



NATIONAL  
SCHOOL BOARDS  
FOUNDATION

# *Are we there yet?*



**Schools still face  
challenges in using  
technology to improve  
student achievement**



*Research and guidelines on schools' use of the Internet*



The findings in this survey are based on telephone interviews with technology decisionmakers in 811 school districts, including 90 of the largest 100 districts (more than 25,000 students), 398 medium-sized districts (2,500 to 24,999 students) and 323 small districts (up to 2,499 students). Grunwald Associates, a leading market research firm specializing in technology, developed and managed the survey, with research assistance from Rockman et al. The survey was made possible with generous support from the Corporation for Public Broadcasting, AT&T and PLATO Learning.

**S**chool leaders today are under increasing public pressure to improve student achievement. Standards, assessments and accountability measures are in place in school districts across the nation — and the recent sweeping reauthorization of the Elementary and Secondary Education Act promises to “leave no child behind.”

**Yet schools are still unable to take full advantage of technology**, a powerful tool for teaching and learning, according to a new survey from the National School Boards Foundation. The survey of technology decisionmakers in school districts nationwide reveals startling gaps between the promise and reality of technology use in schools.

Many school districts have made great progress in joining the digital age, the survey finds, investing heavily in computers and software and in connecting schools and classrooms to the Internet. They have taken tangible steps to narrow the digital divide between affluent and poor students. Moreover, school leaders believe online

learning is a significant trend. Almost 30 percent believe that at least one in five students soon will receive a substantial portion\* of their instruction over the Internet. School leaders also report strong interest in online resources that will help them satisfy the public priorities of standards, assessments and accountability.

Despite this progress, anticipation and interest, however, schools still need to overcome substantial barriers before they fully realize their return on technology investments. It’s not enough to install computers and wire schools and classrooms for Internet access — although there is still plenty of work to do in this regard. Today, the focus needs to expand to *how* schools are using technology. Many teachers still are unprepared to integrate technology into their instruction, the survey indicates. District leaders report that the Internet remains primarily a research tool, not a forum for interactive teaching, learning, communicating or collaborating.

## Coming soon: online learning for many students

Technology decisionmakers — school leaders who manage, buy or coordinate technology for their districts — believe that technology will have a marked impact on traditional classroom teaching and learning in the near future.

Almost 30 percent of school leaders believe that at least one in five students soon will receive a substantial portion\* of their instruction over the Internet. The most optimistic are urban and rural school leaders, with 31 percent and 30 percent, respectively, stating that that percentage of students will receive a substantial portion\* of their classes via the Internet.

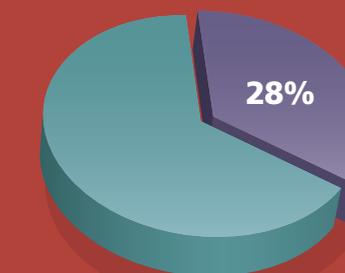
These findings may represent a sea change in education. District leaders see the potential for interactive, online learning to make up a substantial portion\* of instructional time. As more schools move

in this direction, the dynamic between teachers and students may change. With online learning, students can work independently, with customized instruction and at their own pace.

Still, schools have a long way to go before online learning is the norm. About 80 percent of district leaders report that the primary instructional use of the Internet is for research, including teachers’ research for their lessons. Internet use in subject areas is primarily for history/social studies (76 percent) and science (58 percent).

## Are we there yet?

### Instruction in cyberspace



Percentage of district leaders who say that at least one in five students soon will receive a substantial portion\* of their instruction via the Internet

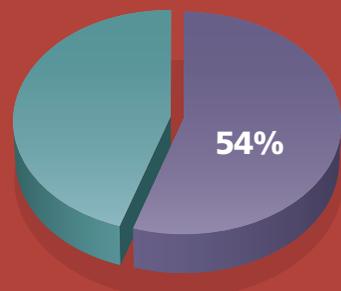
Source: Grunwald Associates



\* One-third or more of instruction in three years

## Are we there yet?

### Students troubleshoot technical glitches



Percentage of districts reporting that students are providing technical support within their district

Source: Grunwald Associates

## Students take charge of technical support

More than half of school leaders report that students are providing technical support in their districts. Often, they are assuming major responsibilities. In 43 percent of districts, students troubleshoot for hardware, software and infrastructure problems. In 39 percent of districts, students set up equipment and wiring. In more than one-third (36 percent) of districts, students take on technical maintenance.

These findings reveal an unprecedented leadership role for students in school technology. One district leader reports that “cyberkids” with technical skills work as helpers or tutors. Another district has help desks at every school run by students who

are trained by a technician. In one district, students supervise Internet use, report problems and monitor equipment. In another, students assist in network engineering—and some have earned network and software certifications in school.

Students seem to be putting their technical prowess to good use in schools, which may have insufficient time or talent on staff for technical support. In the process, they gain experience and skills through performing hands-on, authentic learning tasks, tutoring others, and contributing to effective—and creative—use of school technology. Technical support may be an arena in which students excel—and lead the way.

## Schools bridging the digital divide

Education leaders recognize that schools can help bridge the digital divide. Nearly half (49 percent) of the districts surveyed provide formal technology training to all students. More than 35 percent offer computers to families at free or reduced prices.

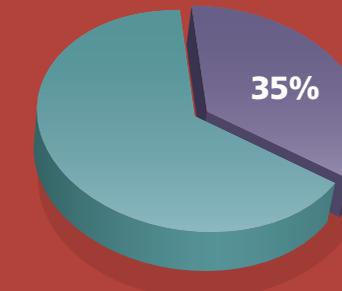
Large districts are significantly more interested in technology equity than small districts; 88 percent of large districts rated their interest as “very” or “extremely” high, compared to 57 percent of small districts.

Funding is still a barrier to equity. Some 72 percent of large school districts say they face barriers in providing their schools with access to the Internet. About one-third of all districts cite hardware as a barrier, while 16 percent report that software is a barrier. Urban school districts are more likely to report barriers to Internet access than suburban or rural districts. Equally telling, 16 percent of all school districts surveyed report that lack of time for staff training is a barrier to providing school access to the Internet.

Still, school leaders believe federal funding has been instrumental in helping to bridge the digital divide. Seventy-one percent of district leaders cited the E-rate program and 17 percent cited the Technology Literacy Challenge Fund with funding technology and influencing Internet use in schools. (E-rate is a federal program that provides discounted telecommunications services to schools. The Technology Literacy Challenge Fund, a competitive federal program, helps states and school districts develop and implement technology plans.)

## Are we there yet?

### Schools help families get computers



Percentage of school districts that offer computers to families at free or reduced prices

Source: Grunwald Associates

## New teachers unevenly prepared

Forty-three percent of district leaders surveyed rate new teachers as only “average” when it comes to their competence in integrating the Internet into their instruction. Thirty-one percent rate new teachers as “expert,” and 26 percent rate them as “novice.”

However, district leaders’ perceptions of new teachers varied significantly, depending on the size of the district. Teachers entering the workforce in smaller districts were rated higher than teachers starting in larger districts by a two-to-one margin. District leaders in

small districts report that 35 percent of teachers are experts, while district leaders in large districts report that 18 percent are experts. This sparks the question: How will schools realize their expectation that more students will use technology for interactive learning without teachers who are better prepared?

To address this challenge, schools are using technology to support teacher training. In fact, 63 percent provide Internet-based staff development. Even so, this may not be enough, given the way technology is underused for teaching and learning.



## Flashback to Safe & Smart

In 2000, the National School Boards Foundation released *Safe & Smart*, a survey of parents and children about children's use of the Internet. At the time, parents and children alike viewed the Internet as a positive force in children's lives. Parents had a balanced view of the threats and benefits presented by the Internet: While they expressed concerns about online safety, parents also said they want their children to be on the Internet learning and communicating.

Today, nine out of 10 school leaders are concerned and vigilant about online safety. Most are responding to legislative mandates and other pressures to protect children from negative influences. More than 90 percent of districts surveyed have installed filtering software. And 78 percent report that teacher supervision is a central part of their response to safety and security issues. More than two-thirds (69 percent) have installed firewalls to protect their networks. Fifty-eight percent have school honor codes for students who use the Internet.

## Technology decisions stay at the top

Despite the rapid advances in technology and the expected increase in online learning in the coming years, decisions on technology policies and budget allocations remain in the hands of a few. School leaders say the superintendent (42 percent), the school board (38 percent), and the technology director or department (18 percent) make final decisions on technology purchases and Internet use.

Parents may have more influence on technology policy and budget allocations in some districts in the future. Already, parents in large districts are more likely to influence decisionmaking than those in small districts. Thirty-two percent of school leaders in large

school districts say parents influence allocation of technology funds, compared to 13 percent in small districts.

Building-level staff, principals and teachers have substantially less influence, especially in smaller districts.

Finally, school leaders want technology to support their academic priorities. They are looking for standards-based resources (64 percent), online assessment and test preparation (59 percent), standards-based report cards (50 percent), and Web-based portfolios (48 percent).

*"The school board is using technology themselves more and more. As their technology knowledge increases, so does their input in district decisions."*

— A school-technology leader



## Guidelines for school leaders and communities

In light of the survey findings, school leaders must consider how they can stretch the capacity of schools and educators to achieve better educational results. Here are some guidelines.

- **Treat technology as an integral tool** for instruction and administration — not as an add-on. Technology is not a frill, it's essential to effective instruction and school vitality.

- **Use the Internet for core educational priorities** that matter most to student achievement. School district leaders report strong interest in online opportunities that match federal, state and local pressures, including standards, assessments and test preparation. School decisionmakers should be informed by these priorities as they make choices. At the same time, schools should understand that they can harness the power of the Internet to create and support diverse learning communities.

- **Invest significantly in professional development** for school leaders and teachers. A broad theme emerging from survey results is that teachers need help incorporating the Internet into regular classroom instruction. For new and veteran teachers alike, the Internet is a new frontier — and one that many have little time or training to explore. Teachers need technology training to be able to use the Internet as an effective, interactive tool for teaching, learning and communicating. Teachers also need to be prepared to guide and assess students in different ways.

- **Anticipate and plan for the changes** that increased use of the Internet will bring to schools. Technology and the Internet are changing the way teachers and students interact — and ultimately, the culture of the school. These changes in roles may yield benefits for both students and teachers as they learn and explore technology — and academic subjects — together.

- **Broaden community involvement** in school technology policies and practices. Educators and school board members may need to look beyond the school system to find models for creative uses of technology, online learning communities and collaborative communications. One possibility: School leaders can arrange for teachers, administrators and school board members to visit local businesses to find out how the workplace is incorporating technology into daily routines. Businesses also can invite educators to corporate workshops for technical training.

Likewise, schools can open their own doors for parents and community members to use computers and the Internet — and, in the process, build community support for technology investments. Additionally, schools can involve technology users — parents, teachers, students, principals and community members — in developing technology policies and priorities.



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*To learn more*

For an electronic version of this report,  
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