# THINK Globally, LEARN Locally:

## *Multimedia Conferencing Between Two Schools of Nursing*

CAROL S. STERNBERGER, BELINA DEAL, AND REBECCA A. FOUNTAIN

**The use of web-based collaboration tools such as videoconferencing in online education has opened exciting opportunities for institutions that want to globalize but have scarce resources.** As Park and Bonk (2007) point out, however, not all faculty are open to the use of such tools, and they may require training and support through professional development programs. Until recently, videoconferencing was typically synchronous (taking place in real time), while web-based communication was asynchronous (taking place any time), except for chat rooms that became popular for virtual office hours. • Adobe Connect, formerly called Breeze, is a web-based, multimedia conferencing system that permits synchronous and asynchronous online education: audio and video communications, text-based chats, collaboration on a white board, and the sharing of documents and desktop applications. Conferences can be recorded and a URL generated for later viewing. **THIS ARTICLE DESCRIBES THE USE OF ADOBE CONNECT IN CONDUCTING A CONFERENCE BETWEEN TWO SCHOOLS OF NURSING.**

**Benefits of Synchronous Conferencing Tools** For many years, videoconferencing has been used in distance education, but it has often been limited to partner facilities or special classrooms. Parks and Bonk (2007), however, predicted that more and more online courses will make use of synchronous conferencing. The educational literature is rife with discussion about the potential these widely available and relatively low-cost technologies hold for students. Although Taylor (1998) writes that lecturing via videoconferencing represents the "tyranny of futility," or a senseless expense, many opportunities exist. For example, when cost savings are required, videoconferences reduce travel expenses while enhancing social presence (Townsend, Demarie, & Hendrickson, 2001).

Researchers are just beginning to examine the effectiveness of online synchronous instruction and to determine the best methods for enhancing learning. A study conducted by Parker and Martin (2010) found that students preferred the virtual classroom established through videoconferencing to course sections that employed a blended learning approach that excluded videoconferencing. It is apparent that the potential for nursing education is staggering. These technologies may reshape how students acquire knowledge, as well as how "a community of critical inquiry essential for higher order learning" is developed (Stodel, Thompson, & MacDonald, 2006).

The literature on multimedia conferencing in distance education has focused mainly on classes conducted via two-way video, but there are two other potential uses for this technology: synchronous video conferencing in the traditional classroom and collaboration among faculty in developing scholarly projects. A synchronous videoconferencing system allows an expert to enter the classroom from anywhere in the world, making it possible for people to connect over vast distances (Alexander, Higgison, & Mogey, 1999). Taylor (1998) writes that such technology has the "capacity to rehumanise distance education" and to "pervade conventional education systems" (p. 14). The option of recording the conference and posting the URL in the course management system allows students to review the material asynchronously (Pullen, 1996). The technology also permits nonprofessionals, such as a parent at home with a special-needs child, to interact with those in the classroom.

Synchronous videoconferencing may also help faculty collaborate on projects with colleagues anywhere in the world. Townsend et al. (2001) identified benefits, including the ability for employees in different geographical locations to work on projects together. Such collaboration is cost-effective, and minimal additional time is required. Chan, Tan, and Tan (2000) recognized the savings in both travel time and expenses. Robert and Gingras (2007) found that both synchronous and asynchronous technologies resulted in higher quality content and shorter production times when used to create educational content.

**The Collaboration** A shelter for people with mental and physical disabilities was established in a gymnasium at a college of nursing in rural Texas after Hurricanes Katrina and Rita passed through in 2005. The experience of caring for more than 200 special-needs evacuees provided learning opportunities for both nursing faculty and students.

**ABSTRACT** *Three nurse educators, who met at the American Nurses Association Nursing Care in Life, Death and Disaster Conference (Atlanta, June 2007), collaborated on a multimedia conferencing project to teach nursing students about disaster response. This case study examines two outcomes of this project. The project provided students in a disaster nursing course in Indiana an opportunity to meet faculty who helped establish and maintain a special needs shelter in Texas following Hurricanes Katrina and Rita. It also demonstrated, through the use of technology, the ability of nurse faculty to share their expertise with colleagues and students residing in different geographical locations.*

Faculty members believed that they should share what they learned with the global nursing community as part of disaster planning.

Several of these nurse faculty members published a manuscript about the challenges and opportunities of volunteering at the shelter (Deal, Fountain, Russell-Broaddus, & Stanley-Hermanns, 2006); that publication precipitated an invitation for the authors to speak at a national American Nurses Association conference, Nursing Care in Life, Death and Disaster, Atlanta 2007. There, an attendee invited the speakers to present the paper and meet with students enrolled in a course on disaster care at a nursing school in Fort Wayne, Indiana. That classroom was 1,240 miles away from the nursing school in Texas. Clearly, a novel means of communication would be needed. Adobe Connect allowed the Texas faculty to connect via webcam from their private faculty office to the classroom in Fort Wayne.

The Indiana faculty had been using videoconferencing and webcams for two years, but the process was brand new for the Texas faculty. Through several email exchanges and phone calls, one Texas faculty member was able to connect from her office to the classroom. The receiving campus owned the software, and the collaborators, with support offered from their staff technology expert, soon found the process to be simple and successful.

Before the class, students read the article by the guest faculty and prepared questions for them. The students watched a slide show introducing the special-needs shelter and the volunteers; they could see and hear the faculty on a portion of the screen simultaneously. The chat room option was activated so that students could send questions during the presentation. To reduce screen clutter, the classroom webcam was not used until the question-and-answer period toward the end of the presentation.

The webcam projected the image of the students asking questions. Students asked questions about specifics of shelter operation, including issues related to the evacuation process, medication administration, and communication among the volunteer health care providers. They were very interested in the identification of the lessons learned and how the students had been prepared for this type of disaster health care. See Sidebar for effective videoconferencing practices.

**The Next Step** The collaboration was a positive one for faculty and students. Since the presentation, the three collaborating faculty, using the Adobe Connect software, designed a presentation called "Over Mountains, Across Rivers and Through Woods" for a symposium at the NLN Education Summit in San Antonio, Texas.

A brief survey, distributed at the conference, was used to ask attendees about their use of software similar to Adobe Connect. Of 30 participants, 13 had not previously used a comparable web-based platform. One participant who had not said that it sounded "doable."

The conference participants taught in varied educational programs, ranging from LPN to PhD. They reported using a variety of course management systems for synchronous and asynchronous learning activities. Positive aspects cited by the participants for using web-based learning activities included flexibility in time and location for learning activities. Barriers to the use of web-based activities reported by the faculty were lack of technical support and training. The faculty also pointed to the need to develop learning activities that accompany web-based platforms and the learning curve that exits for use of technology. From the presentation and survey comments, it is apparent that the use of web-based platforms is standard in nursing education and has much potential for future applications. However, the use of videoconferencing using webcams is not yet widespread.

**Sdebar.**
**Effective Videoconferencing Practices**

PREPARATION

- Set a meeting time with the guest presenter using the synchronous collaboration software to familiarize the guest with the look and feel of the interface.
- Validate the meeting time and the time zone that will be used to set all meetings.
- Identify the applications that will be used in the presentation.
- Practice the use and flow of the applications.
- Record each practice to see the look and feel of the presentation.
- Provide materials to be discussed or reviewed so that students can prepare for discussion, allowing time to reflect on the material.

EQUIPMENT

Clarify the necessary software and equipment needs: Webcam / Headset / URL link for presentation.

- Determine stability of the Internet connection for broadband delivery.
- Check for audio echo. A headset may be needed to reduce feedback loop.

ENVIRONMENT

- Turn off the telephone ringer.
- Post a "Do Not Disturb" sign on the door.
- Check the lighting. A desktop light may be needed to reduce back or side lighting.
- Position the webcam in an area that you look at frequently. This will reduce the gaze angle and appear more natural.
- Close all applications on your desktop. This will prevent your accidentally broadcasting material not intended to be displayed.

PRESENTATION

- Start on time, remembering to validate the time zone.
- Begin by establishing a social climate. This will help the participants feel connected, as is typically done prior to face-to-face meetings.
- Inform the audience about the features and functions of the communication tools.
- Just as speakers at a conference and teachers in the classroom do, make frequent eye contact with the camera during the presentation. It is easy to worry about the sharing of applications on the desktop and forget about the audience.
- Move slowly to prevent a jumpy appearance. Lower bandwidth will have an exaggerated lag time.
- Engage the participants by using the synchronous collaboration tools such as online polling, chat text, or Web browsing. As in face-to-face classrooms, participants get bored and mentally check out after 15 minutes.

**About the Authors** *Carol S. Sternberger, PhD, RN, CNE, is professor and chair, Indiana University-Purdue University School of Nursing, Fort Wayne, Indiana. Belina Deal, PhD, RN, CEN, is an assistant professor at the University of Texas at Tyler College of Nursing. Rebecca A. Fountain, PhD, RN, is an assistant professor at the University of Texas at Tyler College of Nursing. For more information, contact Dr. Sternberger at sternber@ipfw.edu.*

**Key Words** Adobe Connect – Desktop Conferencing – Multimedia Conferencing – Synchronous Technologies – Distance Education

**References**

Alexander, W. Higgison, C., & Mogey, N. (Eds.). (1999). *Videoconferencing in teaching and learning: case studies.* Retrieved from www. icbl.hw.ac.uk /ltdi/vcstudies/vcstudies-all.pdf

Chan, G. C., Tan, B. C. & Tan, W. (Eds.). (2000). A case study of one-to-one videoconferencing education over the Internet. In A.K. Aggarwal (Ed.), *Web-based learning and teaching technologies: Opportunities and challenges* (pp. 327-346). Hershey, PA: Idea Group Publishing.

Deal, B. J., Fountain, R. A., Russell-Broaddus, C. A. & Stanley-Hermanns, M. (2006). Challenges and opportunities of nursing care in special-needs shelters. *Disaster Management & Response*, *4*(4), 100-105.

Park, Y. J. & Bonk, C. J. (2007). Is online life a breeze? A case study for promoting synchronous learning in a blended graduate course. *MERLOT Journal of Online Learning and Teaching, 3*(3), 307-323. Retrieved from http://jolt.merlot.org/vol3no3/park.pdf

Parker, M. A., & Martin, F. (2010). Using virtual classrooms: Student perceptions of features and characteristics in an online and a blended course. *MERLOT journal of Online Learning and Teaching, 6*(1), *135-147.* Retrieved from http://jolt.merlot.org/vol6no1/parker_0310.pdf

Pullen, J. M. (1996). Synchronous distance education via the Internet. *Proceedings of Frontiers in Education Conference, 1996. 26th Annual Conference, 1*, 285-288. Retrieved from http://fie-conference.org/fie96/papers/163.pdf

Robert, J.-M., & Gingras, G. (2007). A study of asynchronous and synchronous collaboration between subjects for the production of educational material. *Systems, Man and Cybernetics. ISIC. IEEE International Conference,* 220-227. DOI 10.1109/ICSMC.2007.4414111

Stodel, E. J., Thompson, T. L., & MacDonald, C. J. (2006). Learners' perspectives on what is missing from online learning: Interpretations through the community of inquiry framework. *International Review of Research in Open and Distance Learning, 7*(3). Retrieved from www.irrodl.org/index.php/irrodl/article/view/325/743

Taylor, J. C. (1998). Flexible delivery: The globalisation of lifelong learning. *Indian Journal of Open Learning*, *7*(1), 55-65. Retrieved from www.usq.edu.au/users/taylorj/readings/caudit.htm

Townsend, A. M., Demaire, S. M., & Hendrickson, A. R. (2001). Desktop video conferencing in virtual workgroups: Anticipation, system evaluation and performance. *Information Systems Journal, 11*(3), 213-227.