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THE UNIVERSITY OF TLEMCCEN/
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Using Video Conferences for ESP Postgraduate Students: An Example of Distance Learning at the University of Tlemcen/ Algeria

Abdelkader BENSABA¹

Abstract

Information Communication Technologies (ICT) is becoming part of our everyday life, and this fact is indisputable. It is gaining more and more ground in the worlds of business, administration and education. This motivated the researcher to undertake this work. The main objective of this paper is to look at the following problem statement, i.e., the role of video conferences in improving the quality and the sustainability of higher education. It will do so by investigating the potentials and effects of using internet-based desktop video conferences to improve ESP postgraduate students' language learning outcomes and examine their perception of using online video conference as an alternative to face-to face interaction. For this purpose, a case study research design was used. To obtain and analyze the necessary data from ESP post-graduate students in the department of foreign languages (English section) at Abou Bekr Belkaid University, a combination of both qualitative and quantitative methods was used. The main results obtained from both semi-structured interview and participant observation revealed that the internet connectivity was a key factor in determining the effectiveness of video conference as an alternative to face-to-face teaching, the context of video conference determined the pedagogical benefits of this new technique, and there were many difficulties related mainly to the quality of sound and image. Moreover, the use of this technology necessitates a good preparation on the part of teachers and students.

Keywords

Video conferences, distance learning, information communication technologies;

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Introduction

Information and communication technologies (ICT) have become commonplace entities in all aspects of life. Education is one of these aspects. Within education, ICT has begun to have a presence but the impact has not been as extensive as in other fields. Additionally, the quality of education has traditionally been associated with strong teachers having higher degrees of personal contact with learners; whereas, in today's information age, learning is no longer confined within the four walls of a classroom. The instructor armed with a textbook, is no longer the sole source of educational experience. Information resources are everywhere, often separated from the learner by time and space. The use of ICT in education lends itself to more student-centered learning settings often this creates some tensions for some teachers and students. But with the rapid movement of the world into the information society, the role of ICT in education is becoming more and more important and its development will be continued through distance learning. It is one of the most rapidly growing fields of education which is becoming accepted and indispensable in the educational system in both developed and developing countries.

One of these technologies used is Video conferencing. It is a powerful alternative that educators can use to deliver instruction across distances. It can reduce barriers such as travel safety, costs and time that can impede trips designed for intellectual exchanges as it offers a viable means to develop a framework for addressing social and work place changing. The above mentioned criteria motivated the researcher to undertake this research work and examine the use of video conferences in higher education to enhance the quality and flexibility of the teaching programme offered to the ESP postgraduate students at Abou Bekr Belkaid University (Tlemcen). Indeed, the University of Tlemcen has programmed a series of lectures in the field of ESP provided by many experts from the universities of La Sorbonne- Paris 3, Nantes and Le Havre. The aim was to examine how these video conferences were organized, developed, upgraded and adapted to students' needs as well as whether they answered those needs with the ever increasing costs of travel (plane ticket and accommodation), and the constrain of planning a meeting with the visitor teachers in terms of time and place. The institution faces many problems which make it difficult to ensure those lectures. Consequently, the solution to bridge that gap, facilitate the

meetings, and save time and money on travel and accommodations is to use video conferencing which is becoming increasingly popular.

The objective of this research work is to look at the role of video conferences in today's education. It will do so by investigating the potentials and the effects of using internet-based desktop video conferences to improve ESP postgraduate students' language learning outcomes and examine their perception of using online VC as an alternative to face-to face interaction. Attention will be given to showing that the importance of ICT in general and VC in particular is context dependent.

Three research questions are formulated to guide this study:

- How do ESP postgraduate students perceive the use of oral – video talking with experts of ESP via internet- based videoconferencing?
- Can video conference be used as an alternative to face-to-face teaching to improve their knowledge and language proficiency?
-
- What are the technical difficulties encountered during the link with those experts?

The research hypotheses that were derived are:

- ESP postgraduate students benefit from the use of oral-video talking with experts of ESP via internet-based video conferencing.
-
- The use of video conferences as an alternative to face-to-face teaching can help a lot in promoting the knowledge and language proficiency of the ESP postgraduate students.
- Some difficulties such as internet connectivity, the quality of sound, the quality of image, and lack of interaction may impede the appropriate use of video conferences related to.

1. Research Design, Approaches, and Procedures.

This part describes the research design, approaches, and procedures. It will do so by giving the rationale behind using the case study. This is followed by a full description of the combination method i.e. both qualitative and quantitative approaches used in this study to analyze the obtained data. To do so, semi-structured interview and participant observation will be used as instruments. The whole process

can be summarized by mentioning that in order to satisfy the information needed in any investigation or research project, an appropriate methodology needed to be well chosen. Additionally suitable tools for both data collection and analysis have to be selected.

1.1. Research Design

This research was conducted under the umbrella of case study research design. The reason for choosing this type of research is that it focuses on understanding the phenomenon -in this case the use of video conference in higher education- within its natural settings. In addition, it is the most common qualitative method used dealing with information systems (Myers, 2003).

The discipline of information system is characterized by continuous, often revolutionary change. Due to the fact that researchers are regularly unable to provide guidance on how to supervise new systems at their introductory phase, they often rely on practitioners in promoting and/or evaluating such change, and find themselves investigating how those practitioners implemented and managed change, thus developing theories for it. This is why the case study can be implied to capture and formalize the knowledge of practitioners, develop theories from practice, and move on the testing stage (Benbasat et al., 1987). Another reinforcing aspect for the use of the case study is that it relies on multiple sources of evidence and multiple data collection techniques.

Case study, as defined by Yin (1994), Eisenhardt (1989), and others, has well-defined steps. However it is significant, at this level, to note down that it does not involve the use of a particular sort of evidence. Yin (1994) lists six most important sources of evidence: documents, archival records, interviews, direct observation, participant observation, and physical artifacts. Additionally, it can be accomplished using quantitative and/or qualitative methodologies. A frequent confusion is that case studies are solely the result of ethnographies or of participant observation (Yin, 1981).

In spite of how it is used, for either theory building or theory testing, case study research is an essential research methodology for applied disciplines. It is a process of scholarly inquiry and exploration whose fundamental objective is to create new knowledge (Herling et al, 2000). It can also be considered as a research strategy aiming at

examining an existing phenomenon and the associated contexts that are not clearly apparent. For example, experiments vary in that they focus on isolating the phenomenon from its context; histories as well vary in that they are limited to past phenomena.

All the above mentioned strengths of case study justify its choice in this work. For example, it enables the researcher to have an in-depth vision of the use of video conferences as a means of content delivery for the ESP postgraduate students at the University of Tlemcen and the series of events related to it (the way those lectures were delivered and received by the audience). It also allows data crosscheck as many sources of evidence were used such as interviews, direct observation, participant observation, and physical artifacts.

1.2. Research Approach

The present study opts for a combination of quantitative and qualitative methods regarded as a worthy method in improving understanding. In practice, both methods are frequently considered to be appropriate within a single investigation. It is up to the researcher to choose specific methodologies which will allow him to obtain a somehow clear understanding of the topic.

In the case of understanding the use of video conferences for ESP postgraduate students (the case under investigation in this work), combining both approaches will help the researcher to seek reliable and valid results so that data can be representative of a true and full picture of integrating ICT in general and VC in particular in tertiary education. In addition, some research questions raised in this study will be readily answered using qualitative means, others quantitative, and some will be best addressed using a combination of the two.

1.3. Data Collection:

Data collection is an essential component to conducting research. It is, generally, conceived as complicated and hard task. This is why O'Leary (2004:150) remarks:

Collecting reliable data is a hard task, and it is worth remembering that one method is not inherently better than another. This is why whatever data collection method to be

used would depend upon the research goals, advantages, as to the disadvantages of each method.

The principle collection categories include: participant observation, interviews and focus group (Dalton, Elias et al., 2001). In this study, two of the above mentioned techniques have been used: an interview (semi-structured) and participant observation.

1.4. Instruments

In this study a semi-structured interview will be used and addressed to the students as well as participant observation, i.e. the same students will be observed while in a video conference session.

1.4.1. Semi- structured Interview:

The Semi-structured interview is frequently used as data collection instrument or technique. The researcher has a list of key themes, issues, and questions to be covered. In this type, the classification of questions can be changed depending on the direction of the interview. A guide (rubrics) is also used, but additional questions can be asked. Corbetta (2003:270) presents the semi-structured interview as follows:

The order in which the various topics are dealt with and the wording of the questions are left to the interviewer's direction. Within each topic, the interviewer is free to conduct the conversation as he thinks, to ask the questions he deems appropriate in the words he considers best, to give explanations and ask for clarification if the answer is not clear, to prompt the respondent to elucidate further if necessary and to establish his own style of conversation.

The strengths of this type of interview are the additional questions that can be asked and the ones that have not been anticipated in the beginning of the interview. Note taking or tape recording can help the researcher to report the interview. This gives him more opportunities to check out the views and opinions of the interviewees. In this vein Gray (2004:217) notes that probing is a way for the interviewer to

explore new paths which were not initially considered. In the same path, David and Sutton (2004:87) argue:

Having key themes and sub- questions in advance lies in giving the researcher a sense of order from which to draw questions from unplanned encounters.

1.4.2. Participant observation

It has been generally acknowledged among specialists that participant observation is a qualitative method with roots in traditional ethnographic research. Becker and Gree (1969:322) define participant observation as follows:

By participant observation we mean that method in which the observer participates in the daily life of the people under study, either openly in the role of researcher or covertly in some disguised role, observing things that happen, listening to what is said, and questioning people over some length of time. Generally speaking, by engaging in participant observation, the researcher tries to learn what life is like for an “insider” while remaining, inevitably, an “outsider”.

Despite all the problems associated with participant observation and in particular the claim that it only produces subjective or individual views of social behavior, it remains along with unstructured and semi-structured or structured interviews, a vital part of many case studies. This is due to the fact that it is useful in a variety of ways: first, it allows for insights into contexts, relationships, behaviors as it can provide information previously unknown to researchers that are crucial for project design, data collection, analysis and interpretation of other data. In addition, it gives the researcher the ability to check the nonverbal expression of feelings. This may help in determining who interacts with whom and grasp how participants communicate with each other.

Moreover, there is a general agreement among educationalists that this technique is often referred to as a naturalistic approach i.e. it gives researchers a method to view the world through the eyes of other people, and look at them in their natural environment. In other words, the researcher does not artificially interfere with people's lives and they are free to act naturally. This allows him to gain insights which surveys cannot produce. This is illustrated by Whyte (1981; 44):

“As I sat and listened, I learned the answers to questions I would not have had the sense to ask if I had been getting my information solely on an interview basis.”

In the present study, participant observation is used as data collection instruments to observe the informants in real world context. Another objective is to develop a deep understanding of the use of video conference in its natural context. In addition, it is designed to provide insights into the behavioral, interactional, and communicative aspects of using technology in Algerian higher education.

1.5. Data Analysis:

Data analysis represents the “construction phase” of the study. This process includes: deciding on the suitable analysis to conduct for each question, preparing data for analysis, and summarizing results.

1.5.1. Qualitative Data Analysis

Analyzing data qualitatively is essentially a simple process. It consists of three parts: *Noticing*, *Collecting* and *Thinking* about interesting things. Figure2. 1 represents the process and the relationships among its parts

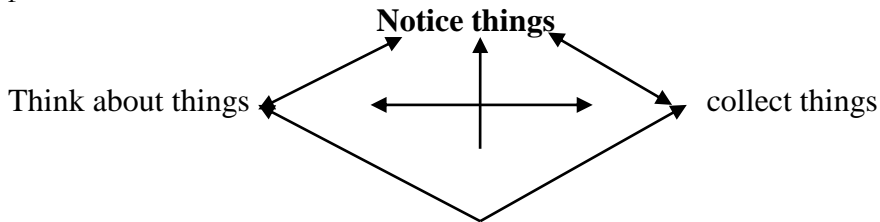


Figure2. 1 Qualitative Data Analysis (Seidel, 1998)

After collecting data using participant observation, the researcher engaged in a three step process of qualitative analysis, which is appropriate in this study since it focuses on aspects such as interaction, motivation and behavior:

- *Data reduction* which refers to the process of selecting, and thus simplifying, the data that appears in written field notes or transcriptions.

- *Data display* i.e. ways used to display data. These include: matrices, graphs, and charts illustrating the patterns and findings from the data.
- *Conclusion: drawing/verification* that refers to a process of building a preliminary thought about patterns and explanations from the findings. Additionally, verifying them frequently by checking the data, and forming a new matrix.

The three steps are presented in the following figure

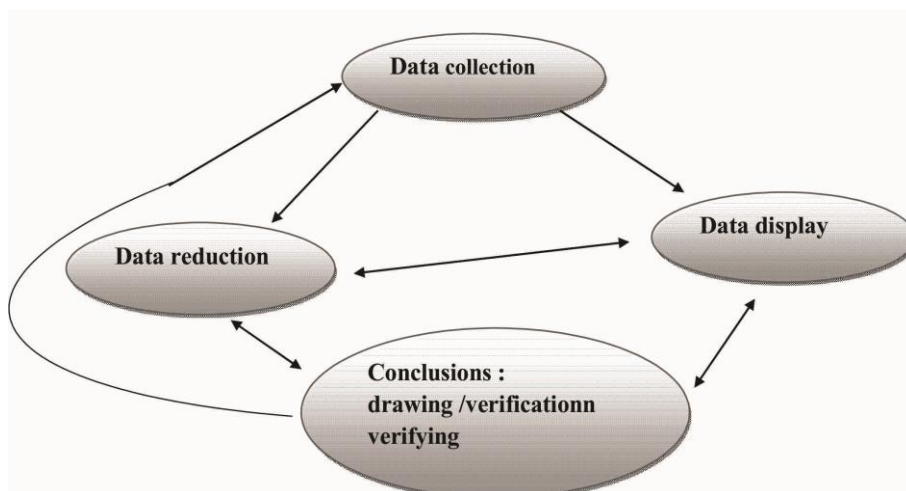


Figure 2.2 Process of Qualitative Data Analysis: An Interactive Model (Miles et al., 1994)

1.5.2. Quantitative Data Analysis

Quantitative analysis is suited to theory testing and developing universal statements i.e. it provides a "general" picture of a situation or the context under investigation. It thus produces results that are generalisable across other contexts, although they neglect the reality of situations. In addition quantitative investigation may smooth the task of understanding the topic by using some programs such as the SPSS (statistical package for social sciences). Thus, the use of graphs (histogramme, secteurs...etc) or smart arts (hierarchie, processus...etc) may give the work a more scientific direction. These techniques will be used to analyze the interview findings. It should be mentioned that in

situations where the sample size is satisfactory and the sample has been suitably selected to represent the target population of awareness, the relevance of statistical methods will provide greater validity to research' conclusions.

2. Results

The results of the semi- structured interview are classified according to the rubrics announced above:

2.1. The Technology Used in the Video Conferences

The first question dealt with the quality of both the video and sound as the central issue. The participants engaged in this study declared that the image was not very clear as to meet their expectations. But this did not seem to disturb them. In fact, the sound (audio) was much more important since it represents the main part of the technology which failed i.e. there were many interruptions. The previous described circumstances caused a lack of motivation, lose of attention, misunderstanding of content, and made the informants feel bored. Figure 2.1 summarizes and gives a quantitative representation of what have been said above concerning the first question of the first rubric.

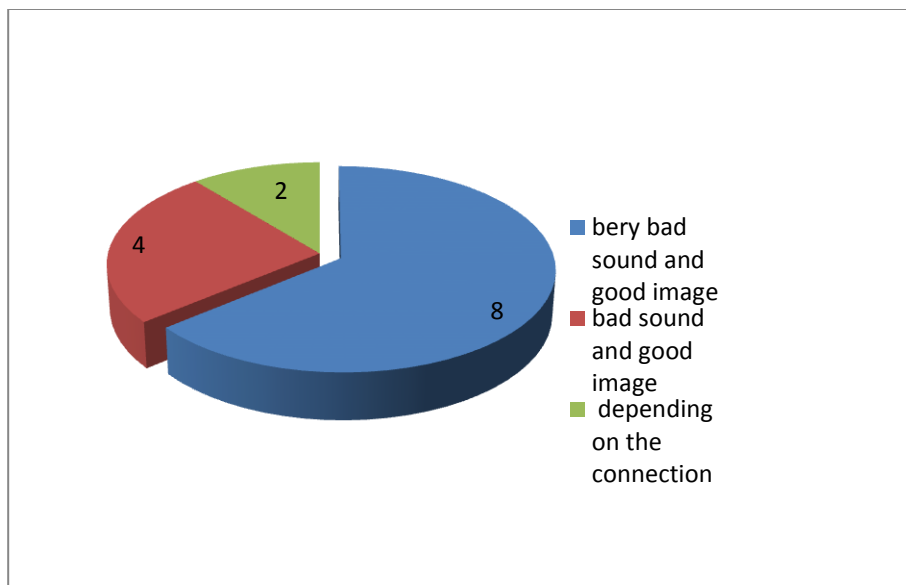


Figure 2.1 The quality of sound and image

To facilitate the task of transmitting data, data sharing facilities were used. This includes power point, typing some sentences on the Skype and showing some documents like figures, graphs and tables....etc. Figure 2.2 highlights the preference of students for the use of those data sharing facilities.

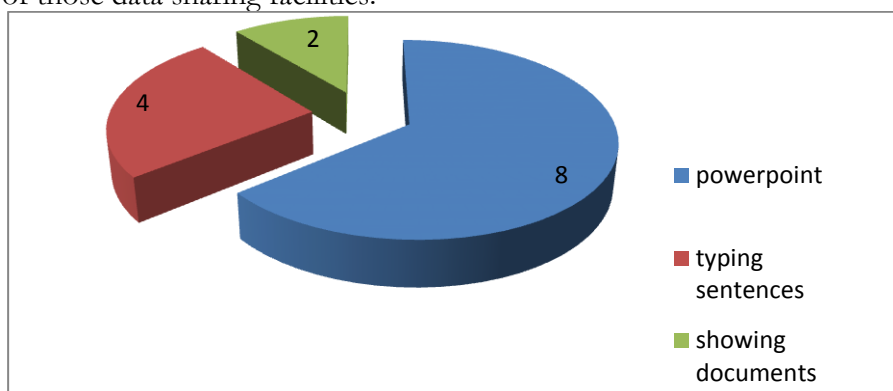


Figure 2.2 Students' preference for the use of data sharing facilities

Figure 2.3 deals with the different types of VC including: desktop⁽¹⁾ and laptop⁽²⁾. This question was necessary as it gives insights that ICT skills⁽³⁾ are highly needed before even thinking about integrating ICT in language teaching and learning. The students' answers reflect that the term desktop was not known for them. After clarifying and explaining the term by opposing it to laptop, they understood the idea and felt more confident.

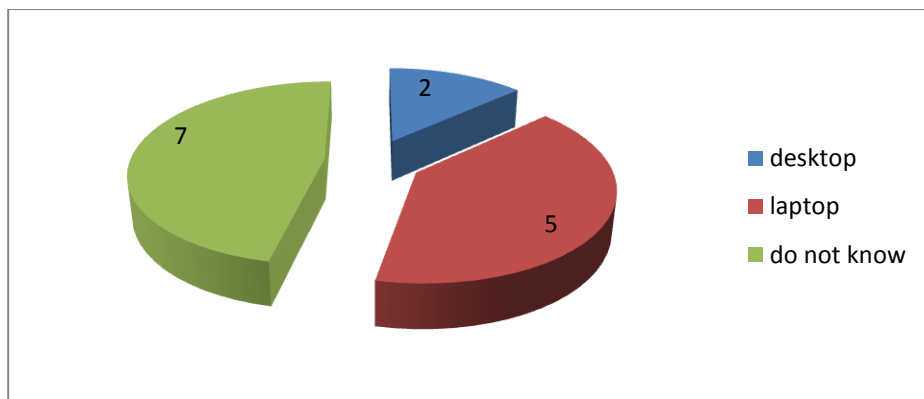


Figure2.3 Types of video conference

- A small unit, which includes the camera connected to a computer. The unit may include echo cancellation to control the sound and will usually incorporate the microphone and camera and may include the speakers. These units are primarily used for network-based conferencing. Suitable for personal one-to-one conferences or small group use.
- A laptop, also called a notebook, is a personal computer for mobile use. It integrates most of the typical components of a desktop computer, including a display, a keyboard, a pointing device (a touchpad, also known as a track pad, and/or pointing stick) and speakers into a single unit. It is also powered by mains electricity via an AC adapter, and can be used away from an outlet using a rechargeable battery.
- This helps them become familiar with the equipment and learn how to make best use of it. This comes quickly with experience and is absolutely essential for the success and sustainability of any video conferencing initiative

2.2. Content Delivery

At this level the focus was on one of the pedagogical issues related to the video conferences as a mean of content delivery. Figure2.4 suggests there was a disagreement among the participants on the use of video conferences. Some refused it taking into consideration the problems encountered during the link. Others argued that if it has been

designed appropriately it could be used as an alternative to face- to- face content delivery.

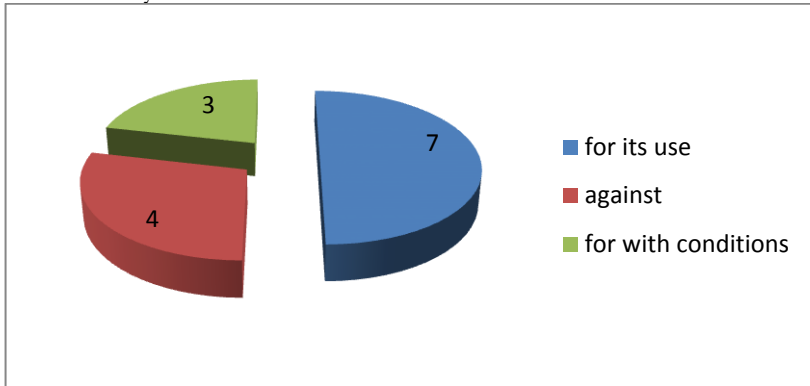


Figure2.4 Video conference and content delivery

Figure2.5 illustrates that most participants agreed on the fact that the video conferences were effective as a means of communication as they gave them the opportunity to talk to experts and test their knowledge on ESP. only one student did not find video conference effective and thus preferred face- to- -face lectures.

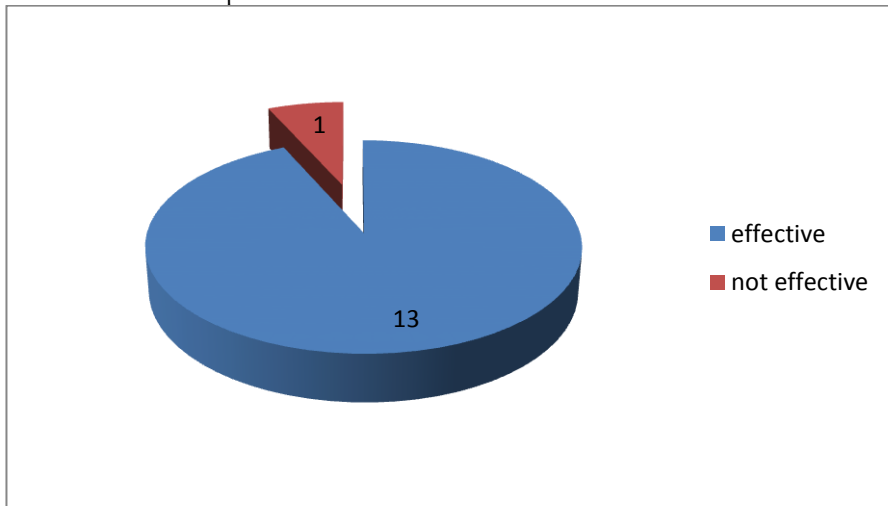


Figure2.5 The effectiveness of video conference

2.3 Students' Attitudes and Perceptions

When it comes to this third rubric the results brought insights on the real value of the video conferences sessions. The strengthening points which endeavored the above mentioned results related to the first two rubrics were: Interaction and motivation. Interaction was a significant component in the whole video conferences sessions. It was also the key factor in supporting a more social learning, negotiating meaning with the teacher in the far-end location, and forming a sense of community using this technology. In the same line with interaction, motivation played an important role in determining the success of the video conference experience. Many students claimed that they were highly motivated only in those sessions with less sound and image delays. Concerning the use of technology in education, the participants welcomed the idea and insisted on its spread since it gives more opportunities and creates an authentic environment for both teachers and learners.

The participants' answers also indicated that video conferences worked for them as follows: It introduced them to technology (ICT) i.e. computers, microphones; digital camera...etc, provided them with knowledge about ICT and ESP, gave them the opportunity to talk to experts outside Algeria, met their expectations such as breaking the routine of the traditional learning classroom, expressing their ideas and asking questions online which stands for them as a new experience. Consequently, all participants were ready to engage and repeat the experience and suggested a better internet connection, more time devoted to each video conference, i.e. to schedule the sessions for more than one hour and a half, and generalization of the experience at all levels of university instruction (starting from 1st year of under-graduation).

Conclusion

The researcher in this thesis tried to investigate the use of video conferencing by the department of foreign languages (English section) at the University of Tlemcen. This was done by observing ESP postgraduate students in a series of video conferences. It was clearly seen that this new pedagogical method is still at a very early stage in Algeria and yet the recognition of its potential for educational interaction between remote participants is well established. However, video

conferencing is not confined to a single mode of teaching, but it provides an avenue for delivery of traditional pedagogies as well as for exploring new ways of educating children and adults.

However, the success of video conference relied on the availability of a well equipped room and adequate bandwidth each of which requires a significant capital investment. The researcher was increasingly concerned with the impact of network bandwidth on desktop video conferencing. He noticed that stepping up from a voice call to a video one means using a lot more bandwidth per call. This helps in minimizing the length of delays which is considered as a critical factor in slowing down and even stopping communication between the two locations. Additionally, as an alternative to face- to -face learning this technology has good potential. It represents a revolution in the domain of higher education which is characterized by its sustainability and flexibility and this confirms the second hypothesis. Some shortcomings and lacks were encountered during the sessions when the room was not well prepared in terms of the equipments and the internet connectivity i.e. there are some difficulties facing the appropriate use of video conferences related to internet connectivity was confirmed. As with all teaching and learning environments, there will be issues to be dealt with and challenges to overcome. For example, some consideration needs to be given to: Multi-site timetabling, access and equity at remote sites, suitable teaching approaches, potential for less content to be covered, more structure when planning sessions, and added layer of complexity.

In today's world, it is a fact that technology is driving progress on many fronts. Education is no exception. How this is going to affect students and teachers will have to be investigated on a much wider scale. Video conferences over IP (internet protocol) - from the desktop or small group size- are only a small part of this convergence. We are aware of the shortcomings in validity and reliability of the results identified in this paper, but one cannot neglect that it discussed important aspects that may help to overcome those problems related to internet connectivity, quality of both sound and image; and developed a new framework to modify net-based learning environments in the future. Greater consideration should be given to gaining a better understanding of the interaction between technological and human factors. It is clear that research has to consider both the pedagogical point of view as well as the technological one. Future research should also consider whether

attitudes towards videoconferencing are uniformly developed across organizational boundaries and within other institutional contexts. Therefore, the following questions open the door to future research to better understand the availability of ICT –video conference in particular- in Algerian higher education: Can the video conferences sessions experienced in the small size group (14) be expanded to large scale students? If so, will it be appropriate as a content delivery method? How can synchronous communication stimulate the tradition of seminars and how can asynchronous and synchronous tools be integrated in order to find a balance between them for different learning situations and for different groups of students?

Acknowledgment

I acknowledge that the paper entitled “Using Video Conferences for ESP Postgraduate Students: An Example of Distance Learning at the University of Tlemcen/Algeria” is original and part of my previous research about the use of ICT in the Algerian higher education, developed within University of Tlemcen.

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