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Blueprint for Opportunity

No. 5

Implementation Memo

TO: Governor Ritter
Members of the 66th Colorado General Assembly

FROM: The Bell Policy Center – Frank Waterous, Senior Policy Analyst

DATE: February 9, 2007

RE: Implementing Bell's Blueprint recommendation No. 5 to close the technology gap that leaves some kids behind, especially in rural communities

In the 2006 Blueprint for Opportunity, the Bell Policy Center recommends:

Close the technology gap that leaves some kids behind, especially in rural communities.

We need to encourage distance learning by equipping every classroom with quality educational technology. Our efforts should focus on low-income and rural schools and should include lowering the number of students per Internet-connected computer. This should involve partnerships with private Internet service providers and include a multi-year grant program to help schools upgrade capacity and training.
(See *Blueprint*, pages 10-11)

This memorandum briefly discusses the issues surrounding this proposal, describes steps for implementing it, outlines some of the factors to consider and lists sources for additional information and resources.

If you are interested in pursuing this issue further, we are prepared to work with you. Please contact the author of this memo directly at (303) 297-0456 or waterous@thebell.org, or Rich Jones, director of policy and research, at (303) 297-0456 or jones@thebell.org.

Overview of the issue

Innovative instruction methods and delivery systems such as distance learning can greatly expand educational opportunities, especially in low-income and rural schools. Technologies such as high-speed Internet and video conferencing now make it possible to transmit educational resources to a wide range of classrooms, regardless of location. With the appropriate oversight and accountability mechanisms in place, online education can be a powerful tool for helping more students to succeed.¹

The U.S. Department of Education's National Education Technology Plan recommends that all schools support distance learning as a way to improve education. Among the action steps

outlined in the plan are increased support for e-learning and virtual schools, greater use of digital content (multimedia or online information) in the classroom, and expanded broadband access.²

Colorado has made significant efforts to help rural areas gain broadband Internet capacity. In 2000, state lawmakers launched the Multi-Use Network Project (MNT) and the Beanpole Project to expand broadband Internet access to rural communities (see Blueprint Implementation Memo No. 30 for details on these efforts). Nevertheless, the state still lags behind when it comes to student access to technology.

In May 2006, *Education Week* gave Colorado a grade of D-minus for student access to technology, compared to a national average grade



of C-plus. The magazine noted in its “Technology Counts 2006” report that, on average, Colorado has 10.4 students per instructional computer and 11.1 students per Internet-connected computer in the classroom. The national average is 7.6 students per instructional computer and 8 students per Internet-connected computer.³

Regarding broadband access for Colorado’s rural schools, the FY 2005-06 MNT annual report states that fiber-optic connectivity is now available to every county seat in the state except for Silverton (San Juan County), which uses high-speed microwave. Nevertheless, only 14 of Colorado’s school districts currently use MNT as their broadband provider. At the same time, the report goes on to explain that 66 percent of Colorado schools have participated in the federal E-rate program, which provides funding to schools for Internet access. These schools now obtain Internet access from 76 different service providers, including MNT.⁴

Implementation steps

Before making specific implementation recommendations, the Bell Policy Center needs to obtain more information on the current state of broadband access and the availability/use of education technologies in Colorado’s schools. This information would be valuable for the state to collect, as well, so that potential policy directions can be better understood.

Among the key questions that must be addressed before substantive recommendations for legislative or executive action can be made are the following:

- What is the current state of broadband access and use in the state’s school districts?
 - o What educational needs are being met through the current broadband technologies, connections, or provider arrangements?
 - o What educational needs are not being met?

- What challenges or obstacles remain for schools in expanding their access to broadband or similar technologies for instructional and other education-related purposes (e.g., teacher professional development)?
 - o Are the obstacles primarily technical or financial in nature?
 - o Are they personnel or human-capacity related?
 - o Do they have to do with the availability of quality curriculum or instructional content?
- What best practices exist in Colorado communities that could be tried in other settings, or that could serve as a foundation for state and local initiatives?

Factors to consider

Rural school districts have always faced unique challenges attracting quality teachers and offering a broad range of courses. The Department of Education’s National Education Technology Plan includes several “success stories” from various states in which technology was used to address these challenges.⁵ For example:

- The Florida Virtual School began as a grant-based project, but developed into the nation’s first statewide school to be funded on a per-pupil model just like any other district. It now partners with all 67 Florida school districts to deliver courses to students with a variety of educational needs in a broad range of settings.
- The Graham County Education Consortium in Arizona was first established to help four of the county’s most rural schools gain access to the Internet. The consortium’s wireless wide-area network has since expanded to the superintendent’s office, 11 school districts in three counties, a charter school, an “accommodation school,”⁶ a detention center, a library, a college and a county extension center.

While the experiences of other states in closing their education technology gap can be instructive for Colorado, our state's strong tradition of local control must be honored in any approach that we ultimately undertake.

Information and resources

☞ Curtis Lee Garcia, "Close the technology gap that leaves some kids behind, especially in rural communities," The Bell Policy Center, Blueprint Brief No. 2, August 22, 2006, <http://www.thebell.org/Blueprint2006/Brf2-TechGap.pdf>

☞ Rachel Colorosa, "Connect all counties to the statewide broadband network," The Bell Policy Center, Blueprint Brief No. 21, August 22, 2006, <http://www.thebell.org/Blueprint2006/Brf21-Broadband.pdf>

End notes

- ¹ For the State Auditor's recent findings regarding online education programs in Colorado, see [Report of the State Auditor: Online Education](#), Department of Education, Performance Audit, November 2006.
- ² National Education Technology Plan web site, Action Steps section, U.S. Department of Education. www.ed.gov/about/offices/list/os/technology/plan/2004/site/edlite-actionsteps.html
- ³ "Technology Counts 2006," Colorado State Report, *Education Week*, May 4, 2006. www.edweek.org/media/ew/tc/2006/35tr.co.h25.pdf
- ⁴ Multi-Use Network/MNT, Annual Report, FY 2005-2006, Colorado Department of Personnel and Administration, Division of Information Technology. www.colorado.gov/dpa/doit/MNT/DoIT-MNTAnnualReport-FinalWeb06.pdf
- ⁵ National Education Technology Plan web site, Success Stories section, U.S. Department of Education, www.ed.gov/about/offices/list/os/technology/plan/2004/site/edlite-stories.html
- ⁶ In Arizona, an "accommodation school" is a school for students who are not otherwise served by local school districts. This can include schools that serve military reservations, alternative educational programs, and schools provided for the children of homeless families. See "Understanding Arizona School Districts," Arizona School Boards Association. www.azsba.org/aboutaz.htm and "Attorney General Opinion No. I02-005 (R02-011), Re: School Facilities Board Jurisdiction Regarding Accommodation Schools; School Facilities Board Funding to Eliminate Debt," State of Arizona, Office of the Attorney General. <http://www.azag.gov/opinions/2002/I02-005.pdf>