

Multisensory Learning

Teachers at Four County Career Center put sight and sound into their lesson plans. *By Claudia Graziano*



(From left to right) Bill Spiess, Steve Sheehan, Rob Williams and Donna Robinson are proponents of audiovisual technology at Four County Career Center.

Instead of scribbling notes on an overhead projector while throwing out questions to the class, many teachers now take advantage of state-of-the-art audiovisual (AV) technology to update their teaching techniques and engage students with more interactive lectures and discussions.

At Four County Career Center, a vocational high school and adult education center in Archbold, Ohio, AV technology is becoming a common classroom fixture, and teachers are developing innovative techniques for incorporating the technology into their lesson plans. During the 2005-2006 school year, 40 PolyVision Walk-and-Talk interactive whiteboards, JVC DVD/VCR combination devices and Toshiba LCD projectors are being installed in classrooms at Four County, and as many

teachers are getting notebook PCs and training on how to use the new equipment. The object is to make learning not only more interactive, but multisensory as well.

“With the equipment upgrades, each classroom will be a new experience,” says Rob Williams, hardware support coordinator and the project’s initiator. “For students, it’s no longer just about what they read, but about what they can see, hear and touch.”

Instead of everyone crowding around a single 17-inch computer screen or following along on individual PCs in the computer lab, students can now view Web sites or electronic documents that teachers project onto 4-foot whiteboards, making it easier for students to stay engaged in discussions and lectures. In addition, teachers and students can write on whiteboards and

have their comments saved electronically, along with the document being viewed.

Interactive whiteboards use resistive sensor technology to record handwriting. As teaching aids, interactive whiteboards are vast improvements over paper-based whiteboards, chalkboards and overhead projectors. Because interactive whiteboards are linked to computers, they can save, print and share all content generated on them.

“The biggest thing for me is that [the new equipment] makes students part of the learning process,” says Donna Robinson, who teaches English and Mass Media at Four County, and was one of the first teachers at the school to experiment with the

whiteboards last spring. This year, she plans to have her students use the whiteboards to present their own projects using Microsoft PowerPoint and then to lead classroom discussions. Using these devices “makes lessons more interesting for students,” she says. “They need to be involved and to learn how to use technology. Like any new technology, [the system] may seem overwhelming at first, but once you begin using it, it is very user friendly.”

HANDS-ON LEARNING HELPS

Engaging kids in the learning process is a challenge for teachers at any school. But at Four County Career Center, students learn real-world vocational skills, so using hands-on teaching techniques is a must. The center provides training to high school juniors and

TECH-SAVVY LESSON PLANNING



Donna Robinson, Four County English and mass media teacher, created the following lesson plan for her students. It required the use of an electronic whiteboard, LCD projector, notebook PC and the Internet.

Research Paper Lesson 3: Distinguish between credible and noncredible sources using the Internet.

Duration: One class period

Student Objectives: Students will identify the indicators for evaluating a Web page for credibility.

Content Standards Met: Research (Using Grade 12 Indicators)
Identify appropriate sources and gather relevant information from multiple sources (school library catalogs, online databases, electronic and Internet-based resources). Determine the accuracy of sources and the credibility of the author by analyzing the sources' validity (authority, accuracy, objectivity, publication date and coverage).

Materials: Computers with Internet connections; electronic whiteboard; LCD projector; notebook PC; handout

DIRECTIONS/PROCEDURES:

Step 1: During class discussion on the validity of sites easily accessed on the Internet, ask students whether they believe everything they read and why it is important to have a credible source.

Activity: Using the whiteboard, notebook PC and LCD projector, type in www.geoffmetcalf.com/bread.html. As a class, circle in red the items that should be strong indicators that this site may not be credible. Circle in blue the items that may cause confusion as to whether or not the site is credible. (Save and print this page when finished for students who are absent.)

Step 2: Discuss how easy it is to make a Web site and explain that finding information on the Internet does not make it credible.

Activity: Using the whiteboard, notebook PC and LCD projector, type in www.bgsu.edu/colleges/library/infosrv/lue/webwizard/evaluate.html and discuss the indicators for evaluating a Web site. Using the whiteboard tools, highlight the points students should take notes on.

Ask a few students to volunteer to come to the board. Each student should find a random Web page. As a class, highlight the indicators that are met and determine whether the source is credible. Continue with each student.

Assignment: Using the "Checklist for Evaluating Web sites" handout from the www.bgsu.edu/colleges/library/infosrv/lue/webwizard/evaluate.html site, students will evaluate two possible sites for their research paper to determine the sites' credibility.

Evaluation: This information will help guide students while doing Research Paper Lesson 4: The Invisible Web, tomorrow.

seniors from 22 school districts in nearby Defiance, Fulton, Henry and Williams counties. Training is offered in 26 fields, from carpentry to interior design.

"Students master more competencies when instructional strategies are used," says Staci Kaufman, the school's academic supervisor. By using the whiteboards, she

adds, "Difficult concepts can be presented in new ways to reach all types of learners."

Robinson says the AV technology frees teachers to move about the classroom. "I can walk around the room and point and click using a remote control," she explains. "And it lets us do more things as a class."

For example, students can take turns

going up to the whiteboard and marking, circling or adding content. Notes made on the whiteboard can be saved electronically, so students who are absent can get a printout of what they missed.

Collaboration is another benefit of the technology. Teachers can work together and use the networked interactive whiteboards to build shared lessons, for example.

These benefits do have a cost attached: Outfitting each room with an interactive whiteboard, wall-mounted LCD projector and DVD/VHS device isn't cheap. Williams says Four County spent roughly \$2,500 per classroom, and that doesn't include the new notebook PCs purchased for teachers.

The money for the upgrades came from the school's tax abatement funds, according to Bill Spiess, Four County's director of operations. "When new businesses move into our communities or existing businesses make improvements, local government may offer tax incentives," he explains. "Tax abatements are paid to schools to help offset funds that would be lost. We have a special fund that allows us to update technology and equipment for labs and classrooms."

Of course, whiteboards enhance learning only when teachers use them effectively. "We had teachers complete a questionnaire on how they planned to use the interactive whiteboards," says Williams. The answers helped determine which classrooms received the upgrades.

The school was already upgrading teachers' desktop PCs to notebooks, and some teachers requested LCD projectors for the new school year. A day of training was held in August to give teachers who were to receive the upgrades tips on using the new equipment.

"My plan is to get the teachers excited [about the technology]," Williams says. "Having this equipment in their classrooms — video, Internet streaming, cable news, DVD, the interactivity, sound reinforcement and so much more — translates into a better learning experience for our students." ☐

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