

Improving Teacher Quality with Web-based Video Cases

Explore the use of video cases to reflect and discuss how practicing teachers implement standards-based reform and infuse technology across the curriculum. Learn about using an online digital video library (DVL) for improving teacher quality through the effective application of educational technology. The DVL is an online resource of video cases drawn from lesson activities in the *NETS for Students: Connecting Curriculum and Technology* (2000), and the NETS teacher standards publication *NETS-T: Preparing Teachers to Use Technology*. The NETS DVL translates the language of pedagogical standards into practical and specific strategies for the classroom. The DVL cases present practicing educators modeling standards-based instruction that effectively employs technology. The DVL is supplemented with descriptive and reactive materials, including expert commentary, curriculum resources, and technology white papers. The DVL goals are to (a) give preservice teachers a resource for learning to implement the standards and give teacher education faculty quality digital content for their methods classes, (b) increase the implementation of the NETS for teachers and students to enhance instruction, (c) teach educators how to use technology by teaching them with technology, and (d) support the awareness of digital equity and access to quality digital materials.

To reduce production cost and editing time, a 3-camera live switch approach was used. The pure digital solution preserves a high quality video image from beginning to end without video degradation. Video segments are shot and edited in digital format using 3-chip SONY digital video (DV) camcorders. (A 3-chip camera produces high quality pictures that can be distributed in any medium, from broadcast television to DVD and streaming media.) A 3-camera live switch approach requires a professional media crew of eight: a director, a content specialist to assist director, a switch operator, an audio engineer, three camera operators, and a cabling/camera assistant. With this equipment and personnel, everything that takes place in the classroom is recorded in a linear narrative, giving viewers the opportunity to hear and see everything that happens in the lesson.

Immediately upon leaving the classroom, the video segments are ready to be critically evaluated without waiting for the traditional editing time to piece together the lesson. After evaluation, the digital video segments are classified, sorted, indexed, and stored on digital tape for archival purposes and then edited on state-of-the-art nonlinear digital editing systems using Final Cut Pro 3. By using this approach, the lesson can be digitally compressed to any platform using any codec (video compression technology) for playback. Real Player streaming technology is used to deliver the content via the Web and MPEG2 for DVD production.

This session will present digital video lessons of PK-12 teachers modeling the National Educational Technology Standards (NETS) for Students and teacher education faculty modeling the NETS for Teachers. Presenters will (a) briefly describe the DVL case model, (b) provide a brief overview of current research studies, (c) discuss DVL innovations, and (d) present five cases from the DVL collection.