview, and seeks to determine effective methods for conducting real-time videoconference classes.

III. METHODOLOGY

1. Participants

The questionnaire data were collected from 37 (9 male and 28 female) students who were enrolled in either two or three courses in the M.A. TESOL program at Cyber H

University in the spring semester of 2012. Since each course included three or four videoconference classes, the students had each taken part in at least six videoconference sessions by the time the questionnaire was administered. The ages of the participants ranged from 23 to 53, with 89% in their 30's or 40's (more specifically, two in their 20's, fifteen in their 30's, eighteen in their 40's, and two in their 50's). The majority of the participants (70%) were English instructors at public or private schools, or at private academies (seven at schools and twenty-one at private academies). The English proficiency level of each participant was either high intermediate or advanced, as determined previously during interviews conducted for admission to the graduate school. Among the 37 students, four students (one male and three female) voluntarily participated in a group interview in an informal setting after completing the questionnaire.

2. Description of Videoconference Classes

The three online graduate courses (Introduction to TESOL, Linguistics in TESOL, and Teaching English Listening and Speaking) were designed for present or future English instructors. The three courses consisted of nine or ten units of online classes, three or four videoconference classes, and two exams. The researcher of this study taught the Introduction to TESOL course. The lectures for each online course were delivered mainly in Korean, but around 30% of the lectures were given in English. Each course set different time slots for videoconference sessions throughout the semester. For example, in the Introduction to TESOL course there were three videoconference classes held during the second, thirteenth and fourteenth weeks of the term. For this course, the students were asked to read the relevant sections of the textbook in advance, and to post questions or opinions about these readings on the online board entitled "My Question" each week. The students were also required to post their opinions about given topics on the online discussion board entitled "Discussion Forum" in weeks 3, 5, 9, 11 and 13. The weekly schedule for this course is shown in Appendix A. Since the participants took two or three courses during that semester, they had participated in real-time videoconference classes six to ten times in total, with each session lasting 90-100 minutes. There were fifteen to twenty-five students in each videoconference class.

The program used for the videoconference system in this study is AccuMeet V3, software used for real-time multimedia business and educational purposes. This program provides various functions required for videoconferencing such as user management, reservation management, automatic program installation, text messaging and chatting. The videoconference system allowed up to 50 students at a time to engage in videoconference lectures and discussions. Since discussions in videoconference classes cannot be conducted effectively if there are too many students in a session, 25 students or less participated in

each videoconference session. Each participant needed to use a headset and webcam to participate in videoconferencing, and all the participants were asked to read the manual at the beginning of the semester. The students were also asked to check their computers before participating in each videoconference class with the help of a tutor or technician working at the help desk to make sure that all systems and equipment were functioning properly. When a technical problem arose during a videoconference class, the students were able to contact the tutor or technician immediately in order to solve the problem.

There were two different conference modes: document conference and video conference. The document conference mode allowed both a moderator and a speaker to upload various kinds of documents, audio/video files and programs, and to share links to websites. The moderator, who was either an instructor or a student, could also use the electronic board to write or draw lines and patterns such as circles, triangles or rectangles. All the participants were also able to use the chat window at the bottom of the screen to exchange instant text messages at any time during the conference.

Before each session, the students were informed of what they should prepare for the class. For example, for the Introduction to TESOL videoconference sessions, students had to upload their lesson plans and video clips of themselves teaching two weeks before videoconference classes began. They also reviewed other students' lesson plans and video clips, and prepared feedback on them. Thus, before attending the videoconference classes, all of the participating professors and students familiarized themselves with the lecture notes, presentation materials and video clips, and completed other necessary preparations.

In the video conference mode, the screen displayed live video feed of all the participants including the instructor, the students, and the tutor. This live video feed gave the instructor the ability to monitor attentiveness and facial expressions, and to tailor the lecture to the participants' needs. The instructor or one of the students served as the moderator of the conference. There were two kinds of speaking modes: free speaking and restricted speaking. In the free speaking mode, all participants could speak freely at the same time, whereas in the restricted speaking mode, only the moderator and one of the participants could speak. In the restricted mode, the moderator had the right to give a participant permission to speak by clicking the mouse, or by dragging the picture of the participant to the upper part of the screen.

In both document and video conference modes, the participants were able to use the chat window at the bottom of the screen to exchange instant text messages at any time during the videoconference classes. The students typically used the chat window when they had a technical problem or question, or when they wanted to share their ideas. Thus, the instructor, tutor or technical assistant was able to help the students resolve their problems and provide answers to their questions on the spot. All the videoconference sessions were recorded and uploaded to the Materials Board, so the students were able to review each

videoconference session as many times as they wanted. The picture to the left in Figure 1 shows a screenshot of the document conference mode from an Introduction to TESOL videoconference session in which the students are exchanging feedback while looking over another student's lesson plan. The picture to the right displays a screenshot of the video conference mode from the same course where all the students, the professor, and the tutor participated in a live discussion.

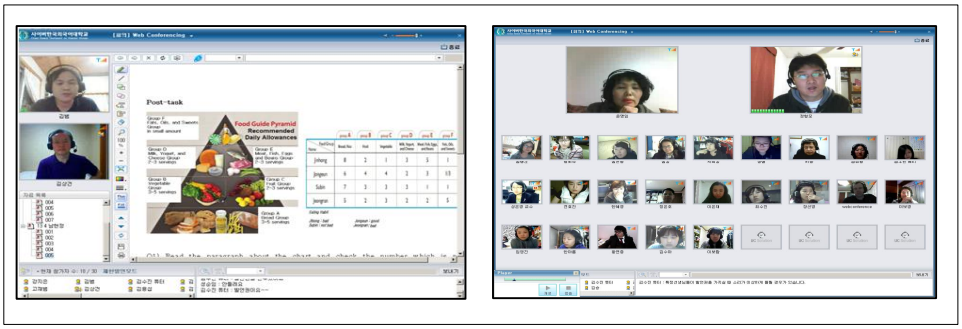

FIGURE 1 Screenshots of the Document Conference and the Video Conference

3. Data Collection and Analysis

The present study aims to examine participants' perspectives on videoconference classes as a component of regular online graduate courses. For this study mixed methods were used. Qualitative data were collected through open-ended questions in a questionnaire as well as through a group interview with four students in an informal setting. Along with the qualitative data, quantitative data were collected through multiple-choice questions in the questionnaire regarding student attitudes and satisfaction levels, content and management of videoconference classes, and technical and other issues.

The questionnaire was made by the researcher of this study and administered to students who were enrolled in either two or three online courses in the spring semester of 2012. A total of 37 students voluntarily completed the questionnaire at the end of the semester. The questionnaire is composed of three parts: 1) student attitudes and satisfaction levels, 2) content and management of videoconference classes, and 3) technical and other issues. The first part includes 6 multiple-choice questions, the second part includes 14 multiple-choice and 2 open-ended questions, and the third part consists of one multiple-choice question and 4 open-ended questions. Thus, the questionnaire consists of 27 items in total: 21 multiple-choice and 6 open-ended questions. Among the 21 multiple-choice questions 16 items were measured on a five-point scale: (1) Strongly Agree, (2) Agree, (3) Uncertain, (4) Disagree, and (5) Strongly Disagree (see Appendix B).

The informal group interview was conducted with four students who volunteered for the interview after the end of the semester, and lasted approximately ninety minutes. The interview contained three open-ended questions regarding how they felt about the videoconference classes, what aspects of videoconferencing were helpful to their studies, and what aspects should be improved in order to conduct videoconference classes more effectively. The interview data were transcribed and translated into English. The interview data are shown with the analyses of the relevant questionnaire responses in the following section.

IV. FINDINGS AND DISCUSSION

In the present study, students' perspectives on videoconference classes were examined in terms of three parts - student attitudes and satisfaction levels, content and management of videoconference classes, and technical and other issues. The students' responses to the questionnaire are shown in Tables 1 - 9.

1. Student Attitudes and Satisfaction Levels

Table 1 summarizes the percentage of responses to the statements regarding students' attitudes toward videoconferencing. The mean and the standard deviation are also reported.

TABLE 1
Student Attitudes

	1	2	3	4	5	M	SD
I participated actively.	56.7%	29.7%	13.5%	0%	0%	1.6	0.7
I was sufficiently prepared.	37.8%	32.4%	27.0%	2.7%	0%	1.9	0.9
I felt comfortable.	24.3%	37.8%	21.6%	10.8%	5.4%	2.4	1.1

* 1=Strongly Agree, 2=Agree, 3=Uncertain, 4=Disagree, 5=Strongly Disagree

The students' responses to the first part of the questionnaire indicated that many students participated in the videoconference classes actively (86.4%) and sufficiently prepared for their videoconference class presentations (70.2%). Also, more than half of the students felt comfortable during the videoconference classes (62.1%). In an open-ended question, some students indicated that they felt uncomfortable due to system-related technical problems. In addition, one student said that she felt nervous when she gave her presentation during the videoconference classes since many other students and the instructor were watching her

presentation. However, other students thought that the presentation through videoconferencing was less stressful than a presentation in a classroom. Also, some participants stated that although they felt uncomfortable and nervous in videoconference classes at first, they became familiar with the videoconferencing system quickly and looked forward to participating in the videoconference classes. Table 2 presents students' overall satisfaction with videoconference classes.

TABLE 2
Students' Overall Satisfaction

	1	2	3	4	5	M	SD
Overall, I was satisfied.	21.6%	48.6%	24.3%	2.7%	2.7%	2.2	0.9
I would like to use videoconferencing for teaching.	29.7%	54.0%	10.8%	2.7%	2.7%	1.9	0.9
Videoconference classes could be an alternative to face-to-face classes.	40.5%	32.4%	24.3%	2.7%	0%	1.9	0.9

The question regarding overall satisfaction showed that 70.2% of the students were satisfied with the videoconference classes. Also, 83.7% of students indicated that they wanted to use videoconferencing in their future English teaching. Furthermore, 72.9% of the students thought that videoconference classes could be an alternative to traditional face-to-face classes. Thus, in general, the students showed highly positive responses to their experiences with videoconferencing.

In the group interview, all the students also agreed that the videoconferencing was an essential part of their online courses. They said that genuine interaction which was often missing in online courses could be provided through real-time videoconference classes. However, one of the students pointed out that just seeing each other in videoconference classes could not promote interaction between instructors and students. He indicated that more efforts should be put into developing students' active engagement.

2. Content and Management of Videoconference Classes

The results in this section present the students' perspectives on the content and management of videoconference classes. Table 3 indicates the students' viewpoints on the videoconference class content.

TABLE 3
Content of Videoconference Class

	1	2	3	4	5	6	7
*Most helpful part	16.2%	59.4%	13.5%	2.7%	2.7%	0%	5.4%
**Aspects in need of improvement	59.4%	10.8%	8.1%	5.4%	16.2%		

*1=Students' presentation, 2=Professors' explanations & feedback, 3=Peer feedback, 4=Multimedia resources, 5=Written materials, 6=Chat window, 7=Other

**1=Discussion & feedback, 2=Lectures from professors, 3=Individual presentations, 4=Group presentations, 5=Other

About 60% of the students chose professors' explanations and feedback as the most helpful part of the videoconference classes. It seems that many students preferred the professors' explanations and feedback on student presentations to comments and feedback from fellow students. Student presentations and peer feedback were considered the second most helpful parts of videoconferencing (16.2% and 13.5%, respectively). In an open-ended question, some students responded that although physically they studied individually in different places, they did not feel lonely because they could see their professors and fellow students during the videoconference classes. They said that a sense of belonging was the most helpful part of videoconferencing. Furthermore, more than half of the students (59.4%) indicated that the aspect of discussion and feedback needed to be supplemented or strengthened in the future. The students' opinions about the professor and peer feedback during the videoconference classes are presented in Table 4.

TABLE 4
Feedback

	1	2	3	4	5	M	SD
Professor feedback was helpful.	43.2%	51.3%	5.4%	0%	0%	1.6	0.6
Peer feedback was helpful.	32.4%	45.9%	18.9%	2.7%	0%	1.9	0.8
The level of feedback was sufficient.	18.9%	37.8%	37.8%	5.4%	0%	2.3	0.8

Most of the students found the feedback from their professors and peers very helpful (94.5% and 78.3%, respectively). However, fewer students thought the level of feedback from professors and peers was sufficient (56.7%). In an open-ended question, many students indicated that interactivity through discussion and feedback should receive more focus. Thus, it might be helpful to give all the participants including professors and students more time to prepare for discussion and feedback before a videoconference class begins. It seems that adequate preparation is a necessary precursor to lively discussion in

videoconference classes. Furthermore, some students mentioned that since videoconferencing required collaboration among the participants, more positive attitudes toward other participants was necessary. Thus, it was suggested that more constructive critiques or feedback should be given in response to the work of others, and all the participants should conform to the etiquette of cyberspace. The students' responses regarding the management of videoconference classes are shown in Table 5.

TABLE 5
Management of Videoconference Classes

	1	2	3	4	5	M	SD
Helpful for exchanging information	37.8%	40.5%	21.6%	0%	0%	1.8	0.8
Efficiently conducted	16.2%	51.3%	24.3%	5.4%	2.7%	2.3	0.9
Appropriate presentation of multimedia materials	18.9%	56.7%	24.3%	0%	0%	2.1	0.7
Helpful for curricular studies	37.8%	48.6%	13.5%	0%	0%	1.8	0.7

Many students found that information exchange was helpful (78.3%), and that presentation of multimedia materials was appropriate (75.6%). They also indicated that the content of the videoconference classes was helpful for their curricular studies (86.4%). However, fewer students indicated that videoconference classes were conducted efficiently (67.5%). In response to an open-ended question, some students mentioned that more efficient time management was needed during videoconference classes.

In the interview, a student also said that instructors should put more effort into the management of videoconference classes in order to induce students' active participation. Another student mentioned that videoconference classes were effectively conducted when specific directions for preparation were given in advance and the students had enough time for preparation. For example, the students had enough time to prepare feedback on other students' lesson plans and teaching videos in the Introduction to TESOL course because all the materials were uploaded onto a website two weeks before the videoconference classes began. The students were able to learn a lot through other students' work and feedback. Another student also pointed out that the delivering of lectures and having the Q & A time just before exams were extremely helpful for the Linguistics in TESOL course. The students' responses regarding the proportion of online and videoconference classes and allotted time for each videoconference class are shown in Tables 6 and 7.

TABLE 6
Proportion and Time of Videoconference Classes

	1	2	3	4	5	M	SD
Appropriateness of proportion of online and video classes	21.6%	40.5%	32.4%	5.4%	0%	2.2	0.9
Appropriateness of allotted time for each class	13.5%	54.0%	29.7%	2.7%	0%	2.2	0.7

As previously mentioned, videoconference sessions were held three or four times for each course during the semester, and more than half of the students felt that the proportion of online classes to videoconference classes was appropriate (62.1%). Furthermore, a similar percentage of the students thought that the allotted time for each videoconference session was also appropriate (67.5%). The responses regarding the options of the proportion of online and videoconference classes, and the options of allotted time for each videoconference class are illustrated in Table 7.

TABLE 7
Options of Proportion and Time

	1	2	3
Options of proportion	35.1%	5.4%	59.4%
Options of amount of time	29.7%	5.4%	64.8%

*1=should be increased, 2=should be decreased, 3=keep the present level

Table 7 shows that although many students wanted to keep the present proportion of online and videoconference classes, 35% of the students felt that the frequency of videoconference classes should be increased. Also, about 30% of the students stated that the amount of time allotted for each videoconference session should be increased. In general, the students wanted more videoconference sessions and longer sessions. It seems that the frequency of videoconference sessions, and amount of time for each videoconference session should be carefully determined for each online course based on the content of the course.

TABLE 8
Number of Participants for Each Videoconference Class

	1 (5-10)	2 (11-15)	3 (16-20)	4 (21-25)	5 (26-30)	6 (Over30)
Number of participants for each session	37.8%	51.3%	10.8%	0%	0%	0%

More than half of the students mentioned that a total of 11-15 participants was appropriate for each videoconference session (51.3%). Fewer students responded that 5-10 participants would be most suitable for each videoconference class (37.8%). Considering that there were up to 25 students for each session in the present study, decreasing the number of students for each session should be considered.

3. Technical and Other Issues in Videoconference Classes

Students' opinions on the technical issues in videoconference classes are presented in Table 9.

TABLE 9
Technical Issues

	1	2	3	4	5	M	SD
I did not experience any problems with the system.	5.4%	16.2%	40.5%	21.6%	16.2%	3.3	1.1

Only 21.6% of the students answered that they did not experience any problems with the system. It seems that more effort should be made in improving the system. In response to an open-ended question, many students pointed out that the echoes due to individual microphones or computers sometimes interrupted the flow of videoconference classes. Also, they couldn't speak freely in the free speaking mode because of the noises from individual microphones.

In the interview, all four students mentioned the technical problems interrupting the flow of videoconference classes. One student pointed out that in the document conference mode, HWP and PPT files could sometimes not be uploaded. Another student expressed that instructors needed to become more accustomed to operating all of the functions of the system for saving time, and that every student should check their PC before each videoconference class. In order to make discussions more effective and lively, system-related aspects should be addressed.

In an open-ended question in the questionnaire, the participants were asked what they thought needed to be improved about the videoconference classes. Some students mentioned that although the chat window was necessary and useful during the classes, it was not always used properly. The following is a response from one student.

> During the lesson, there was a tendency for students to use the chat window as a space for individual chitchat which had no connection to the course content. We need to try using this space for feedback and the exchange of information instead.

In the interview, the students pointed out some of the problems of videoconference classes. A student also proposed a way to use the chat window more effectively. The following is an interview excerpt from the student.

> Although it was shown that some students did not utilize the chat window properly, the chat window could be an excellent teaching tool. For example, when the instructor asks a question to many students, if the students answered together at the same time, it would be noisy. Instead of speaking out their answers, every student could write their thoughts in the chat window. In this way, the instructor would be able to see all the answers quickly and give feedback on each answer.

In the questionnaire, the students also mentioned that they wanted to have a chance to work together with other students for team or group projects. A similar sentiment was expressed in the interview, too. The students commented that team or group projects should be added to increase the effectiveness of videoconference classes. They said that in the Teaching English Listening and Speaking course, it was helpful for a group of students to conduct their own videoconference sessions to discuss a variety of things for their group project.

Furthermore, in the questionnaire, some students stated that the number of students per session should be reduced to around ten in order to foster more active and lively discussions. Some students mentioned that if they prepared presentation materials and feedback more sufficiently in advance, they would benefit more from the videoconference classes. Proper and sufficient planning is of key importance to the efficient management of videoconference classes. In addition, some students wanted to talk with other students who were enrolled in the same course but participated in a separate session of videoconferencing. The following is a response from one student on the questionnaire.

> There weren't any opportunities to meet or exchange ideas with students from other videoconference sessions. It would be nice if the videoconference classes were divided into two groups, one of participants and the other of observers. In this way, students could participate in their own section actively, and in the other section merely as passive observers. If this were done, then everyone could familiarize themselves with all of the students in the program and hear what goes on in the other sections, and this would be helpful to everyone.

The rest of the students' opinions expressed in response to open-ended questions in the questionnaire are as follows. When they were asked which language skill could improve most through videoconference classes, many of them responded that speaking would

improve most because videoconference classes could involve communicative activities easily. However, some students claimed that videoconferencing could also help improve writing and reading skills by using the document conference mode effectively. If students uploaded their writing, they would be able to get immediate feedback from instructors or peers in a non-threatening environment.

The students also mentioned that they would recommend videoconference classes to other people working in schools or private institutes. Other students indicated that the videoconference classes would be immensely helpful for reviewing the materials presented in online classes and for providing emotional connectedness and motivation for the students at online graduate school.

Moreover, some of the students arranged regular meetings at set times every week outside of scheduled class times to engage in autonomous study through videoconferencing. The students who wanted to arrange a videoconference session filled out and submitted the reservation form including details of the videoconference classes such as time, the number of participants and purposes in advance. Many students participated in one or two regular videoconference meetings a week even during vacation for group study and discussion. The board members of the student council also often used videoconference meetings to deal with various issues related to student activities whenever they arose. Therefore, videoconferencing has the potential to be an effective tool for cooperative learning and study as well as for autonomous student activities.

V. CONCLUSION AND SUGGESTIONS

The present study was undertaken in an attempt to show students' perspectives on real-time videoconference classes used as a part of online courses, and to seek more effective ways to conduct videoconference classes. With these aims in mind, an in-depth questionnaire and an informal group interview were employed. Overall, the findings of this study indicate that videoconferencing can be an efficient and effective method for online courses. One of the major problems with online courses is the lack of real-time, genuine interaction, but videoconferencing can supplement online courses by providing active interaction between instructors and students at a convenient time and place. Students can also get instant feedback on their work from their instructors or peers. Thus, the use of videoconferencing as a part of online courses helps students overcome feelings of isolation and fosters a sense of social connection with instructors and peers.

Through the questionnaire, it is shown that student attitudes toward videoconference classes are positive, and the students are generally satisfied with videoconference classes. Also, many students are of the opinion that although professors' explanations and feedback

are the most helpful part of the videoconference classes, the aspect of discussion and feedback needs to be strengthened in the future. It is stated that it would be better if professors and students spent more time to prepare for discussion and feedback in advance. In addition, the results of this study reveal that the students want more videoconference sessions in each course, and they want longer sessions.

Furthermore, it was observed that videoconference classes could facilitate voluntary meetings and small group activities. A group of students can participate in videoconferencing whenever they want to discuss group projects or do collaborative research. Also, instructors are able to view how actively each member of a group participates in the project if each discussion session is recorded and uploaded to the online classrooms. Some of the students in the present study voluntarily participated in extra videoconference sessions during the semester and even over the vacation in order to discuss research topics and share their teaching experiences. In addition, the members of the student council often held meetings using the videoconferencing system to deal with various issues related to student activities. Therefore, videoconferencing can enhance cooperative learning as well as autonomous study and activities.

However, there are some issues that need to be carefully addressed in order to improve the quality of videoconference classes. Many students stated that although the chat window was necessary for the sharing of ideas and the discussion of problems, there were some negative aspects to it as well. The chat window should not be used for personal chatting irrelevant to the content of classes. If the chat window were only used for discussing the materials related to the class, the positive features of the chat window could be utilized for the benefit of the students. Also, the chat window could be used for writing answers and giving instant individual feedback.

Additionally, more effort should be put into solving system-related technical problems. Also, planning is of key importance to the efficient management of videoconference classes. Furthermore, some students wanted to take part in every videoconference session of a course. If there were many participants in a videoconference class, it might be desirable to divide the participants into two groups, one of speakers and the other of observers. The observers are not able to participate in the discussion unless they get permission from the moderator. In this way, all the students who enroll in a course could familiarize themselves with all of the other students and be able to know what goes on in every videoconference session.

Moreover, in response to an open-ended question, some students mentioned that all the participants should conform to etiquette during videoconference classes. For example, if a participant behaved improperly, gave an offensive critique on another participant's work, or posted impolite messages on the chat window, collaboration and interactivity among the participants could not be expected. Since collaboration and interactivity are critically

important in videoconferencing, it might helpful to make a set of rules for proper communication and behavior in videoconference classes. If a participant were too talkative, it might also be useful to set a 10-minute rule, limiting presentations or talking to no more than 10 minutes per person. The 10-minute rule could be applied to instructors, too. If a lecture lasted over 10 minutes, students could get bored and fall into a passive viewing mode. Thus, activities or discussions involving the students should be inserted even during the lecture. If good strategies were used in class management in order to develop a high level of interaction and collaboration, videoconference classes could serve as an effective supplement to online courses.

It is also believed that efficient administration of videoconference classes will be of importance to the forthcoming 'ASEAN Cyber University.' If this project, which includes Korea as well as participating countries such as Cambodia, Laos, Myanmar and Vietnam, were to feature not only shared online lectures, but also real-time videoconference classes in which students of various countries could participate in discussions together, then the effectiveness of courses could be greatly increased. As shown in previous studies, videoconferencing can be an efficient tool for understanding other cultures.

Future studies might consider the effectiveness of videoconferencing in online courses, and in doing so, one possible research method would be to compare two groups over the course of a semester - one group using only online content, and the other group using online content along with videoconference sessions. In addition, since interaction is the key component of videoconferencing, more research should be done in order to take better advantage of interactivity and collaboration in videoconference classes. Moreover, specific instructional strategies regarding using meaningful visual aids, maintaining eye contact, and utilizing interactive techniques should be developed to accommodate the various learning styles of students and to maximize the success of videoconferencing-based education.

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APPENDIX A

Weekly Schedule for Introduction to TESOL

Week	Online Lecture	Discussion Forum (Online Board)	Assignment	My Question (Online Board)	Real-time Video-conference	Exam	Presentation
1	V						
2					V		
3	V	V		V			
4	V			V			
5	V	V		V			
6	V			V			
7	V						
8						V (Mid-term)	

9	V	V		V			
10	V		Lesson plan (1st draft)	V			
11	V	V		V			
12	V			V			
13		V			V		V
14					V		V
15			Lesson plan (final draft)				

APPENDIX B

Questionnaire

This questionnaire is about real-time videoconference classes. We hope that you will express all of your thoughts and opinions regarding the real-time videoconference classes you attended this semester.

Part 1 Student Attitudes and Satisfaction (6 items)

1. I participated in videoconference classes actively and positively.
① Strongly agree ② Agree ③ Uncertain ④ Disagree ⑤ Strongly disagree

2. I sufficiently prepared for my videoconference class presentations.
① Strongly agree ② Agree ③ Uncertain ④ Disagree ⑤ Strongly disagree

3. I did not feel bored or uncomfortable during the videoconference classes.
① Strongly agree ② Agree ③ Uncertain ④ Disagree ⑤ Strongly disagree

4. Overall, I was satisfied with the videoconference classes.
① Strongly agree ② Agree ③ Uncertain ④ Disagree ⑤ Strongly disagree

5. If provided with a system, I would like to use video conference classes to teach English in the future.
① Strongly agree ② Agree ③ Uncertain ④ Disagree ⑤ Strongly disagree

6. Videoconference classes could be an alternative to face-to-face classes.
① Strongly agree ② Agree ③ Uncertain ④ Disagree ⑤ Strongly disagree

Part 2 Content and Management of Videoconference Classes (16 items)

7. What was the most helpful part of the videoconference classes?
① Student presentations ② Professors' explanations and feedback
③ Peer feedback ④ Multimedia resources
⑤ Written materials ⑥ Chat window ⑦ Other

8. If you have selected “Other” from the list above, please provide an explanation.

9. Which aspect of video conference classes do you think should be supplemented in the future?
① Discussion & feedback ② Lectures from professors
③ Individual presentations ④ Group presentations ⑤ Other

10. If you have selected “Other” from the list above, please provide an explanation.

11. I found professors' feedback during the videoconference classes helpful.
① Strongly agree ② Agree ③ Uncertain ④ Disagree ⑤ Strongly disagree

12. I found peer feedback during the videoconference classes helpful.
① Strongly agree ② Agree ③ Uncertain ④ Disagree ⑤ Strongly disagree

13. I found the level of feedback given during the videoconference classes to be sufficient.
① Strongly agree ② Agree ③ Uncertain ④ Disagree ⑤ Strongly disagree

14. I found it helpful to exchange information and opinions during videoconference classes.
① Strongly agree ② Agree ③ Uncertain ④ Disagree ⑤ Strongly disagree

15. Videoconference classes were conducted efficiently.
① Strongly agree ② Agree ③ Uncertain ④ Disagree ⑤ Strongly disagree

16. An appropriate presentation of multimedia materials (audio, video, web resources, etc.) was accomplished during videoconference classes.
① Strongly agree ② Agree ③ Uncertain ④ Disagree ⑤ Strongly disagree

17. I found the content of the videoconference classes helpful to my curricular studies.
① Strongly agree ② Agree ③ Uncertain ④ Disagree ⑤ Strongly disagree

18. The proportion of online classes and videoconference classes was appropriate.
① Strongly agree ② Agree ③ Uncertain ④ Disagree ⑤ Strongly disagree

19. If the proportion was not appropriate, please circle one of the following options.
① The total number of video classes per semester should be increased.
② The total number of video classes per semester should be decreased.

20. The amount of time allotted for each video class was appropriate.
① Strongly agree ② Agree ③ Uncertain ④ Disagree ⑤ Strongly disagree

21. If the amount of time was not appropriate, please circle one of the following options.
① The amount of time allotted for each video class should be increased.
② The amount of time allotted for each video class should be decreased.

22. What do you think is the appropriate number of participants for each videoconference class?
① 5-10 ② 11-15 ③ 16-20 ④ 21-25 ⑤ 26-30 ⑥ Over 30

Part 3 Technical and Other Issues (5 items)

23. I did not experience any problems with the system during videoconference classes.
① Strongly agree ② Agree ③ Uncertain ④ Disagree ⑤ Strongly disagree

24. For which aspect of language ability do you think video conference classes are the most helpful in developing (listening, speaking, etc)? Why?

25. What was the best thing about real-time videoconference classes?

26. What do you think needs to be improved about real-time videoconference classes?

27. If you have any other ideas, opinions or suggestions regarding effective real-time videoconference classes, please feel free to write them here.

Examples in: English
Applicable Languages: English
Applicable Levels: Tertiary

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