THE USE OF COMPRESSED VIDEO FOR DISTANCE LEARNING: FROM MIDDLE SCHOOL TO SENIOR CITIZENS

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Introduction

A review of a ten-year project using ISDN Compressed Video to connect middle and high schools around the world for monthly explorations of a variety of topics ranging from music concerts to joint science experiments. At the other extreme, the use of webcams over the Internet in Skype, ooVoo, Logitech, and Google Video to make free video conferencing calls by limited income senior citizens in a Quality of Life project illustrates the distance compressed video has come. Finally, the use of video conferencing in Elluminate in Blackboard for graduate online courses is described. Participants will be invited to use their desktop units to explore some of these options and video clips during the session.

The SAXophone project
For approximately ten years, "Students Around the World eXchanging over the phone" (SAXophone), provided middle and high school students around the world with the opportunity to meet and interact with students from other cultures and societies. The SAXophone project was sponsored by Nova Southeastern University and the Broward County, Florida BECON Distance Learning Center from 1995 until 2005. The project began at the September1995 PictureTel User Group Annual Conference in Nashville, Tennessee. Three individuals attending the conference from different parts of the world met each other at lunch for the first time and began discussing ways to use compressed video equipment that they had recently received. The project began, as described by Mizell (1997), when Colonel Bent Kroon from the Swedish Military College, Mr. Thomas Ziegler, Computer Center Director at Ulster BOCES in New Paltz, New York, and Dr. Al Mizell of Nova Southeastern University (NSU) in Fort Lauderdale, Florida agreed to try to connect with each other from their home locations using the new NSU bridge as soon as they returned from the conference. Mr. Ted Detjen, now retired Assistant Director at BOCES, was then appointed by Mr. Ziegler to replace him as the BOCES participant. Although it took over three months to make the international connections work, these three (i.e., Florida, New York, and Sweden) finally were connected.

During the first year, the project emerged slowly. Originally named SAXophone, from the participating countries—"Swedish and American students eXchanging over the phone," the title had to change even thought the acronym was kept the same. As additional countries joined the project, the title changed to reflect the purpose that the initial group of teachers and students envisioned for it: "Students Around the world eXchanging over the phone." The first formal session was held on December 11, 1995 when students in New York, Sweden, and Florida gave brief presentations, including skits, songs, and descriptions, describing their major winter holidays. Document cameras were used to show close-up images of typical foods, icons, photographs, etc. The second formal session was held on February 27, 1996 when students described a typical "Day in the Life" of students from each culture.

During the second year of the project, additional schools heard about it and became involved. Schools from England, Sweden, Finland, Poland, Norway, Greece, Germany, Japan, the UAE, Costa Rica, Japan, and the U.S. all participated in one or more sessions. Randy Palmer, in his comments in Chapter 11 of the text, Teaching and Learning with Technology (Lever-Duffy et al., 2003), said "With opportunities such as those provided by SAXophone, students come together as an international learning community in our global village" (p. 373).

Different topics were offered each month. Probably one of the most popular topics was the session where students read and discussed their original poetry reflecting their feelings. Equally engaging were the emotionally charged session with Holocaust survivors, a simulation game involving the global environment and oil drilling, and a music concert that included a symphonic presentation from England and a rock band from a New York alternative school. The impact of the project on preconceived notions is best illustrated by this 17-year old from the U.S. who said, "…that kids would get an idea that there are other ways to work things out than the way [they are done] in the U.S." From across the ocean, a student from Sweden said, "We will understand each other better."

The impact of the project has been described by Kontos and Mizell (1997). A report by Mizell (1999).summarizes participant evaluations of the project and conclusions from the project evaluations describe the value of the project.

In January 2006, the SAXophone project was closed. However, even though the SAXophone project was closed, NSU kept the Web page active for several years.   Teachers visiting the SAXophone Web site were encouraged to set-up a similar competition on their own—either over ISDN or IP. Using the groundwork done by SAXophone, project developers could use the format, rules, prior schedules, and other forms available to them without cost on the SAXophone Web site.

Some of the published articles that you can access to read greater detail about this project:
Kontos, G. and Mizell, A. P. (1997). Global village classroom: The changing roles of
    teachers and students through technology. TechTrends, 42(5), 17-22.
Howard, C., Boettcher, J., Justice, L., Schenk, K., Rogers, P., & Berg, G., editors (2005).
    "Compressed   video for the global village" by Mizell, A. in Encyclopedia of Distance
    Learning, 1, 317-322. Hershey, PA: Idea Group Reference.
Lever-Duffy, J., McDonald, J., & Mizell, A. (2003). Teaching and Learning with
    Technology. Boston: Allyn and Bacon.
Mizell, A. (1997). SAXophone: Enhancing the global village via compressed video.
    Distance Education Report, 1(3), 1-3.
Mizell, A. (1999). Creating a small, small world through videoconferencing:
     SAXophone. Educational Technology Research and Development, 47(4), 102-107.

SeniorComp
At Nova Southeastern University (NSU), Dr. Mizell and a senior volunteer, Cecil Sugarman, created a project to enable limited income senior citizens to obtain a new Dell computer, monitor, and printer plus 28 weeks of training in their use. They used the facilities of SeniorNet lab centers where available and provided the seniors with laptops that they could bring to class in locations where a SeniorNet center was not available.

They obtained funding from the Mandel Foundation to support ten groups of ten seniors over a six-year period. When Cecil Sugarman died and the funding from the Mandel Foundation ended, the project's alumni were invited to use their computers to participate in an advanced course during the first year that SeniorComp had no funding.

Webcams over the Internet
In the second year without outside funding, Nova Southeastern University (NSU) awarded Dr. Mizell a $10,000 Quality of Life grant to conduct research on the impact of the use of technology on the lives and attitudes of senior citizens with limited income. Twenty seniors at two South Florida Senior Centers were selected to participate in the project from October 2010 through May 2011. The main focus of the project was to provide each participant (students and instructors) with a Logitech Webcam and training and practice in its use to make free video calls over the Internet.

Students were taught how to subscribe to different video calling host sites, how to use their new web cameras and related equipment, how to make video calls, and how to upload recordings of their calls to YouTube – if they wished to do so. They created accounts on Skype, ooVoo, Logitech, and Google Video and were shown how to make free video point-to-point and video conferencing calls. They also heard about eight different aspects of Internet Safety.

When the project ended in May, 2011, 14 of the original 20 seniors completed the entire project. Summative data was collected from these seniors for comparison with their baseline data. At the closing luncheon, participants were invited to make comments if they wished. Many of the seniors spoke favorably about their new skills using web cameras over Skype and ooVoo to see and hear family members and friends, and their appreciation for the impact the course had on their lives.

Video conferencing in Elluminate
Within the graduate courses offered by the Fischler School of Education at NSU, the Elluminate program is used within the course management system, Blackboard. In Elluminate, up to six participants in a synchronous session can use their webcams so the class can see them. The instructor usually uses one of these six slots so he can be seen at times.

In the author's experience, the use of video made the synchronous class sessions more engaging and gave more of the feeling of a traditional face-to-face (F2F) classroom. Students could see visual cues on the instructor's face as well. The instructor could observe the effect on students during presentations, discussions, etc. Once, when a student dozed off, it was obvious to all.

Students who felt uncomfortable projecting their image simply did not indicate that they had a webcam available. There was no penalty for not using a webcam but most of the students felt it added to the class so they volunteered to connect visually if they owned a webcam.

Video conferencing software
It is interesting to watch the evolution of the two most popular, free videoconferencing sites, Skype and ooVoo. OoVoo states that eight of ten Skype users say they prefer ooVoo. Each time one of the sites offers something new and free for users, the other one responds. Currently, users must pay a premium on Skype to be able to make video conference calls with more than two participants but ooVoo has been allowing users to make calls for free with three participants. During May 2011, ooVoo allowed all users of free accounts to make calls with up to six participants.

Some individuals prefer to use the software that comes with their webcams, such as Logitech or Microsoft. Individuals who try several sites soon find that they prefer one service over the others but not everyone likes the same service so we continue to see a variety of sites being used.

The Future

It appears that the day of the "Dick Tracy Wrist Two-Way Video Camera" arrived in the early 21st Century. An obvious trend today is toward the ubiquitous use of video in every new device. With the built-in camcorder in most laptops, netbooks, notebooks, cell phones, tablets, and other new devices, the popularity of two-way video calling is becoming an accepted expectation. It would seem probable that almost every new device will have this capability and the ability to see anyone, anywhere, anytime will continue to evolve.