



At Baldwin County Public Schools, Fran Pridgeon ensures that all of the teachers are computer-literate.

Technology Takes a Front Seat

Survey shows teachers moving beyond just using technology for administrative tasks.

By Claudia Graziano

FOR TEACHERS AT BALDWIN COUNTY Public Schools in Alabama, using technology to enhance student learning is no longer an option—it's a requirement, says Fran Pridgeon, the district's technology coordinator. "The superintendent has mandated that all teachers should be computer-literate by the end of summer 2005," she says.

To help teachers create more technology-enhanced lesson plans, Baldwin County Public Schools used federal grant money to identify "technology mentors" at each of its 45 schools. "Our goal," says Pridgeon, "is to encourage students to use

technology resources by making technology a transparent part of the learning process."

While other schools around the country may not yet mandate the use of technology as a teaching tool, teachers appear to be stepping up technology usage on their own. For CDW•G's third annual Teachers Talk Tech survey, more than 1,000 K-12 teachers across the country were interviewed to assess the role that technology plays in their classrooms.

Not surprisingly, the survey results show that an overwhelming majority of teachers—86 percent—use technology

to streamline administrative tasks such as reporting grades and tracking student attendance. But arguably more significant is that more than half of those teachers surveyed—56 percent—say that computer technology has changed the way they teach "a great deal."

For example, some of Baldwin County's elementary school teachers now use assessment software to gauge their students' reading, writing and critical-thinking skills so they can tailor their lessons to address students' weak spots—and avoid spending more time on skills the students have already mastered. Teachers elsewhere in the country also use technology—and not only computers—to enhance student learning and save precious classroom time.

Joe Rowe, a computer teacher at H.B. Lee Middle School in Portland, Ore., uses an LCD projector as a "virtual blackboard" to lead classroom discussions and outline student assignments. "It's a great classroom tool because it means I don't have to spend time printing out 30 worksheets every day before class," says Rowe.

Access Is Everything

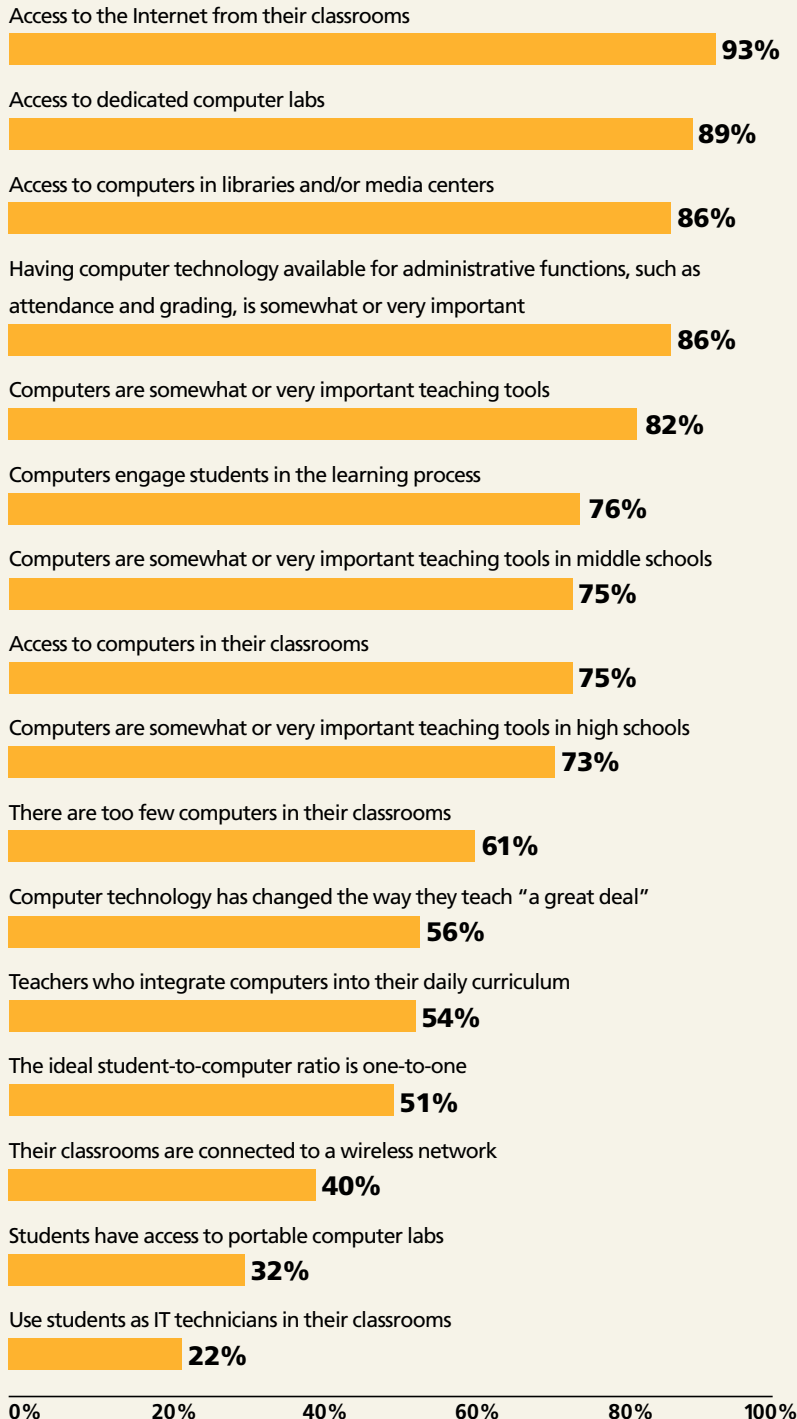
Of course, as Rowe points out, technology must be readily available before it can significantly change the way teachers teach. Computers—along with Internet access—have become more or less ubiquitous in schools, but almost two-thirds of the teachers surveyed feel there are still too few computers in classrooms.

The survey found that if students do have access to computers, they have access, on average, to seven computers in their classrooms, 35 in computer labs, and 17 in library or media centers. More than 51 percent of the teachers surveyed feel that the ideal ratio of students to computers is one-to-one,

Teachers Talk Tech

CDW•G partnered with research firm Quality Education Data to conduct its annual 2005 Teachers Talk Tech survey. QED conducted 1,000 telephone interviews with K-12 public school teachers in March 2005 to complete the survey. A random sample of teachers was drawn from QED's National Education Database, which is a census of all K-12 schools and districts in the United States.

Teachers report the following:



while 33 percent cite a ratio of one computer for every five students as being ideal.

However, simply adding more computers to the classroom may not solve the problem. "A teacher may have three or four computers at the back of the classroom, but those tend to get dusty" from infrequent use, says Rowe. For technology to become a meaningful part of the instruction process, it must be regularly accessible to all students.

One way schools are addressing the issue of accessibility is with mobile computing labs and wireless access. Nearly 40 percent of the surveyed teachers report that their classroom is connected to a wireless network. Such wireless access is becoming essential, says Baldwin County's Pridgeon, for making use of mobile computing labs.

"We're looking into setting up mobile labs equipped with notebook computers so students can have more frequent access to computers, and so teachers can have a little more flexibility in how they teach," says Pridgeon.

Too Little Training?


Interestingly, more elementary school teachers rated using computers as teaching tools higher in importance than either middle or high school teachers. At John Baldwin Elementary School in Danville, Calif., computer instruction begins in kindergarten, where young children are taught keyboard basics and are introduced to instructional software games. By grades three through five, children are using computers for writing activities and interactive science experiments.

But teachers' enthusiasm for using technology as an instructional tool doesn't always translate into practice, John Baldwin Principal Claudia Carbonell says. "We've seen a high correlation between the number of years a teacher has been teaching and their use of computers in the classroom," she says. Teachers with more than 10 years of

classroom experience, for example, are less likely than those new to the profession to integrate technology into their lesson planning.

After years of offering voluntary training sessions, Carbonell says her school will mandate basic technology training for teachers this year so that more experienced teachers learn to use administrative essentials such as e-mail. “We want to make sure we’re at least all on the same page for communications,” she says.

H.B. Lee Middle School’s Rowe agrees that basic technology skills are a must for teachers. “Having every teacher complete technology training is the Holy Grail, but you can’t mandate it,” he says. “Teachers are often hard-pressed for time, and they may need to focus more on other areas like classroom management.” On the other hand, introducing new equipment into the classroom without providing training for teachers can cause more problems than it solves, Rowe adds.

However, Carbonell of John Baldwin Elementary says that hiring practices are beginning to favor those with technology training over those without it. “It’s definitely on our list of interview questions,” she says. “We always ask about someone’s technology comfort level because we want to hire teachers who are going to be able to use technology to engage students.” 

Claudia Graziano is a technology-focused writer based in San Francisco.

Technology Tools That Help Students Learn

Educators seem to universally agree that integrating technology into the curriculum means more than just taking students to the computer lab so they can key in and print their assignments. “The majority of technology use in classrooms today is really productivity-oriented,” says Cornelia Brunner, associate director for the Center for Children and Technology, a division of the Education Development Center in New York.

“The real value of technology comes from using it to support a whole new way of teaching and learning,” says Brunner. In fact, there is a range of technology-driven teaching tools to address students’ various learning styles and proficiency levels. The tools give teachers more choices in designing innovative, engaging lessons.

Preschool software: These computer programs and systems help preschoolers learn to read, write and conceptualize. Using a keyboard or touch-sensitive screen, the computer can present images of letters, animals or other objects. Many systems can also recognize and repeat sounds.

Educational software: The programs enable children to learn math, spelling, geography and other subjects, often in the form of an adventure game. Software for both individual and collaborative learning exists.

Computer simulations: These programs have sophisticated graphics and commands that let a child practice real-world knowledge and decision-making skills, such as planning and managing a city, excavating an archaeological dig or exploring the intricacies of an anthill.

E-mail and instant messaging: The ability to transmit messages from one computer to another gives children the opportunity to instantly communicate through written messages with a variety of people including scientists,

teachers, friends and fellow students around the world.

Online services and the Internet: Bulletin boards, online databases, encyclopedias, dictionaries and research sites give children access to vast amounts of information and allow them to interact with experts.

Graphics: Creative software tools allow children to draw, design and create original works of art.

Distance learning: Students in remote locations can take classes or visit museums and libraries via the Internet, live television feeds, and computer or satellite hookups.

Electronic portfolios: Keeping electronic records of a child’s schoolwork allows teachers and students to easily access that information.

Special education: A variety of tools are available to address the specific needs of children with learning and other disabilities, according to the Newton, Mass.-based National Center to Improve Practice in Special Education Through Technology, Media and Materials. These tech aids include:

- Software-based tools that can help students with learning difficulties organize information for deeper understanding and enhanced expression.
- Technologies that support literacy development in students who are deaf and hard of hearing, including different applications of video and captioning technologies. Also available is a descriptive video service for students who are blind or visually impaired.
- Word prediction software can help students with physical and learning impairments develop their written language skills.
- Hypermedia tools and instructional programs that incorporate a range of media can address the needs of students with various learning styles.