

In The Classroom, Tech Options Expand

One well-to-do district shows the growing ways teaching and technology can mix.

By Marianne Kolbasuk McGee, [InformationWeek](#)
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In its use of classroom technologies, Arcadia Unified School District in California's San Gabriel Valley could be considered a role model for other school districts--if they all happen to have the means that Arcadia has. Because when it comes to giving teachers and students technologies, this well-off community 20 miles north of Los Angeles just about has it all.

The debate over the best ways to bring technology into the classroom is by no means settled. Attempts championed by politicians a decade ago to have "a computer in every classroom" often meant an idle computer in every classroom, if the PCs came with no teacher training or inadequate tech support. While most schools can't afford every tool Arcadia has, a look at its experience shows the widening possibilities for technology in the classroom.

In 1996, the district installed fiber optics in all classrooms, providing Internet access and a broadband pipe for other media content. Two years ago, voters approved a \$218 million bond issue to renovate buildings and build new ones, with the biggest single chunk of money designated for technology upgrades.

With that, Arcadia is building "classrooms of the future," says Rob Leri, the district assistant superintendent who was recently promoted from Arcadia's director of technology and information services, a job that reports directly to the superintendent. All the schools will have wireless Internet so students can use their own devices, from laptops to smartphones with Wi-Fi. Students without computers can get access to school computers. Arcadia experimented with providing laptops to a group of students, but that proved inefficient, given how many students already had PCs at home.

Coyla Grumm, an Arcadia middle school classroom teacher for 33 years, is working part time providing tech training to other teachers. Before retiring two years ago, Grumm was involved in a pilot program that wired 13 classrooms. Now, 400 classrooms in 10 schools are being equipped with whiteboards, laptops, and document cameras, which take pictures of images in a textbook, display them on the whiteboard for discussion, and publish them on the class' Web site. That lets students access from home something they might have missed, and the images can be archived to share with other teachers.

Among the instructional tools used at Arcadia is reading assessment software and also MyAccess, an online service that provides students with feedback on the grammar and structure of their writing. Tested in Arcadia's middle schools for two years, it's now being rolled out to fourth- and fifth-graders. Arcadia also is using reading assessment tools and computerized testing programs that let students move on to more difficult levels of material only after they've succeeded at the previous level.

Arcadia also subscribes to Discovery Learning, which provides streaming video content that teachers can use in their classrooms or that students can add as clips to their own projects.

Homework 2.0

Collaborative Web 2.0 technologies also are playing a role, including a gated student blog site designed to

give Arcadia students a vehicle to publish what they're learning.

The site, which has been up three years, recently provided a place for exchanges between a fourth-grade Arcadia class and Alexis O'Neill, an author in the midst of writing a children's book. The blog discussion elicited ideas from the kids about how the author could make Victor, one of the main characters, "cooler," says Grumm. Also, after a recent career day, kids blogged for two days about what they learned.

Arcadia also provides wikis for students and teachers. One Arcadia teacher recently had students create a wiki about the California gold rush, in which each student contributed facts about the topic.

Aside from computer technology, each Arcadia classroom also has microphones and four speakers in each ceiling. "Everyone hears the same thing," Grumm says. "Kids in the back aren't falling asleep." Each school also has a "presentation cart" that includes a Webcam that can let teachers stream class activities for parents to watch from their home or office computers.

On the administrative side, all of Arcadia's student information is electronic. Teachers take attendance electronically, clicking on each absent child's photo in an electronic seating chart, with the information automatically reported to the school office. Grades also are recorded electronically.

For student data, Arcadia does data mining at the district level, using SPSS, DataDirector, or simply Crystal Reports connected to its SQL database to run queries and generate reports. Teachers can search data on their students' performance using a spreadsheet interface.

Perhaps most impressive of all, Arcadia has a staff of 10 to 12 who support technology in the schools. Most school districts don't have that kind of staff or capital budget for technology.

Tessa Jolls, president of the Center for Media Literacy, an organization that provides resources and consulting to schools, says staffing's often the biggest obstacle to deploying technology well. "Schools put funding for buying the equipment, not for support," she says. A teacher left stuck with an IT problem in front of 25 squirming students, with no one to call for help, is going to think twice about using that tool again.

Photograph by Erica Berger