

LIVE AUTHORITY IN THE CLASSROOM IN VIDEO CONFERENCE-BASED SYNCHRONOUS DISTANCE EDUCATION: The Teaching Assistant ¹

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ABSTRACT

The aim of this study was to define the role of the assistant in a classroom environment where students are taught using video conference-based synchronous distance education. Qualitative research approach was adopted and, among purposeful sampling methods, criterion sampling method was preferred in the scope of the study. The study was carried out during the spring semester of the 2008-2009 academic years. A teaching assistant and a total of 9 sophomore or senior students from the Department of City and Regional Development, Faculty of Architecture, Karadeniz Technical University, participated as subjects.

The students included in the study sampling were taking lessons from the Middle East Technical University on the basis of synchronous distance education. Among the qualitative research methods, case study method was used and the study data were obtained from the semi-structured interview and observation results. Study data were analyzed with descriptive analysis methods. Data obtained at the end of the study were found to support the suggestion that there should be an authority in the video conference-based synchronous distance education. Findings obtained during the interviews made with the students revealed that some of the teacher's classroom management related responsibilities are transferred to the assistant present in the classroom during the synchronous distance education. It was concluded at the end of the interviews that a teaching assistant's presence should be obligatory in the undergraduate synchronous distance classroom environment. However, it was also concluded that there may not be any need for an authority in the classroom environment at the postgraduate education level due to the profile and expectations of the student, which differ from those of students at lower educational levels.

Keywords: Video Conferencing, Synchronous Distance Education, Role of Assistant

INTRODUCTION

Due to rapid technological developments, societies tend to live an information-intensive life. Curricula are re-arranged, investments in education are increased, and education policies are developed in this perspective (Çallı, İşman & Torkul, 2001). Distance education gains gradual importance in meeting the demand for education, which is increasing in parallel with these technological developments. Because distance education is an educational choice for individuals with diverse

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conditions and expectations, it is widely applied in different parts of the world (Topalođlu & Topalođlu, 2009). Since it provides spatial and time flexibility, distance education is known to be the most rapidly developing pedagogical method. Moreover, we can anticipate that this method will remain vital for quite a long time (Hallal, 1999).

In line with the technological developments, distance education is classified into two categories: synchronous and asynchronous distance education. Teacher and students interact asynchronously in asynchronous distance education while they are present at the same time in different locations for a lesson conducted in synchronous distance education. When compared to asynchronous distance education, synchronous distance education is more advantageous as it enables real-time discussion and brain storming opportunities, provides a classroom environment that approximates the traditional classroom environment, and makes it possible to give immediate feedback. Delayed feedback in asynchronous distance education lowers the level of interaction and decreases students' attention span. Thanks to the video conference based implementations introduced to solve this problem, synchronous distance education provides a classroom environment close to the traditional one and enables students to establish audio and visual communication with the teacher (Reinhart & Schneider, 1998; Gillies, 2008).

The concept of distance education is widely welcomed in Turkish universities which, in turn, establish distance education centers and develop curricula to this end. The video conference system plays a great role in the wide and rapid implementation of distance education (Varol & Dař, 2003). Video conference systems were used for the first time in business transactions. Since it provides simultaneous audio and visual tools and enables opportunities for accessing people in different geographies, the popularity of distance education has increased considerably. As a result, it has spread into different areas to meet different needs (Gillies, 2008). Although the use of video conference systems in the field of education is a relatively new phenomenon, it is an undeniable fact that this system has introduced considerable innovations and facilities (Gillies, 2008). The studies carried out in recent years emphasize that video conference implementations constitute an effective tool of modern education under pedagogical and social conditions (Gillies, 2008; Anastasiades, et al., 2010). Video conference implementations enable people to share cultural experiences and contribute to their education thanks to the innovative and alternative learning approaches they bring.

With the use of video conference systems for education, people in distant areas who need education are convened in an effective way. These people receive high quality education from qualified teachers specialized in their fields. Facilities provided by the video conference systems provide advantages not only in academic but also economic terms. When compared with the other types of distance education, video conference-based distance education provides real-time learning, interaction, approximation, motivation and cooperative environments (Rosen, 1996; Guri-Rosenblit, 1999; Brown & Liedholm, 2002; Bates, 2005). By this way, students can study both on their own and share experiences together with the other students (Wheeler & Amiotte, 2004; Wheeler, 2005). Although video conference provides other participants with a simultaneous watching, hearing and communication opportunity, interpersonal interaction in the video conference is not as effective as that in the face-to-face education process because the participants' viewing angle is limited to the area shown by the camera (Bonk, Malikowski, Angeli, & Supplee, 1998; Schweizer, Paechter, & Weidenmann, 2003).

Also, the non-verbal communication in video conference is not as apparent as when teacher and students have face-to-face interaction (Bruce, 1996). The quality of the video conference system changes depending on the technology and bandwidth, which can affect the lesson's quality (Martin, 2005). Video quality, which is based on the bandwidth used, is also effective on the transfer of gestures-mimics and body language (which are important elements of communication) to the other party. Thus, the limitations found in other distance education types are eliminated by the video conference (Biocca, Harms, & Gregg, 2001; Hills, 2005; Smyth, 2005). Despite these facts, the studies conducted to evaluate educational video conference effectiveness point out that the needs of the participants cannot be met at a sufficient level (Knipe & Lee, 2002; Delaney, Jacob, Iedema, Winters, & Barton, 2004; Koppelman & Vranken, 2008).

A perfect technological infrastructure is not sufficient alone for successful video conference implementations. When developing synchronous cooperative learning environments, video conference implementations have to be designed in compliance with the integrative pedagogical framework (Amirian, 2003; Gibbs & Gosper, 2006; Greenberg, 2004; Anastasiades, et al., 2010). The teacher's perspective and approach, technological facilities and active participation of the students in the process are factors of great importance for the establishment of an effective educational environment. Studies underline that when the teacher who works in distance education is technologically competent and has positive attitudes towards distance education, s/he can undertake her/his pedagogical and logistical responsibilities in an effective way (Moore, L., 1997; Gillies, 2008). These studies also show that it is important to support learning but video conference practices do not sufficiently support student learning (Knipe & Lee, 2002; Abbott, et al., 2004; Bates, 2005). The most important reason for this situation is suggested to be the lack of pedagogical approach in the video conference implementations (Newman, 2008).

Despite this suggestion, video conference systems enable people in different places to make simultaneous and face-to-face interaction via telecommunication network and video technology. So, it is believed to provide students with an environment closer to the traditional classroom environment, which turns some disadvantages of asynchronous and Internet-based synchronous distance education into advantage (Gibson & Cohen, 2003). While teachers always establish face-to-face relationships with their students in traditional education, they establish relationships with students thanks to multimedia technologies in distance education. According to Beaudoin (1990), while the role of traditional classroom-oriented teachers is to decide on and share the content, the role of distance education teachers is to facilitate student learning particularly by focusing on the process. In distance education, teachers perform personal, independent, continuous and interactive teaching; increase student achievement more when compared to the traditional environments; and provide such opportunities as generality, diversity, functionality and economy (Uşun, 2006). Teachers should have required pedagogical and technological knowledge to make distance education as functional as it can be. Therefore, faculties have to undertake important duties and responsibilities when training faculty who will be employed in distance education (Moore, 1997; Jadun, 1998).

In its generalization process, distance education has undergone many specific innovations and changes. These changes have not been recorded only in teacher training in the education faculties; many changes have occurred in the roles of teachers and classroom management as well (Toprakçı & Ersoy, 2008).

Teachers should define the technological practices which overcome time and distance-related problems and which meet many learning needs. These practices are designed in such way to increase pedagogical effectiveness and to improve teaching skills. Information technologies have undertaken many of the classroom teacher's traditional roles. Therefore, teachers now undertake new responsibilities related to the students who receive distance education. The most important of these roles are to develop an approach related to the qualifications and needs of the distance education students; to adapt to the pedagogical method believed best for meeting the expectations and needs of the students; to comply with the distance education technologies and serve as a content provider to facilitate learning skills (Willis, 1992). Briefly, in distance education the teacher serves as a bridge between the information and the student.

One of the issues rarely or never addressed in traditional education is the fact that the technological role of the teacher in distance education is nearly as important as her/his technological role in the other types of education. The teacher can be deemed to have undertaken her/his new roles successfully as long as s/he has utilized technological facilities in the most effective way in the pedagogical process (Toprakçı & Ersoy, 2008).

During the review of relevant literature we discovered that the studies conducted in Turkey on distance education implementations are focused on classroom management and the changing roles of teachers. No studies have been conducted on whether there is need for a teaching assistant in synchronous distance education and, if yes, what should be the assistant's role. The results of the present study are thought to pave the way for the researchers who plan to study these questions.

METHOD

Qualitative research approach was adopted and, among purposeful sampling methods, criterion sampling method was used in the scope of the present study. The main understanding behind criterion sampling method is to study all the cases corresponding to a set of pre-defined criteria. This criterion or these criteria may be developed either by the researcher or a list of pre-defined criteria may be used to this end (Yıldırım & Şimşek, 2006).

The criterion taken as basis in the selection of the participants of the present study was "To take synchronous distance education lesson for one semester" and "To have different levels of lesson participation". Case study method was adopted as the qualitative research method in this study.

Participants

The study was carried out during spring semester of the 2008-2009 academic year on a volunteer teaching assistant and a total of 9 volunteer sophomore or senior students from the Department of City and Regional Development, Faculty of Architecture, Karadeniz Technical University (KTU).

The students included in the study sampling were taking lessons from the Middle East Technical University (METU) on the basis of synchronous distance education. Due to research ethics reasons, the names of the participants are not disclosed in the present study. Participant students are coded as "P1, P2, P3, P4, P5, P6, P7, P8, P9" and the participant assistant as A1. Participant information is presented in Table 1.

Table 1:
Characteristics of the Participants

Participant	Sexuality	Class	Interaction in Classroom
P1	Woman	4	Active
P2	Man	4	Passive
P3	Woman	4	Passive
P4	Man	4	Active
P5	Woman	2	Active
P6	Man	2	Active
P7	Man	2	Passive
P8	Woman	2	Passive
P9	Man	2	Passive
A1	Woman	-	Active

Synchronous Distance Education Environment

The synchronous distance education environment is an environment in which students in a distant education setting interact with a teacher who is in a different location via video conference device, smart chart, etc. In addition, there is also a teaching assistant together with the students in the distance education center.

The assistant is there to ensure coordination of the students. Figure 1 summarizes the synchronous education environment.



Figure: 1
Synchronous Education Environment

Data Collection Process

Study data were obtained from the results of the semi-structured interviews and observations. To this end, an interview form was prepared by the researchers. The form was finalized on the basis of field experts' opinions about the content validity of the form.

Following verification of the content, the study interviews began. To prevent data loss and to ensure data reliability, interviews were recorded by using a sound recorder after obtaining the participants' permission.

Researchers were in the same setting with the participants from the beginning of the semester and thus could observe all the lessons. By spending time with the participants during breaks and after school, researchers tried to discover what students thought about the role of the assistant in their synchronous distance education. Since a sincere atmosphere was created among the researchers and participants in this process, it was possible to obtain deeper and rich data during the interviews.

Validity and Reliability

Triangulation method was used to ensure this study's validity and reliability. Triangulation is a method used to obtain data related to the study question by using different methods, and to test the reliability of the findings obtained this way. Conducting interviews to confirm the data obtained via observations or making observations to confirm the data obtained via interviews is an example of triangulation (Yıldırım & Şimşek, 2006). Reliability is of great importance for the qualitative studies. From this aspect, long-term participation, source triangulation and participant control were used to make the present study reliable. Continuous presence of the researchers in the study environment and the study's inclusion of participants with different characteristics were important factors in terms of finding out multiple facts by addressing different perceptions and experiences. Data obtained from the interviews were presented to the participants for approval.

Consistency is an important factor for the qualitative studies. The first thing done to ensure the study's consistency was to free the data from any bias and to support deductions via exact citations and use of raw data. In addition, study data were re-coded by two researchers and consistency between the re-coded data was tested. Conflicting issues between these two researchers were resolved by a third researcher via triangulation method to ensure consistency.

Purposeful sampling method was adopted and the study's process was explained in detail to the reader so as to ensure the study's external validity. To meet confirmation criteria of the other researchers during data analysis, unprocessed data, findings, comments and suggestions were tested again and again.

Data Analysis

Descriptive analysis technique was used in the analysis of the data obtained via interviews. Sound records made during interviews were transferred to the electronic environment by the researchers to create transcripts. Participant transcripts were read again and again in the scope of the interview questions. By this way, they were re-coded and themes were developed. Moreover, repetition frequency of the coding related to transcripts was calculated to tabulate frequency. In addition, participant statements were directly cited to reflect interesting opinions and to support the themes. In the citation process, names of the participants were replaced by the codes assigned to them by the researchers.

FINDINGS

In this part, participant statements are directly cited to summarize the findings obtained at the end of the study. Points agreed or disagreed on at the end of the analysis of interviews were used to create the below given matrix.

Columns of the matrix present respectively the theme, the code and the related frequency values.

**Table 2:
Findings Obtained From the Interviews**

THEME	CODE	f
Lack Of Teacher Management	Teacher's authority is insufficient	7
	Teacher does not try to learn about the students	3
	Teacher fails to realize the student needs	2
	Teacher fails to realize the behaviors of the students, which do not comply with the lesson	2
Role Of The Assistant	To ensure teacher-student communication	5
	To ensure silence in the classroom	3
	To ensure classroom control	3
	To support participation of the students in the lesson	2
	To roll call	2
	To perform official procedures	1
	To assist students after the lesson	1
	To discuss the technical problems	1
Need For The Assistant	At undergraduate level	6
	At each level	2
	As long as students get used to the environment	2

Examination of the opinions of the participant students and the assistant about "lack of teacher management in the process of video conference-based synchronous distance education" shows that according to the majority of participants, the teacher's authority is insufficient in this process. In addition, two participants believe the teacher does not try to learn about the students. Some of the students stated that the teacher cannot realize the students' needs due to technological reasons. Moreover, observations and interviews also pointed out those students misbehave because the teacher is not present in their actual learning environment. Opinions on this issue are as follows:

"Since the teacher does not directly see me, I think he can not realize when I get bored or when my motivation lags. Since he cannot realize it, he does not make any attempt to regain my attention." (P1)

"I cannot chew gum in face-to-face education. But, I can chew gum here easily." (P2)

"The teacher does not pay any special attention to learn about us. He is interested in only the ones sitting at the front of the class and I guess she knows some students from their voice as they frequently ask questions." (P9)

"I can suggest lack of teacher control as its disadvantage." (P4)

In the interviews made with the participants about the role of the assistant, five participants stated that the assistant functions as a tool ensuring communication between the teacher and the students.

The assistant has important responsibilities to eliminate problems that can possibly arise due to the teacher's actual absence from the classroom. Three participants defined the role of the assistant as "To ensure silence in the classroom"; three said, "To ensure classroom control"; two said, "To support participation of the students in the lesson"; two said, "To roll call"; and one said the assistant's role is "To define the technical problems encountered during the lesson."

Furthermore, some participants stated that the teaching assistant supports students by performing official procedures and assisting them after lessons. It was also underlined during the interviews that the assistant takes an active role in the whole education process by examining students at the end of teaching process. Participant opinions about the roles of the assistant are as follows:

"We communicated with the assistant rather than the teacher. And then she conveyed what we said to the teacher. She was the mediator. Without her, we would have experienced serious problems. (...) We could not say anything as the sound was lowered. But, it was enough just to look at Teacher Z and he intervened." (P8)

"If the research assistant had not been there with us, there would have been murmur in the classroom." (P1)

"There was an assistant with us. She managed the classroom." (P7)

"He sometimes supported us to participate in the lesson. He wanted us to participate and ask questions to the teacher. (...) All in all, Teacher T cannot fax an official document to me. Teacher Z undertakes the official procedures. (...) For instance, she helps us in the issues related to the lesson (such as the points explained by Teacher T but not understood by us)." (P5)

"If she had not been here, no one could take attendance." (P6)

"I acted as the mediator. I collected the assignments. I proctored the examinations and sent them to the teacher. I was the mediator." (A1)

Regarding the need for a teaching assistant, all of the participants were recorded in agreement on the necessity of an assistant in the classroom environment, but they had conflicting ideas about the assistant's presence at different academic levels and regarding the duration of an assistant's presence in the scope of a distance course.

Six participants stated that there should be an assistant at undergraduate level while two participants stated that there is no need for an assistant at every level. In addition, two participants underlined that an assistant should be provided in the classroom unless the students get used to the classroom environment. Opinions about this issue are given below:

"I think, due to the student psychology, there should be a superior in the classroom to establish an order." (P5)

"When a postgraduate level of education is considered, there is no need for a person to manage the classroom." (P3)

"Maybe not at all levels, but there is an absolute need for an assistant at undergraduate level." (A1)

"After getting used to this practice, which takes 2 or 3 weeks, it will be easy to establish a dialog with the teacher (even if not as strong as the one established in face-to-face education). As for seniors like us, who are aware of everything, I think there is no need for an assistant after a specific period of time." (P1)

Observations made by the researchers during the semester also supported the interview findings. Observations revealed that all of the participant students regard the assistant as a live authority in the classroom and that they asked her/him for help with any question or problem related to the lesson. In addition, the teacher was observed to share some of her/his responsibilities related to classroom management with the assistant during the lesson.

RESULTS and RECOMMENDATIONS

Findings obtained at the end of the study showed that there needs to be an authority in the classroom during video conference-based synchronous distance education. Interviews revealed the fact that students find it difficult to regard the teacher they see on the screen as a real authority as they are used to teachers who are physically present in the classroom. They regard the assistant as a live authority.

The teacher was observed to hand over some of her/his classroom management responsibilities to the assistant in the video conference-based synchronous distance education. While it is the teacher's duty to establish a seating chart, to call roll, to manage examinations and to ensure silence in the traditional classroom environment, these duties are undertaken by the assistant in the synchronous distance education. Teacher-student interaction is limited to the lesson hour in the synchronous distance education, which creates some communication deficiencies. According to students, the teaching assistant is a communication tool serving to eliminate such deficiencies. This expectation is even to the extent that students think that they cannot express their problems in the absence of the assistant. Furthermore, the assistant acts as a mediator in supporting student participation in the lesson and for communicating lesson-related problems to the teacher. The assistant also helps the teacher fulfill the official procedures.

Interviews revealed that it is necessary to provide an assistant in the classroom to help the teacher at undergraduate level in the scope of video conference-based synchronous distance education. The reason behind this necessity can be suggested as that undergraduate students are not fully oriented towards learning via synchronous distance techniques. However, it is believed that there is no need for an authority in the classroom at postgraduate level as the profile and the expectations of postgraduate students differ from those of other students.

We conclude with the following suggestions made on the basis of results obtained from the present study:

- At least one face-to-face lesson should be made at the beginning of the semester; this will be more beneficial in terms of the future communication between the teacher and the students.

- Students should be given seminars on compliance with the system before the semester begins; this will help students in overcoming adaptation problems.
- The teacher can get in more effective interaction with the students if s/he actively undertakes the duty of ensuring silence in the classroom and giving them permission to speak rather than handing over these duties to the assistant; this will improve effective classroom management.
- Forum and chat modules should be introduced in the distance education system to prevent limitation of teacher-student interaction only to the lesson. By this way, students can share the points they are interested in with the teacher without need for a mediator.
- Out-of-lesson activities should be organized to increase the interaction between the teacher and the students.
- The profile and expectations of the students should be considered when deciding on the necessity of an assistant in the video conference-based synchronous distance education.
- As stated by some students, an assistant should be present in the classroom until students get used to video conference-based synchronous distance education so as to ensure that the lesson is taught in a more effective way.

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