

Harmonizing the Virtual Choir: Interactive Synchronous Webinars for Online Education

Jinnette Senecal and Russ Gazda

ABSTRACT - The doctoral level online program at a large southwestern college of nursing required synchronous web-based conferencing tools to support and promote active learning and virtual social presence at the faculty-student and student-student level. The solution had to be affordable, scalable, and versatile enough to work for many different courses and instructional scenarios. Adobe® Acrobat® Connect™ Pro proved to be a viable webinar tool across several different online courses taught by faculty with varying technical skill levels. This qualitative/case-study report offered by the college instructional technology support group focuses on the challenges, successes, and best practices of the experience using data collected over the last two academic years.

Keywords: Webinars, online instruction, collaboration, synchronous, best practices

Introduction

Synchronous computer-based web-conferencing (also referred to as desktop conferencing, webinars, or net meetings) is increasingly being incorporated into distance education for its affordability, scalability, and ease of use. Popular and well-known commercial solutions include Adobe® Acrobat® Connect™, Elluminate®, Horizon Wimba Classroom, and Cisco WebEx. Most software solutions share common features such as text chat, the ability to share webcam or high definition video, audio via voice over internet protocol (VoIP), and some kind of desktop or application screen sharing. Another common feature is that basic meeting attendees can join online sessions from any computer operating platform/browser for free. The licensing costs are assumed by the hosting institution or person.

The PhD program at Arizona State University, College of Nursing & Health Innovation made a commitment upon program initiation to offer high-quality distance education, with a focus on social presence and synchronous learning engagement. To meet those goals, program faculty have incorporated Adobe® Acrobat® Connect™ Pro, which is centrally licensed at Arizona State University. The American Association of Colleges of Nursing reports that during the 2008-2009 academic year, only 7.8% of surveyed doctoral level nursing programs offered 100% level of distance education, and only 21.6% of programs offered distance education at the 50-99% level (Fang, Tracy, & Bednash, 2009). While higher education in general has shifted to meet the great demand for distance education, less than one-third of U.S. doctoral-level nursing programs are offered in a mostly or fully distance education model.

While educational research focused on integration of synchronous web-conferencing is scant as yet, prelimi-

nary findings indicate that it can increase student collaboration/contributions, result in significantly higher student satisfaction, improve communication at the faculty-student and student-student level, and promote active learning experiences (Bower & Hedberg, 2010; Little, Passmore, & Schullo, 2006; McBrien, Jones, & Cheng, 2009).

Purpose

The purpose of this qualitative/case study report is to examine the experiences of a doctoral-level online nursing program that has used Adobe® Acrobat® Connect™ Pro to provide synchronous learning activities across most courses for the last two years. The focus of the analysis is to explore themes in usage scenarios and to identify best practices for implementing synchronous web-based conferencing tools. Related issues such as technical hurdles, logistical challenges, and infrastructure needs will also be addressed for implications to teaching practice.

Participants

The PhD program at Arizona State University, College of Nursing and Health Innovation (CONHI) was approved by the Arizona Board of Regents in mid-2007, with two entry pathways: BS-PhD and MS-PhD. Course roll-out began in the fall 2008 semester, with an initial cohort of 11 students. A second cohort of 14 students entered the program in the fall 2009 semester. Several of the students in each cohort are distance learners, from a variety of geographical regions such as Mexico, Oman, and the Midwest U.S. Student professional backgrounds and specialties vary immensely, with interests ranging from nurse education, administration/leadership, midwifery, obesity research, elder care research, and community health.

PhD course instructors are primarily tenured or ten-

ure-track research faculty, and most reported at least minimal experience teaching online prior to engaging in the doctoral program. Instructional technology planning, training, and implementation support is provided by CONHI's internal *Evaluation & Educational Excellence: Media, Instruction, & Communication Support (E³: MICS)* group. E³: MICS is comprised of a coordinator/manager, an instructional designer, and two media technicians.

Research Design and Methods

The research design was mostly qualitative. Data collection was primarily conducted through:

- Instructor interpretations of usability (ease of use) by examining the quality and utility of the Adobe® Acrobat® Connect™ Pro webinar tool;
- Informal observations of the technology challenges faced by students as reported by instructors and teaching assistants;
- Assessment of personal conversations between instructors and students for themes of social engagement and active learning processes; and
- Written student feedback related to logistical issues and quality of learning transactions while using Adobe® Acrobat® Connect™ Pro.

The authors analyzed communications with the students and instructors in order to improve the educational process for future offerings of online courses. The results of this research will inform instructors and technology planning/support staff on how to best implement the use of webinars for online learning.

Challenges and Requirements

The integration of Adobe® Acrobat® Connect™ Pro into the doctoral program presented several challenges for faculty and students. One of the most significant obstacles encountered was providing effective and timely training. Comprehensive technical orientation to Adobe® Acrobat® Connect™ Pro was provided at the start of the fall 2008 semester to each group respectively. This model of training was somewhat ineffective for instructors because several individuals attended the orientation weeks or months prior to when their teaching assignment required use of the webinar software. They expressed feelings of disorganization, frustration, and inability to succeed with Adobe® Acrobat® Connect™ Pro, because of the time gap between training and consistent use. Additionally, the faculty orientation session focused upon technical functionality of the platform and did not incorporate pedagogical planning strategies, or best practices for effective teaching. Little, Passmore, & Schullo (2006) point out that a multidisciplinary approach which incorporates faculty expertise with a focused instructional design planning process is imperative for successful webinar experiences.

In practice, each instructor adapted the webinar software in a unique manner in accordance with their individual instructional goals, objectives, teaching styles, and

level of comfort with the technology (see Table 1). This flexible multimodal technology built into Adobe® Acrobat® Connect™ Pro makes it a powerful teaching and learning tool. However, the doctoral students were often confused from course to course and uncertain about how to adapt their technical skills to each class scenario.

Instructors and students similarly faced many recurrent technical difficulties such as initiating video and audio; loading and displaying presentation files; and observing appropriate in-room microphone use during class meetings. Audio feedback loops frequently occurred because of multiple in-room participants who used their laptops to join in the webinar, and then turned on their microphones at inopportune times. Remote students sometimes forgot to turn their microphones off appropriately, thus cancelling out others' attempts to broadcast VoIP. Additionally, the in-room instructors and students frequently began side discussions or Q&A sessions without talking into a microphone, which resulted in the distance students being unable to hear anything. In some cases, this evolved into the practice of in-room students relaying the conversations via text chat to their distance peers, which forced them into the role of moderators instead of simply participating in the classroom discussions.

In-classroom activities posed another logistical challenge. Interactive exercises led by the instructor often did not translate well to the webinar environment. This occasionally resulted in distance students "sitting out" and waiting for lecture/discussion to resume. In-classroom small group activities were also troublesome because remote participants sometimes did not have the appropriate number of people to form a group, or technical ability to complete group work successfully via webinar.

Ultimately, many of these challenges were observed because of this doctoral program's unique educational model: providing local students a principally traditional face-to-face classroom experience, with virtual integration of a few distance students. The majority of technical difficulties related to audio/video or presentation control may have been reduced or eliminated with either a more traditional broadcast model or a standard webinar model.

Best Practices and Supporting Success

Prior to beginning any course, the most important best practice for instructors is to develop clear and pedagogically-appropriate strategies for webinar use. Detailed planning can prevent a wide range of frustrating problems with webinar technology. Consultation with instructional design and/or technology support staff can be very helpful with this process. Transparent course organization and consistent, well-structured synchronous learning experiences can increase student interaction and level of engagement (McBrien, Jones, & Cheng, 2009). Expectations for style and level of webinar participation need to be clearly outlined for students at the beginning of the course to avoid confusion at point of access. Student group activities or interactive exercises that are not well

suitable to webinar collaboration should either be redesigned or provided in an alternative context, such as an online course management system, discussion board, or via email.

During the faculty orientation and training phase, instructional design/technology staff should provide pedagogically-grounded recommendations for synchronous learning activities, instead of solely focusing on basic technology competence. Initial training should be provided close to the time of use, along with several opportunities for “safe practicing” prior to engaging with students. Quick reference cards or basic technology flow charts that cover basic moderator functions can be of great assistance to faculty while preparing for/during webinar sessions. In the authors’ experience, utilizing a “buddy system” during meetings can be very helpful: incorporating a teaching assistant, or instructional technology staff member, or even a fellow faculty member to help facilitate the webinar/keep participants organized and on-task.

Additionally, instituting one to two mandatory practice sessions for new students will quickly get them oriented to webinar technology and prevent in-class problems with cameras, VoIP, and screen/document sharing (Little, Passmore, & Schullo, 2006). Students should also be provided with some version of quick reference cards or technology flow charts, modified to include participant-level information and clear resources for obtaining assistance if needed. For optimal student success, it is critical that they utilize newer generation personal or Macintosh computers, have access to high-speed internet connectivity, and be well-versed in the use of their computer microphones.

Instructors must be diligent and persistent in requiring

microphone use for all in-class participants during mixed-mode face to face (F2F)/webinar sessions. This practice will reduce incidences of missed conversation for distance students, and avoid unnecessary reliance on students as peer-moderators. Furthermore, instructors should recognize that while webinar software platforms provide excellent, flexible, multimodal discourse, students can easily become overwhelmed and overstimulated by incorporating a large number of features simultaneously (McBrien, Jones, & Cheng, 2009). Thus, the authors suggest selectively incorporating only two to three interactive functions at any given time during the course meeting.

In the authors’ experience, the most viable path to webinar success includes adequate planning, a willingness to adapt as needed, and preventing as many problems ahead of time as possible.

Implications for Future Webinar Usage

The authors intend to continue using Adobe® Acrobat® Connect™ Pro as a means of synchronously connecting doctoral program instructors and students for collaborative, active learning experiences. The robust, flexible, multimodal platform provides a virtual learning space with limitless versatility. Web-based conferencing allows teaching institutions to reach a more diverse body of students than ever before, while maintaining high programmatic quality.

The ever-increasing sophistication and computer literacy levels of incoming students will enable instructors to expand and modify existing webinar techniques for future online participants. With refinement of best instructional methods over time, a lot of practice, and a little patience, we can bring harmony to the virtual choir of webinars in online higher education.

Table 1. Observed Instructional Use Scenarios for Adobe® Acrobat® Connect™ Pro in Doctoral Courses

Scenario	Description
F2F classroom broadcast	Traditional F2F classroom meeting with simultaneous webinar broadcast (high-quality video, VoIP, desktop screen share) to distance students. Distance students may participate via text chat, VoIP, or both. Student presentations may be facilitated in this manner for F2F and distance students.
Full webinar	Traditional webinar style where all instructors and students log in from their individual locations. VoIP and text chat discussions function as primary modes of discourse. Webcams may be utilized, but absorb significant bandwidth.
One-to-many	A lecture model that typically involves one presenter delivering a presentation and VoIP audio to a group of people sharing a computer or in a room with projector. This model rarely utilizes video or two-way VoIP. Incoming questions for the presenter are typically posed via text chat.
Archive	Utilization of Adobe® Acrobat® Connect™ Pro to record VoIP audio and desktop screen shares from the instructor at a local F2F meeting for later review by students. No live attendees or interactive communication.

F2F = Face to face

VoIP = Voice over internet protocol

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