

## MARKET BRIEF

# Serving Today's K-12 Learning Environment

### Complex Needs, Comprehensive Solutions

The demands on K-12 faculty and staff have rarely been as complex as they are now. Public and private schools are being evaluated more often, and more strictly, than ever before on their ability to improve student achievement. They must also deal with ever more complicated regulations governing teacher development, parental involvement and school safety. They teach an increasingly diverse student population with a wider range of primary languages, home environments and learning styles than ever before. Because today's students have also grown up in an all digital environment, they are predisposed to interactive learning experiences where they can control the pace of the learning. They also expect to be connected to the world and each other through the Internet and wireless technologies such as text messaging.

AT&T can help K-12 educators improve student achievement, enhance school safety, promote parental involvement and develop the skills of faculty and staff. It assists K-12 schools in achieving these goals with high-bandwidth, secure wired and wireless voice and data networks, videoconferencing, disaster and recovery services, as well as with experienced and skilled staff.

**Today's K-12 curriculum may include a videoconference with a scientist, a video clip about a current event downloaded to classroom PCs or a distance learning class taught by a specialist in another state.**

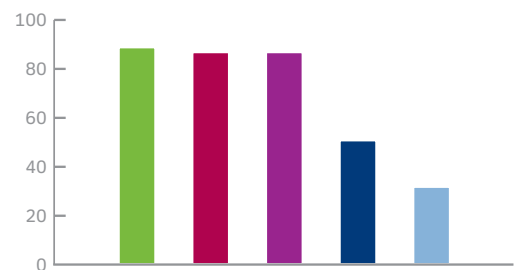
### Improve Student Achievement

Students may take their wireless devices out of the classroom to collect scientific data or to record interviews for a local history project. Distance learning offers a world of educational opportunities for students and faculty in rural or isolated areas, while e-mail and Web access is critical for educational and administrative functions. As students and teachers understand the potential of e-learning, demands for bandwidth and security increase.

AT&T can help meet these needs with its portfolio of Ethernet products which provide flexible connections between multiple school district locations within a metropolitan area. The key products in this portfolio – OPT-E-MAN® Customized Switched Metro Ethernet Service (CSME) and Metro Ethernet – provide schools with high-speed 10 Mbps to 1 Gbps Ethernet transport, allowing connectivity to the Internet or a network-based VPN service. OPT-E-MAN is a high-speed Ethernet service that proactively monitors network availability and latency to assure compliance with Service Level Agreements (SLAs), making it an ideal solution for IP-based voice and distance learning applications. CSME provides the same bandwidth options as OPT-E-MAN but without SLAs, providing a cost-effective and scalable bandwidth solution.

### How Public Schools Use Internet Access

**Most use the Web to find and share assessment data and for digital content for courses**

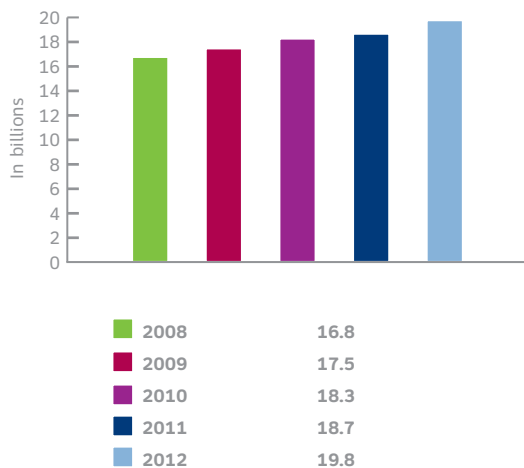


Finding data such as student test results to inform instructional planning at the school level	89%
High-quality digital content for courses	87%
Assessment results and data for teachers to use to individualize instruction	87%
Teacher professional development through online courses	51%
Distance learning to offer students courses otherwise unavailable at the school	32%

Source: U.S. Department of Education National Center for Education Statistics



## K-12 IT Spending in the United States Grows 18% by 2012 (in billions)



Source: Compass Intelligence

AT&T Videoconferencing Services deliver high levels of quality and reliability, allow any mix of IP and ISDN sites to be handled on the same call and provide a multimedia experience on a multipoint call. AT&T Consulting and Integration Solutions help educators design and implement the scalable, secure networks required to handle these and other bandwidth-intensive applications.

Teachers, students and outside experts expect these network-based services to be secure, reliable and easy to manage. AT&T's Security and Business Continuity service takes the headache out of managing educational networks by assessing vulnerabilities, protecting the network infrastructure, detecting attacks, responding to suspicious activities and events and designing enterprise networking environments for non-stop operations.

### Promote School Safety

Securing the safety of students, faculty and staff is essential to a healthy learning environment. In an emergency all members of the school community must be able to communicate with each other, as well as with their families, first responders and other public officials.

Cellular phones are the first line of communication for today's increasingly mobile population. AT&T maintains the largest digital voice and data network in the country, offering reliable, affordable wireless services that help teachers, faculty, staff and students keep in touch wherever they are. In addition, Fleet Management solutions from AT&T and its partners, bundled with the extensive coverage of the AT&T wireless network, allow the school district transportation department to monitor school bus routes via Global Positioning Satellite (GPS) devices. This is an ideal solution for emergency response, as well as for monitoring and optimizing bus routes and maintenance.

Critical information networks must also be kept secure to protect the integrity of sensitive information. AT&T Token Authentication requires users to provide both a password and a physical authenticator such as a smart card to gain access to critical systems.

AT&T's Ultravailable Managed Network Service, Network Disaster Recovery, AT&T Consulting and Integration Solutions, and Managed Storage Services also help assure critical networks and data are continuously available, even in the event of a natural or man-made disaster.

### Enhance Parental Involvement

Studies show – and most teachers know – that a parent who is aware of and involved in a student's progress helps assure their child's success. But with students, faculty and staff juggling busy schedules, it can be difficult for parents to check on a student's progress, clarify class requirements or ask questions.

The AT&T wireless network can keep parents in touch with school and involved in their child's education wherever their daily routines take them. To help faculty and staff address parents' questions, AT&T Unified Messaging<sup>SM</sup> allows them to check their email, landline voicemail, wireless voicemail and faxes through a personal computer or touchtone telephone. Because email has also become a key means of communication among parents, teachers and other school staff, the AT&T Secure E-mail Gateway provides network-based e-mail security and message management, helping to ensure the integrity of messages before they enter the school network. For larger districts with larger amounts of data and more crucial backup requirements, AT&T Storage Connect provides networked storage replication, tape pipelining, tape-backup and recovery for storage area networks.

AT&T Voice DNA<sup>SM</sup> can reduce the cost and complexity of managing the complex telephone networks serving faculty and staff. AT&T Voice DNA provides a complete IP communications solution that includes network-based, fully-hosted VoIP with a full range of advanced calling features, applications, and management tools for employees and remote workers.

### Promote Staff Involvement

Behind every teacher stands a network of staff ranging from administrators to curriculum developers as well as guidance, health and behavioral counselors. To provide the best services for each student, each member of this extended support system must be able to communicate with their peers about the student's needs and progress.

AT&T provides the infrastructure for this communication with services such as AT&T Voice DNA which can reduce the cost and complexity of managing complex telephone networks used by mobile teachers and students.

Keeping on top of schedule changes, students' needs or questions from other staff members is easier with AT&T Unified Messaging<sup>SM</sup> which allows faculty and staff to check their email, landline voicemail, wireless voicemail, and faxes through a personal computer or touchtone telephone. As faculty and staff travel from school to school or to educational conferences and other events, AT&T Wi-Fi provides access to school or district applications or to the Internet from more than 33,000 'hotspots' around the world.

Just as they help students learn, AT&T Videoconferencing Services help schools reach out to new recruits, connect current staff to educational resources and help provide the professional, connected environment that keeps staff motivated and engaged. AT&T can also provide

IP-based videoconferencing and video streaming that allows faculty and staff to attend courses, consult with professionals or meet job candidates utilizing the same IP-based infrastructure as that used for the district's data network.

In an age of stagnant or even shrinking budgets, AT&T IP Telephony/LAN Management and AT&T Long Distance Voice Services save schools money without sacrificing quality, performance, security or control. AT&T's Consulting Services highlight opportunities for schools to reduce costs while maintaining the service levels expected by faculty, staff and parents.

In today's networked world, teaching still relies upon one-to-one communication among people. Let AT&T's services and solutions provide the voice and data connectivity that allows educators to do what they do best: Communicate with, and engage with, their students, parents and other professionals to provide the best education possible.

#### AT&T Foundation

Education is one of the prime focus areas of the AT&T Foundation. The foundation invests in projects that use technology to improve the quality of teaching and learning; supports programs that develop the skills needed for a competitive workforce, and promotes efforts to advance diversity in education and the workplace.

In spring 2008, the foundation announced AT&T Aspire, a \$100 million program aimed at helping students achieve in high school and prepare for college and/or the workforce. The initiative includes funding for programs aimed at keeping at-risk students in school; job shadowing for 100,000 students in conjunction with JA Worldwide (Junior Achievement); commissioning major research on the reasons behind (and ways to reduce) high-school drop-out rates, and underwriting 100 community dropout-prevention summits organized by America's Promise Alliance.

Additional grants announced with the launch of AT&T Aspire include:

- \$500,000 to America's Promise Alliance to help support 100 Dropout Prevention Summits in communities nationwide. The summits will bring together educational experts and business, faith, nonprofit and community leaders across all 50 states to address the high school dropout crisis.
- \$500,000 to Jobs for America's Graduates (JAG), a nonprofit organization that works in 700 public schools nationwide, helping at-risk high school students graduate and make successful transitions to postsecondary education and careers.

#### AT&T Boosts K-12 Learning

##### Improves Student Achievement through

- **Wireless access to data**
- **Distance learning**
- **High-speed data networks**

##### Increases Safety through

- **Cellular phone service for emergency communications**
- **Fleet management solutions/GPS to track buses, school vehicles**

##### Promotes collaboration, professional development through

- **Videoconferencing**
- **Messaging solutions**
- **High-speed data and voice networks**
- **Wireless and long distance phone service**

##### Enhances parental involvement through

- **Wireless voice and data services**

##### Assures Security and Reliability through

- **Token Authentication**
- **Secure E-mail Gateway**
- **Disaster Recovery, Business Continuity and Data Backup**

##### Reduces Administrative and Service Costs through

- **Network administration services**
- **IP Telephony/LAN Management**
- **Consulting Services**

**For more information contact your AT&T Representative or visit us at [www.corp.att.com/edu](http://www.corp.att.com/edu).**

