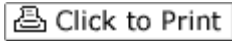


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## AV Upgrades Educators Can Make Right Now

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By Linda Seid Frembes

As the lazy days of summer set in, thoughts of school are far behind. But for AV professionals, summer is the prime time for technology and equipment upgrades in schools and universities around the country. As mid-summer approaches, there are still technology upgrades that can be completed in time for the start of the school year. "There are lots of technology options that do not require the planning and budgeting of a large-scale installation," says Theresa Naumann, president of [Matrix Ingenuity](#), a systems integration firm based in Sacramento, Calif. "Summer is a great time to look at smaller AV investments—grant money is coming due and new budgets for the year are approved."

With so many choices, how can AV staff members help their school choose the right tools and technology right now? According to Naumann, there are certain sure-fire upgrades that will make a big impact in the classroom, without blowing apart the AV budget.

### Document Cameras and Projectors

Document cameras are this century's answer to the overhead projector. For only a few hundred dollars more than an overhead projector, this type of equipment provides the same functionality, plus the capture and recording features of a digital camera. With the addition of a projector, the expanded capability allows for teachers and students to view magnified 3D objects that might be too small or delicate to be passed from student to student.

"Document cameras can be used in any curriculum—from English to science and math," Naumann says. Many document cameras provide basic functions, but Naumann suggests that educators focus on certain features depending on type of usage. Important features include the preference of digital versus analog, image clarity, zoom capability, and the ability to capture live movement. Naumann recommends the [ProMax DP580](#) document camera, but also points to [AVerMedia's](#) portable options, which offer basic functions in a smaller package.

### Mobile AV Carts

Agile AV carts have replaced the bulky TV/VCR racks of the past. As components have gotten smaller, AV carts now pack more punch in less of a footprint. Common components include a DVD/VCR combo unit, an amplifier for audio, a small PC or laptop connector, and even a wireless web tablet or a small projector.

"Cart manufacturers have really addressed some of the common problems we've seen in the past—namely issues with proper ventilation and overheating," says Naumann. Steel carts by [Spectrum Industries](#) and [Video Furniture International](#) provide proper ventilation for components as well as better designs for power handling and locks for securing the equipment.

### Wireless Audio Systems

While many manufacturers target their audio systems for the education market (among others), [LightSpeed Technologies](#) has developed a multimedia classroom amplification system specifically for teachers' use: the 780iR. Using wireless IR technology, the system is quick to set up and easy for a non-technical person to understand and use. The LightMic IR wireless microphone is lightweight enough to comfortably hang around a teacher's neck, enabling the use of both hands during a lecture. "Using IR technology eliminates the problem of interference that you may see in a radio frequency (RF) environment," Naumann says. "You can set up this system in neighboring classrooms and not have any problems with interference."

### Personal Response Technology

InterWrite Personal Response System (PRS) by [GTCO CalComp](#) is a new technology that is quickly gaining ground in the education market. Using infrared (IR) clickers—small devices similar to a remote control—students can answer a question or take a pop quiz instantly. Teachers can easily integrate the system into existing Microsoft PowerPoint presentations and get instant feedback on whether students understood the material that was just taught. PRS also integrates with existing whiteboard technology.

"The software is easy to install and even integrates into the existing grading system," Naumann says. "Students can take a

pop quiz and know their score in realtime." The complete system is cost-effective and provides 32 clickers and all essential software/hardware in one package for \$1,466.

### Wireless Bluetooth Tablets

The InterWrite Bluetooth wireless SchoolPad by GTCO CalComp gives teachers control of their computer and lessons from anywhere in the classroom up to 300ft. The SchoolPad allows teachers to give individual attention to each student from around the classroom, allowing for interaction between the lesson and the students. Up to seven SchoolPads can be handed out to allow groups of students to collaborate together on a lesson. The SchoolPad comes with feature-rich InterWrite software and sells for \$497.

Overall, Naumann advises that educators seek professional advice on technology implementations, no matter how large or small. "A professional firm has a wider perspective on how other schools are using technology. We may have ideas on how to integrate your current equipment with new technology—like taking an underutilized electron microscope and connecting it to the new document camera," she concludes. "We want to empower our schools to use AV technology and do understand they are working with a limited budget. Our job is to make sure that technology integration is as cost-effective as possible."

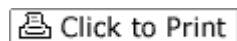
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