

TELEMATICS AND NEW TECHNOLOGIES COMMISSION REPORT

VIDEOCONFERENCING AND LANGUAGE LEARNING

This report will address the tremendous potential of videoconferencing technology in the field of language education. After a brief historical overview, examples of both classroom and individual applications will be presented. The report will conclude with some ideas for the future of videoconferencing.

Background

According to Davis Janowski of *PC Magazine*, the 1927 science-fiction masterpiece, *Metropolis*, a silent film, was the catalyst that sparked the technological imagination by showing the first example of video calling.¹ A few years later, in 1931, cartoonist Chester Gould was inspired by the lure of new technological applications when he debuted the comic strip *Dick Tracy*.² Readers may remember that fictional detective sporting his two-way video-wristwatch with integrated monitor. In the early 1960s, the futuristic, animated cartoon "The Jetsons" featured instantaneous video-screen communications.³ By then, videoconferencing—a synchronous exchange of audio and video communications from different locations—had transcended the world of science fiction into the realm of the possible.

Although early videoconferencing systems had used analog transmissions on closed-circuit television,⁴ by the 1980s new video compression techniques allowed digital transmission of both audio and video over an Integrated Services Digital Network (ISDN).⁵ Those dedicated systems, requiring large-scale and expensive equipment, are still used today in some business settings.⁶ In the 1990s, researchers developed compression-decompression (codec) devices to quickly encode and decode packets of data in real time, and a standard Internet Protocol (IP) for their transmission, known as H.323, soon followed, allowing greater access to videoconferencing.⁷ At that time, however, only a small number of personal computer users who had Internet connections faster than the standard 28K or 56K "dial-up" system could participate in videoconferencing. Today's average user enjoys a much more rapid broadband access to the Internet, through either a Digital Subscriber Line (DSL) or a cable modem.⁸ With these faster data transmission speeds and technological advances in place, our decade is the first to experience wide-scale use of videoconferencing on the personal computer.

Evolution of Software Programs

In the early 1990s, a team of researchers at Cornell University developed a sys-

tem that allowed video and audio transmission between personal computers.⁹ This dual-platform (Mac and Windows) videoconferencing system was released as a commercial product in 1998 under the name CU-SeeMe®. It allowed group conferences with multiple video screens in the same window. However, the audio and video quality was acceptable only with broadband Internet connections, which were not common at that time. Even so, the early video was often grainy, and a lag in synchronicity existed between the audio and the video.

Also in the 1990s, Microsoft® developed its own videoconferencing software, known as NetMeeting®. It was bundled with its Windows 98 operating system, could operate with Windows 95, and had been included in all subsequent versions of Windows® except the most recent one, Windows Vista.¹⁰ Still in use, NetMeeting® allows real-time, synchronous audio and video capability between two users in addition to multi-point chat windows and whiteboard collaboration. Individuals can also transfer files and control the other computer if permitted to do so. The major drawback with NetMeeting® has been its Windows-only applicability.

During this first decade of the 21st century, improvements in web-cam technology and audio devices, the development of more powerful personal computers, and the nearly ubiquitous access to broadband Internet connections have brought videoconferencing to the forefront. It is accessible to nearly every user of personal computers. Numerous free videoconferencing software programs now exist, some of them integrated into current operating systems. For example, iChat allows voice- and video-chat capabilities on the Mac OS X platform. Several instant messaging clients now offer video capabilities as well. Among them are AOL Instant Messenger (AIM®), which can communicate with iChat users, Yahoo!® Messenger, and Windows Live™ Messenger (formerly known as MSN® Messenger).

Updated versions of two relatively new videoconferencing software programs for the personal computer have been named by *PC World* as among the 100 best products in 2007.¹¹ They are Skype™ 3.0 and SightSpeed™ 6.0. The latter has also garnered an Editor's Choice award for 2007 from *PC Magazine*.¹² Both programs are powerful and easy-to-use videoconferencing applications. "Videoconferencing with Skype™" is featured as the January 2008 Tech Tip of the Month on the Web page

of the AATF Commission on Telematics and New Technologies.¹³

Current Applications in Language Teaching

A superb example of extending videoconferencing capabilities to the language classroom was presented in 2005 by Candace S. Walton, then of Smith College's Department of French Studies, and by James Benenson (via videoconferencing) of the Department of Modern Languages, *École normale supérieure de Télécom-Paris*.¹⁴ With the help of their respective Information Technology specialists, they were team-teaching a course that featured a trans-Atlantic videoconferencing connection between two specially equipped classrooms at each institution. The course included at that time ten students studying French at Smith College and eight Engineering students studying English at *Télécom-Paris*. The professors at these partner schools had developed a curriculum centered on videoconferencing technology and on a written on-line forum for students to exchange cultural views and social values both orally and in writing. Real-time sessions included a weekly video connection, which students eagerly anticipated. Seeing their partners' facial expressions and gestures added an extra dimension to the students' understanding of cultural similarities and differences. This course, which continues to be offered at Smith College, has been a resounding success. Smith's technological endeavor to offer language students direct access to individuals of the target culture, while emphasizing contemporary language use and cultural literacy, is a model for other institutions to follow.

Over the past ten years, with the advent of the H.323 standard for video teleconferencing systems, the greater accessibility of high-speed Internet connections, and the availability of free conferencing software, some private schools and instructors, including this report's author, have embraced the new technologies by offering one-on-one tutorials and lessons on-line. Computer-to-computer videoconferencing allows instructors to reach long-distance students anywhere in the world where access to the necessary hardware and software is available. It provides the opportunity for live visual stimuli during the instructional process, which greatly facilitates the recognition of gestural components of the target culture and the acquisition of specific features of articulation for proper pronunciation.

A recent player in the field of language learning through videoconferencing has moved a step further along the technological spectrum. That player is *eLycée*, a virtual French school created in 2006 by a joint public-private partnership with several French institutions, such as the *Institut national de Recherche pédagogique* in Lyon, all of which have contributed to the development of this leading-edge educational tool.¹⁵ *eLycée's* Web site proudly promotes specially developed videoconferencing applications that maintain a true virtual classroom environment. Up to fourteen students at a time can link together from various locations through video, audio, group chat, and a shared whiteboard while interacting with their on-line teacher. In addition to offering virtual classes and private lessons, *eLycée* hosts a French Club, writing workshops, and a free exchange forum for teachers. All the *eLycée* teachers, who are native French speakers, have been certified by the French Ministry of Education; certain *eLycée* courses have been endorsed by the Cultural Services of the French Embassy in the U.S.; and their AP® French Language and Literature preparation courses have been accredited by The College Board®.¹⁶ Attesting to the dynamism of this new tool, one *eLycée* teacher states:

Students speak and write spontaneously, and classes are always dynamic, fun and challenging. It is the most natural and easy way to learn French if you can't actually study in France. As for the future... this is how a new generation of language learners are [sic] going to study, practice and perfect their skills.¹⁷

Future Potential

As *eLycée's* applications of cutting-edge technologies in the field of language education confirm, the future potential of virtual classrooms is enormous. One can envision the day when it will be commonplace for specialists in language learning to reach hundreds of students in all corners of the world to share a particular area of expertise. Closer to home, language departments facing budget restrictions could still provide the highest quality of education in many subfields by inviting specialists to teach semester-long courses through videoconferencing. Those specialists could thus remain in one location but teach at several institutions, perhaps on a visiting basis. Students everywhere would benefit greatly by receiving the best possible instruction made available through technology. Furthermore, disadvantaged or geographically isolated students could enjoy near-immersion experiences in their target cultures, which have traditionally been out of their reach. Diverse groups of students

worldwide could come together in a virtual environment to learn from one another and develop cultural sensitivity at a young age. A visually connected, interactive world is within our reach. As educators, we must lead the way.

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URLs of Cited Programs

"AIM®" [www.aim.com/get_aim/win/latest_win.adp]
"eLycée" [www.elycee.com]
"iChat" [www.apple.com/macosex/features/ichat.html]
"SightSpeed™" [www.sightspeed.com]
"Skype™" [www.skype.com]
"Windows Live™ Messenger" [http://get.live.com/messenger/features]
"Yahoo!® Messenger" [http://messenger.yahoo.com]

Notes

- 1 Davis D. Janowski, "Free Video Calls," *PC Magazine* 25.18 (17 Oct. 2006): 105.
- 2 Dick Locher and Michael Kilian, "Dick Tracy," *ComicsPage*, 31 Dec. 2007 [www.comicspage.com/dicktracy/dick_about.html].
- 3 "The Jetsons," TV.com, 31 December 2007 [www.tv.com/jetsons/show/3723/summary.html].
- 4 James R. Wilcox, *Videoconferencing & Interactive Media: The Whole Picture* (St. Louis, MO: Focal Press, 2000) 4.
- 5 "Videoconferencing," *Grolier Multimedia Encyclopedia*, 2008, Grolier Online, 2 Jan. 2008 [http://gme.grolier.com/cgi-bin/article?assetid=0303437-0].
- 6 "Videoconferencing," Channel Web network, 2007, Channel Web, 8 Dec. 2007 [www.crn.com/encyclopedia/printerFriendly.jhtml?term=videoconferencing].
- 7 Wilcox 12.
- 8 "Broadband," *Grolier Multimedia Encyclopedia*, 2008, Grolier Online, 2 Jan. 2008 [http://gme.grolier.com/cgi-bin/article?assetid=0043115-0].
- 9 Lucy P. Roberts, "The History of Video Conferencing—Moving Ahead at the Speed of Video," *Ezine@rticles®*, 3 Jan. 2008 [http://ezinearticles.com/?The-History-of-Video-Conferencing—Moving-Ahead-at-the-Speed-of-Video&id=5369].
- 10 "What Happened to NetMeeting?" Microsoft®, 2 Jan. 2008 [http://windows.help.microsoft.com/Windows/en-US/Help/54a96def-4ac6-42f3-bd15-574fdf21200f1033.mspx].
- 11 Eric Dahl, ed., "The 100 Best Products of 2007," *PCWorld*, 31 Dec. 2007 [www.pcworld.com/article/id,131935-page,14/article.html].
- 12 Davis D. Janowski, "SightSpeed 6.0,"

Videoconferencing, 2007, *PC Magazine*, 31 Dec. 2007 [www.pcmag.com/article2/0,2704,2101677,00.asp].

¹³ Cheryl A. Demharter, "Videoconferencing with Skype™," Tech Tip of the Month, 2008, AATF Commission on Telematics and New Technologies, Jan. 2008 [www.frenchteachers.org/technology/techtips.html].

¹⁴ Candace Skorupa Walton and James Benenson, "'Can You Hear Me?' Webcams and Videoconferencing in the Language and Culture Classroom," *New Directions in Learning Language and Culture with Technology*, Smith College, Northampton, MA, 9 Apr. 2005.

¹⁵ "Business partners," Company Information, 2007, *eLycée*, 31 Dec. 2007 [www.elycee.com/company_info/business_partners.php].

¹⁶ "What makes eLycée special?" What is eLycée, 2007, *eLycée*, 31 Dec. 2007 [www.elycee.com/what_is_elycee].

¹⁷ "Sophie eProf," Academic Staff, 2007, *eLycée*, 31 Dec. 2007 [www.elycee.com/academic_staff/sophie.php].