



Schools Going High-Tech

Specially equipped classrooms can enhance learning

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By **ROBERT P. MAYER**
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To teach the ancient topic of fractions to her sixth-graders, teacher Amy Davis turned to the latest in classroom technology.

Davis wrote her math problems on an ACTIVboard, a sort of large computer screen that hangs on the wall and acts as a chalkboard, a video player, an Internet browser and dozens of other instructional tools.

Davis said she liked the board's word-processing functions, such as being able to save, highlight or copy what she wrote, allowing her to do more in less time.

"(The students) are more interested in looking at it and that gets them more involved than just writing on a white board," she said.

Embracing technology as a key to more effective education, Riverside Unified has poured nearly \$9 million during the past three years through federal grants, a local bond and its general fund into creating high-tech classrooms called iTree -- Instructional Technology Reinforced Educational Environments. Nearly \$1 million of that sum has gone toward technology training for teachers and tech support.



Terry Pierson / The Press-Enterprise

Harrison Elementary School sixth-grade teacher Amy Davis, of Corona, teaches math using special technology to help her students learn. Classrooms equipped with teaching technology can help students learn lessons more effectively.

In addition to the ACTIVboard, each iTree classroom comes with remote control-like devices that allow each student to answer a teacher's questions with the push of a button rather than with a raised hand.

Teachers learn which students actually know the answers, and it allows them to later analyze the results and tailor instruction based on students' individual strengths and weaknesses.

Another tool operates like an electronic notepad that allows a teacher or student to write on the board from any place in the room.

A digital projector, a document camera, a tablet laptop, and other equipment totaling \$10,000 round out each iTree classroom.

Program Expansion

The program started as a pilot in 11 classrooms during the 2003-04 school year. It has since expanded to more than 500 fifth- to eighth-grade classrooms.

The district's newest elementary school, Mark Twain in Orangecrest, will open in late August with all iTree classrooms. Like most of the district's other schools, Mark Twain will be wireless, meaning a computer can connect to the Internet via radio waves from anywhere on campus.

Riverside Unified was one of 12 California school districts invited to present at a high-tech conference in San Diego earlier in the year.

"Riverside really has done a thoughtful and comprehensive approach in implementing technology ... all the way down to the individual teacher in the classroom," said Paul Butler-Nalin with the California Technology Assistance Project, an initiative that helps schools integrate technology.

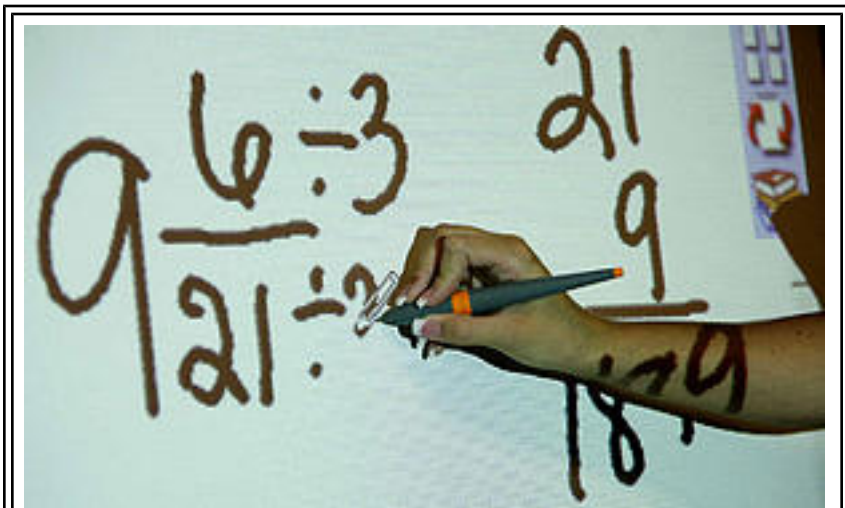
"They really emphasize how to get students actively involved as learners using technology."

Davis's students viewed the equipment such as the ACTIVboard as a welcome improvement.

"It's awesome," said Kieran McVeigh, 11. "It's a lot better than what we had last year. Last year, we had an overhead projector, and you couldn't write on the (projector screen)."

"On this board you can actually highlight stuff better and you can erase it quicker. And you can write a lot more stuff on it," said 11-year-old Samantha Chavez. "It has a lot of space and there's buttons that you can make the writing smaller."

Positive Feedback



Davis uses a stylus on a special board during a lesson. The aim of high-tech classrooms and tech-trained teachers is to boost student achievement.

While using such technology helps teachers with instruction, the main premise behind high-tech classrooms and tech-trained teachers is to increase student academic achievement.

Preliminary analysis of teacher and student self-reported surveys shows that students tend to pay more attention to the teacher and the lesson when such classroom technology is used, said Jay McPhail, an instructional technology specialist.

But drawing a direct connection between technology and higher test scores is tricky, McPhail said.

Still, the district is undergoing a variety of evaluations, he said.

The district will partner with California Baptist University to evaluate the district's iTree classrooms at the elementary-school level. Several times each trimester, Cal Baptist students, armed with a checklist, will make surprise visits to sixth-grade classrooms, checking the extent to which teachers use the classroom technology. They will also interview randomly selected students and teachers.

The district will then compare test scores of students of teachers who frequently use the technology with those who don't, said Tom Barrett, director of educational accountability.

The results, Barrett said, should provide a clearer picture of whether technology and tech-savvy teachers equate to higher-performing students.

It's a higher standard than just a decade before when the state measured technological success simply by the student-to-computer ratio, McPhail said.

"Just putting a computer or that equipment into a classroom isn't necessarily going to transform it," he said.

The district, as well as federal and state governments, has shifted the emphasis in technology dollars to increasing the proportion spent on professional development and tech support.

This summer, hundreds of teachers are attending three district technology training workshops, the second of which just wrapped up last week.

'Feast or Famine'

Funding for education technology continues to be inconsistent, McPhail said. California doesn't earmark in its state budget for such equipment

Schools generally receive tech dollars from grants, bonds and other sources.

"The way it is now, it's feast or famine," McPhail said. "If you get the grant, great, it's feast. If you don't, you're starving."

A large portion of the district's technology funding, roughly \$5 million, came from the federal Enhancing Education Through Technology grant. Riverside Unified was the only Inland-area district to win it twice.

But \$5 million doesn't go far in a district with 42,000 students, McPhail said, and the grant's future remains uncertain as federal lawmakers reconsider funding the grant.

California schools stand to receive hundreds of millions of dollars for technology from a settlement the state reached in an antitrust case against Microsoft Corp. The actual amount will be determined in September.

"It'll help, but it's a Band-Aid on an open wound," McPhail said.

Technology has a short shelf life, he said. The state considers a computer obsolete after five years, making nearly 2,000 of the district's computers obsolete, he said.

Reach Robert P. Mayer at 951-368-9455 or rmayer@PE.com

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