NCSL

# Connected Learning: A Primer for State Policymakers

Second of four reports

# Expanding Broadband Access for All Learners

BY SUNNY DEYE

The digital age provides abundant opportunities to expand learning to times and places beyond the classroom, with access to global knowledge and resources available at the click of a mouse or the touch of a screen. To realize the full benefits of the digital age, young people need access to broadband—high-speed Internet access that is always on and faster than traditional dial-up access—in order to maximize collaboration, creation and research.

Current Internet connections in schools and libraries are becoming increasingly inadequate to support individualized technology-based learning for all students. While nearly all of the country's schools and libraries are connected to the Internet at a basic level, educational use of computers, tablets, mobile devices and other online applications have increased the demand for higher-performance broadband connectivity.

The federal E-rate program, launched in 1997, has provided a basic level of broadband connectivity to America's schools and libraries, and the Federal Communications Commission is currently in the process of reforming and expanding the program. Since learning often takes place beyond these institutions, access to higher-performance broadband connectivity at home and at other non-school locations is also important.

## Policy Considerations – Broadband for Education

State legislatures are acting to ensure that broadband access is thoughtfully deployed to meet both the needs of today's learners, as well as the increasingly individualized, technology-enhanced learning needs of future generations. Previous efforts by federal and state policymakers have brought some level of Internet connectivity to nearly all the nation's schools and libraries, but while the speed of the connections in many schools was acceptable for yesterday's technologies, it is nowhere near adequate for today's classrooms. The bandwidth required for today's students to upload interactive media content, participate in online learning opportunities, and develop electronic portfolios of work far exceeds what was required a decade ago. Access to high-speed Internet in schools is particularly important for rural and low-income communities. When Internet connections in schools are too slow, and students don't have access at home, students miss the benefits of educational technologies altogether.

Increasingly, the learning that takes place in and out of a classroom is blurring, so that students are truly learning at any time, any place, and at any pace. States are looking to implement digital upgrades sufficient to move schools, homes, community centers, libraries and museums toward the full potential of Internet capability, so that all students will be able to use digital devices to enhance learning in multiple locations.

## State Policy Approaches

State legislatures are enacting policies that emphasize state and district planning, standards, methodology and funding to upgrade broadband and education technology infrastructure.

### ARIZONA

- **SB 1488** (2014) creates the Joint Committee on Broadband Expansion and Education Technology to review the availability of high-speed Internet access within the state, particularly in rural areas; the technological needs of school districts and charter schools in the state, including infrastructure, Internet connectivity, data security and information technology personnel; federal programs relating to Internet accessibility, including the federal E-rate program, and availability and access to federal monies, especially for rural districts; the development of high-speed Internet access in other states, including model governance structures; and the state's current contracts for carrier services and telecommunications and the potential to offer incentives to expand Internet access throughout the state.

### FLORIDA

- **HB 5101** (2014) outlines the details of the state's $40 million digital classroom allocation, including requiring the Department of Education to develop a five-year strategic plan for implementing

technology in classrooms for learning and teaching. The plan will identify minimum technology requirements for hardware, devices, network security and bandwidth capacity and guidelines for the ratio of students to available devices.

### LOUISIANA

- **SB 622** (2014) requires the Department of Education to develop and implement a statewide educational technology plan for public elementary and secondary schools. The plan is to include recommended standards for devices, Internet bandwidth, software applications and local network capacity; clear short-term and long-term goals and standards for school technology readiness; a realistic strategy, timeline and cost estimates to meet both minimum and optimal standards; and consideration of the technology needs of high-poverty and rural areas.

### MARYLAND

- **SB 170** (2014) provides a $3.5 million appropriation for the Digital Learning Innovation Fund to be distributed to local education agencies in need of funds to accelerate their transition to digital learning. The fund will also help agencies upgrade their information technology infrastructure to implement the online Partnership for Assessment of Readiness for College and Careers tests.
- **HB 1388** (2014) requires the Department of Education to report on existing broadband speeds and connections in all public schools in the state. The bill also requires the department to report on each local school system's plan to reach a broadband speed of 1 gigabyte per 1,000 students by FY 2020 through public and private efforts, and to offer classroom teachers support and training in the use of education technology tools.

### NEW MEXICO

- **SB 159** (2014) defines "education technology infrastructure" and dedicates up to $10 million per year from the Public School Capital Outlay Fund in FY 2014 through FY 2019 to correct education technology infrastructure

deficiencies. It requires the Public School Capital Outlay Council to develop a methodology and standards for correcting education technology infrastructure deficiencies.

#### TENNESSEE

- **SB 2519** (2014) requires Local Education Agencies to survey students as to availability of Internet in their homes and to report results to the Department of Education.

#### GEORGIA

- **HB 283** (2013) establishes a grant program that offers incentives to use digital learning in K-12 classrooms, commits school systems to expand and pay for bandwidth for five years, and requires each school to demonstrate or develop a technology plan for student learning that includes professional development for staff.

#### KANSAS

- **HB 2390** (2012) creates a program to facilitate the use of "broadband technology-based video communication" as a tool for distance learning in schools and libraries.

## Considerations for State Policymakers

The state policy examples discussed here encompass a wide range of approaches to improving broadband connectivity and planning for infrastructure upgrades to meet the needs of the 21st century learner. Broadband upgrades are needed to move schools, homes, libraries and community centers toward the full potential of Internet capability, so that all students will be able to use digital devices to enhance learning both in and out of school. As the use of mobile devices, computers and the Internet increases, both in intensity of use and the bandwidth requirements of applications being used, the capacity of broadband will continue to be a critical issue for states.

Learning institutions—including schools, libraries, museums and community centers—are finding new ways to increase access to learning opportunities, and state policy can help accelerate these efforts by providing frameworks for higher-performance broadband connectivity. Other briefs in this series explore how state legislatures are adjusting policies to harness the power of technology in the classroom, protect student privacy and promote digital literacy so that young people know how to communicate, collaborate and behave ethically online.

## Recommended Resources

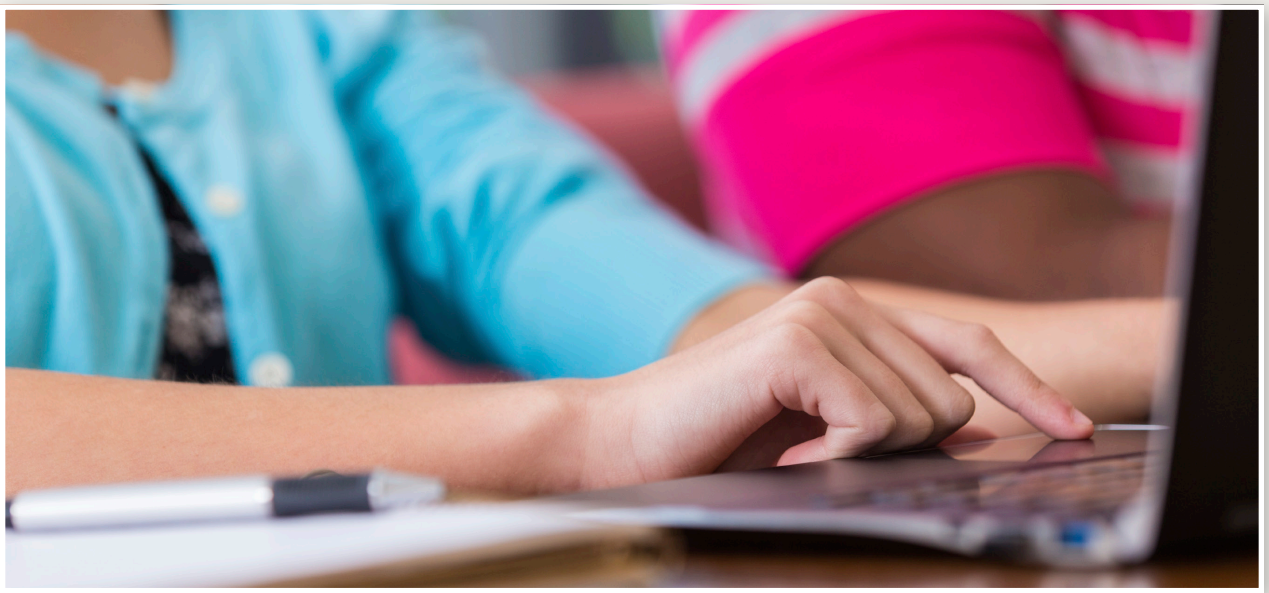
*Learner at the Center of a Networked World* is the 2014 report of the Aspen Institute Task Force on Learning and the Internet.

The Connected Learning Alliance is a network of organizations, projects and people working to make learning relevant by integrating personal interests, peer relationships and the tools of the digital age.

The State Education Technology Directors Association works to build and increase the capacity of state and national leaders to improve education through technology policy and practice.

## NCSL Resources

State legislative involvement has been an important factor for successful implementation of a variety of broadband projects. NCSL closely tracks state broadband legislation here: www.ncsl.org/research/telecommunications-and-information-technology/telecommunications-technology-and-regulation.aspx



# Policy Questions to Consider

1. What is the vision for learning that technology will be supporting? Bandwidth requirements depend on the role technology plays in supporting teaching, learning and assessment within districts and schools. Before making decisions about technology, schools and districts need to articulate how students will use technology to learn.
2. Does the state have the broadband necessary for students to be able to use their computing devices at school and at home? Legislation, like Arizona's SB 1488 (2014) and Louisiana's SB 622 (2014), (described on pages 2 an 3) can appoint working groups to review the technological needs and availability of broadband within the state and make recommendations about standards, goals, strategies, timelines and cost estimates to meet both minimum and optimal standards.
3. What resources are available to fund the transition? One of the most important resources available for the transition to sustainable broadband connectivity in schools is the Schools and Libraries Universal Service Support Program, also known as the E-rate program. The Federal Communications Commission's E-rate program provides discounts of up to 90 percent to help elementary and secondary schools and eligible libraries connect to the Internet and maintain internal connections. The highest discounts are provided to high-poverty schools and libraries, and rural schools and libraries can also apply for higher discount rates.
4. Is support available to help school districts leverage federal, state and public-private partnership programs that support their broadband needs? States are creating departments, commissions or other government structures to support broadband deployment to schools, homes, community centers, libraries and museums. For example, New Mexico SB 159 (2014) dedicates up to $10 million per year to correct education technology infrastructure deficiencies and tasks the Public School Capital Outlay Council with developing a methodology and standards for correcting the deficiencies.

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