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More Technology Training for Teachers

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Schools are spending more to train teachers how to use technology, but the amount still lags behind that invested in new computers and software, according to a recent analysis of technology spending in education.

Of the estimated \$5.67 billion public schools spent on technology in the 1999-2000 school year, just 17 percent went to teacher training, according to an annual survey

conducted by Market Data Retrieval, a Connecticut-based educational research company. 63 percent was allocated toward computer hardware and 20 percent was spent on new software and upgrades.

"There is pressure to see your investment," said Kathleen Brantley, director of product development for Market Data Retrieval. "You can see computers. It's hard to show how well teachers can use the computers."

Even though spending on teacher training remains a small part of school district technology budgets, there is growing concern that teachers are not adequately prepared to integrate technology into classroom instruction.

"We have made a strategic error in wiring our schools," said Mario Morino, a philanthropist and the chairman of the Morino Institute. "We should have been wiring our teachers. If you can get a teacher to use technology to improve his or her productivity, you get a quantum change."

Schools should show teachers how technology can make them more productive by, for example, automating grade book and attendance records, said Morino. "There is an osmosis process. People have to come to it in their own terms. You start by creating a network for teachers. You show how it will help them."

Teacher training is the key to ensuring that technology investments result in better-educated students, said Barbara Stein, senior policy analyst for education technology issues for the National Education Association (NEA).

"The greatest indicator of technology improving student achievement depends on the degree to which the teachers can use it," she said.

While the 17 percent spent on training pales in comparison to the amount spent on computer hardware, Stein said she was encouraged that spending on technology training has been steadily increasing. The NEA recommends that schools devote 40 percent of their technology budgets to teacher training.

"We're in this mentality of doing things on the cheap in education," she said. "The 17 percent demonstrates progress is being made because it was so much worse in the past."

Morino also recommends a greater percentage of school budgets go to teacher training. He suggests that 70 percent of educational technology budgets should be dedicated to organizational development -- which includes teacher preparation -- with the remaining 30 percent allocated to computer hardware and services.

Even though schools are slowly increasing the amount they spend on training, 46 percent of the schools surveyed said the majority of their teachers are at an "intermediate" skill level when it comes to technology. They are able to use a variety of computer applications, such as word processors, but cannot fully integrate technology into the

curriculum. Twenty-eight percent of schools report that the majority of their teachers are at a beginning level, or just mastering the basics. Just 8 percent of schools say the majority of their teachers have "advanced" skills and are able to fully integrate technology into the curriculum.

"There is concern that a number said their teachers are only at the beginning or intermediate level," Brantley said. "There has been a lot more emphasis on the last year on staff development. You see it building momentum."

Corporate leaders and educators, through the CEO Forum on Education and Technology, also have encouraged schools of education at colleges and universities to step up technology training. Stein said business leaders were initially surprised to see how little time and money were spent to prepare future teachers.

"Folks were astounded at how little was being spent on professional development compared to what they were doing in their corporations," she said.

The NEA is arming its local chapters with information on teacher technology training, and in some states, the union is bargaining with school districts to give teachers more free time to learn how to use new technologies, Stein said.

"We provide our state and locals a framework to become advocates for training," she said. "State laws vary. But certainly there are situations where they can bargain for it."

Stein added that it would take time for teachers to learn how to fully integrate technology into the curriculum.

"We're asking them to change their approach to education," she said. "We're not asking them to type a memo on a computer rather than a typewriter."