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EDDL 5101
Education Technology in the Curriculum

ONLINE AND DISTANCE EDUCATION

CY-ICER2012

Students' perceptions of video-conferencing in the classrooms in higher education

Duygu Candarli^a*, H. Gulru Yuksel^b^a*Yildiz Technical University, Istanbul, 34210, Turkey*^b*Yildiz Technical University, Istanbul, 34210, Turkey*

Abstract

Videoconferencing technology is now considered as an advantageous way to connect with people anywhere in the world. Literature has indicated that it improves learning by meeting people that were previously inaccessible due to several problems such as time and financial constraints (Dogget, 2008; Jian-Xiang, 1998; Martin, 2005). Despite its benefits, its success depends on various factors like tutors, students, and their attitudes to educational technology. This study aims to find out students' perceptions of video-conferencing in higher education. Within the framework of this study, the second and third year students from English Language Teaching Department at Yildiz Technical University attended a videoconferencing class delivered by a native speaker of English related to their field for about thirty minutes. Adapted from Ashley's study (2010), pre-session and post-session surveys which included both short-answer and likert-scale type of questions were used. The results indicated that students tend to have a negative attitude towards both using video-conferencing in the class themselves and having videoconferencing in their classes at the university. The study is of vital importance as it can reveal how prospective English teachers will deal with technology in their own classes in the future.

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Keywords: *Videoconferencing, attitudes, perception, live lecture.*

1. Introduction

With the advent of information technologies, distance education has become an essential complement to conventional lectures. Distance education enables students to take courses that are not available at their own educational institutions regardless of their location. Moreover, it can be a great asset in enhancing the quality of education as “ distance learning is a means of creating educational unification; connecting people who may be physically, socially, and/or culturally distant from each other, but who are unified in active learning communities by mastery of a shared body of knowledge and common educational goals and aspirations.” (Derlin & Erazo, 1996, p. 1)

Videoconferencing is just one of the technological systems that can be used in distance education. Videoconferencing is a synchronous model for interactive voice, video and data transfer between two or more groups/people (Wiesemas & Wang, 2010). Videoconferencing is not a new technology itself as it has been used since 1968. However, it has not been used extensively as an educational tool, and very few studies have examined

*Duygu Candarli. Tel.: +090-212-3834812

E-mail address: candarli@yildiz.edu.tr

its efficiency and students' attitudes towards it as an educational tool in Turkish education context. The effectiveness of videoconferencing as an educational tool depends on many factors, such as contextual, institutional and the attitudes of students and teachers. Schrum suggests that "It is important to begin by accepting that distance learning is an effective and appropriate manner in which to deliver instruction" (as cited in Fillion, Limayem & Bouchard, 2006, p.3). Therefore, this study attempts to find out students' perceptions of videoconferencing in higher education to see whether it is an effective learning tool for university students which will be teachers of English in the future.

2. Literature Review

Using videoconferencing can be conceptualised within the framework of sociocultural theory (Wiesemes & Wang, 2010). "Social constructivism provides a theoretical approach to learning in which students construct their own knowledge as a result of interacting with their environment and of mediating their understanding through meaningful cultural and social contexts contained within it" (Coyle, 2004, p. 6). Within the framework socio-cultural theory, videoconferencing can offer students to experience and analyse sociocultural learning and teaching interactions.

The literature indicates that video conferencing has been used increasingly for initial teacher education in higher education and for other students at different levels (see for example, Armstrong-Stassen, Landstrom & Lumpkin, 2006; Coyle, 2004; Doggett, 2008; Gillies, 2008; Karal, Çebi & Turgut, 2011; Martin, 2005; Wiesemes & Wang, 2010)

Several studies have examined students' attitudes towards videoconferencing in the classrooms. Although students predominantly think that videoconferencing has certain benefits, such as increasing motivation, interaction, novelty and improvements in communication skills, not all students are comfortable with the new technology, which may be attributable to different learning styles, strategies and unfamiliarity with new technological tools. The potential disadvantages of videoconferencing technology are difficulty in sustaining the interest of the learners, lack of training and guidance for teachers and/or students (Martin, 2005).

In Armstrong-Stassen, Landstrom & Lumpkin's (2006) study that focused on students' perceptions about videoconferencing, it was found out that students had less favourable attitudes towards videoconferencing at the end of the semester than at the beginning of the semester, which may stem from the inexperience of students and teachers with the technology. Also, they argued that female students were less positive about videoconferencing than male students at the end of the semester, which may be attributable to the so-called "technological gender gap" (Armstrong-Stassen, Landstrom & Lumpkin, 2006). Nevertheless, this gender difference can disappear if they have the same computer use experience in their daily life.

Dogget (2008) found out that over 80% of the students responded favourably to the videoconferencing. However, 80% of the students stated that they would have been more comfortable in a conventional classroom setting. Additionally, videoconferencing was found to have no significant effect on students' achievement in the course. Likewise, Gillies (2008) focused on the opinions of students that took videoconferencing classes in the teacher training context which is similar to the context of this study. In the interviews, students raised some issues regarding technical problems, lack of their engagement and training for students and teachers. However, they also stated that videoconferencing can have a great potential for teacher education and interaction with the teacher.

To the knowledge of the authors, there is only one experimental and longitudinal study that investigated the students' perceptions of videoconferencing in Turkish educational context. The study was conducted in Karadeniz Technical University, and the lecturer was in Ankara while students were in Trabzon. The study concluded that the students' negative perspectives began to turn into more positive ones towards the end of the conference. The students' interviews revealed that five main factors that were technical problems, the teacher, environment, course and distance caused a change in students' perceptions (Karal, Çebi & Turgut, 2011). Therefore, this study will give further insight into students' perceptions of videoconferencing in the classroom from the perspective of students in English language teacher education programme. The study will attempt to answer these two following questions:

- 1) What are the perceptions of ELT students regarding the use of videoconferencing in the classroom?

2) Is there any difference in the opinions of students about videoconferencing before and after taking a videoconference-based lecture?

3. Methodology

3.1. Participants

The participants of the study are 36 students who study English Language Teaching at Yildiz Technical University. 24 female and 12 male students who were in their second and third year at the department, participated in the study. Only 2 of the students have participated in a videoconference-based lecture prior to the live lecture at their own department.

3.2. Data Collection

The video-conference based lecture was delivered by a native speaker of English who lived in Spain via Skype. The topic of the live lecture was developing personal learning network for English teachers. The live lecture took about 45 minutes including the question and answer session. The student pre-session questionnaire was distributed to the students before the session so as to identify their basic demographic information and their expectations before the session. The student post-session questionnaire was implemented after the live lecture to find out their perceptions of videoconferencing and to learn whether the session met their expectations or not. The questionnaires were adapted from the ones in Ashley's study (2010) in accordance with our research questions, objectives and content. The questions were based on instrument items that were previously used in videoconferencing studies in the literature (Ashley, 2010). The 37-item post survey questionnaire includes questions about expectations, perceptions of perceived speaker personality traits, presentation content and effectiveness, technology, session objectives in a likert-scale format. Additional open-ended questions consist of items regarding what they liked best and least about the session, how they described the session in one word, whether they could use videoconferencing to benefit their students and share other issues and suggestions about the experience, which added a qualitative nature to this study.

3.3. Data Analysis

The likert-scale questionnaire items are analysed by using SPSS 20 software whereas open-ended items were analysed in NVivo 9 to identify recurring patterns and themes.

4. Findings

In the pre-questionnaire, majority of the participants stated that they had positive expectations of a video-conference based lecture. In terms of the category of teaching presentation with regard to the content and effectiveness, most of the students responded favourably to the items related to this category. For instance, 64% of the students agreed or strongly agreed that the video-conference based lecture was a worthwhile educational experience for them. However, as for taking more online sessions like this, only 58% of the students would like to have video-conferencing sessions in their classes in the future. In the second category related to the speaker's interaction and competency, 70% of the students thought that the speaker interacted well with the students. Similarly, online interaction was mentioned as one of the advantages of the videoconferencing because students liked the interactive nature of the videoconferencing as student 1 said: "Interacting with a native speaker is the best thing. I think that kind of experience motivated me for my profession." However, only two students asked the speaker questions in the question and answer session, which suggests that the students tend to avoid interacting with the speaker no matter how we encouraged them to share their opinions with the class and the speaker. This may stem from various factors, such as students' motivation, interests and personal characteristics. For example, student 26 stated: "Prior experience is important. I wasn't relaxed enough to talk to the guest speaker." This remark indicates that if we continue to have videoconferencing sessions, it is highly likely that the interactivity will increase in the sessions. In another category concerning the session objectives, the participants have very positive attitudes

towards this issue in that 70 % of the students felt that they learned something important during the session. Also, almost all of the students believe that videoconferencing has one or more benefits for education. The main benefits were sharing ideas, learning new information, benefiting from experts, feeling relaxed and creating a new learning opportunity and environment that they wouldn't normally have at their university as student 24 said: "We can't have the opportunity to participate a lecture of, so a videoconferencing created an opportunity for this." Feeling relaxed was another important theme since the majority of the participants said that "they felt much more relaxed as it was a virtual lecture". Furthermore, over 75% of the students described their videoconferencing session experience with positive words, such as "interesting, useful, beneficial, incredible, enjoyable, good". There are eight students that associate their videoconferencing experience with negative words, such as "unnecessary, boring, pointless." Although the number of male and female participants does not allow us to do statistical analysis, female students appear to be more negative about the use of videoconferencing in the class than male students as seven participants out of those eight students that associate their experience with negative words are female. When their perceptions of videoconferencing before and after a video-conferenced based lecture are compared, there is no significant difference between their attitudes towards videoconferencing although the opinions tend to be slightly more negative after the session, which may be attributable to the topic of the session as a few students stated they weren't interested in the topic. The other factor might be technological issues as some students complained about the sound quality, headphones and connection problems. The paired samples test indicate that students thought that they learned something important in their field via videoconferencing before and after the session ($t=1.281$, $p=0.28$). There is no significant difference in terms of this item.

As the students will be prospective English language teachers in the near future, their acceptance of technology is crucial for their teaching practices in the future. Therefore, they were asked whether they would use videoconferencing in their classes if they had the chance. 67% of the students said they would use it in their own classes in order to motivate the learners, which is promising for the future of educational technology use. However, other 8 students stated they would never use it, which indicates that students appear to be at the two ends of the continuum towards using videoconferencing as an educational tool. This may stem from their previous experiences in educational technology or their computer abilities.

5. Discussion and Conclusion

The students predominantly have positive attitudes towards videoconferencing, which is in line with other studies (Martin, 2005; Dogget, 2008). A slight change in their perceptions of videoconferencing session occurred due to technological problems and the content, which is a parallel finding to Karal, Çebi and Turgut's study (2011). The slight change after the lecture is slightly negative which is a consistent finding with Armstrong-Stassen, Landstrom & Lumpkin's (2006) research results. In addition, the tendency of female students' negative perceptions of videoconferencing was a similar result to Armstrong-Stassen, Landstrom & Lumpkin's study (2006). Nevertheless, in contrast to Gillis's study (2008), the participants of this study were more relaxed and felt that it was like a real classroom. Majority of the participants believe they will use videoconferencing in their classes when they become teachers. Similarly, most of them would like us to organise more videoconferencing sessions like this. Although the results of the study cannot be generalized to all the ELT students in Turkey due to the small sample, it gives us useful insights into the place of videoconferencing in future classes in Turkish education context and prospective teachers' acceptance of it as an educational tool. The perceptions of students might turn into being more positive rather than negative if the videoconferencing session could have been organized at frequent intervals on a longitudinal basis. Moreover, those factors that are technological problems and topic of the lecture which are likely to cause negative perceptions should be minimised by asking students' opinions on the topic, using new technological systems and introducing the system to the students before the session. Further research with larger sample and longitudinal research design is necessary to gain a more in-depth understanding into the students' perceptions and explain the reasons behind their views.

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