SCORE
State Collaborative on Reforming Education

Policy Memo

The COVID-19 pandemic has caused major disruption to education at all levels, and the potential impact on student outcomes will be felt for months and possibly years ahead. The SCORE series of COVID-19 Impact Memos analyzes challenges, examines potential responses, and highlights student-centered solutions.

COVID-19 Impact Memo 4: The Digital Divide

Summer 2020

Instruction And Internet Access In Tennessee

The COVID-19 pandemic has halted face-to-face instruction across Tennessee's school districts for the 2019-20 school year, bringing renewed attention to Tennesseans' unequal access to technology. Currently, an estimated 14 percent of Tennesseans do not have access to broadband internet, and these technology gaps are even greater for low-income families, families of color, and rural residents. School districts have leaned extensively on digital learning to combat student learning loss in light of school closures during the pandemic. Although achieving full digital access is years away at the current pace of expansion, immediate opportunities exist for state, business, district, and community leaders to narrow the digital divide in Tennessee.

To date, some progress has been made to increase digital access for Tennesseans. At the federal level, the Lifeline program provides low-cost access to cell phone or broadband for low-income families. And the Tennessee Broadband Accessibility Act (TBAA) increased investments in broadband access and digital literacy, with more than $400,000 in digital literacy grants in 2018-19. These initiatives are important first steps, but state leaders can take additional action so that families have and can use technology for student learning in the event more social distancing is needed.

Persisting Challenges

Tennessee can build on existing efforts to expand broadband access and accelerate progress to meet education needs resulting from COVID-19 school disruptions.

- **Investments are needed**. Tennessee invested in rural broadband access through the 2017 Tennessee Broadband Accessibility Act (TBAA), committing a total of $70 million as of 2020 to improve connectivity.[1] These investments eventually will expand access to nearly 70,000 Tennesseans, but experts estimate that it would take another $500 million of capital investment to achieve 100 percent broadband access statewide. Importantly, broadband connectivity issues are also predominantly rural and expensive to address, so making high-quality broadband available in these regions will not ensure greater access if residents cannot afford the subscriber fees.
- **Digital literacy must increase.** Based on population density and technical requirements for service, many rural communities face high monthly service costs to be economically viable for internet service providers. One way to lower subscription costs is through digital literacy initiatives that increase demand for broadband service: More subscribers can mean lower subscription costs for the entire community.

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- **Data quality must improve.** The exact number of Tennesseans who lack broadband service is unknown because of imprecise data collection by the federal and state governments.[2] Comprehensive household and neighborhood level data about broadband access are needed to guide leaders in developing the right solutions. Colorado and Minnesota have invested in more granular data collections and mapping that help policymakers evaluate and prioritize needs.[3]
- **Educators can contribute to better data.** Since 2014, district and institutional leaders have asked at least annually about student internet access to meet a state requirement.[4] This data should be linked with existing federal and state data to create a better statewide snapshot of broadband gaps.

The cost of internet is another significant barrier to student and family access.

- **Historically underserved students face more access issues.** A national study reported that 17 percent of students were unable to complete homework due to lack of access to a computer or the internet.[5] Census data demonstrate that these access barriers are most acute for lower-income households and people of color, with high cost as one of the most cited reasons for lack of access.[6]
- **Urban areas also have access disparities.** Broadband service is widely available in cities, but there are significant neighborhood-level differences in subscribing to it.[7] The lack of connection is particularly concentrated among low-income, black, and Hispanic households, highlighting the need for additional support and digital literacy to ensure families obtain low-cost internet, devices, and subscriptions. A recent national study from The Brookings Institution of neighborhood-level differences in broadband subscriptions highlighted stark variations in Memphis and Shelby County.[8]

How Tennessee Responded To COVID-19 And The Digital Divide

As schools transitioned to distance learning during the COVID-19 pandemic, Tennessee saw numerous examples of creativity, flexibility, and commitment from teachers and leaders working urgently to close the digital divide for students.

A Best Practice: The Chattanooga Tech Goes Home (TGH) program addresses both digital literacy and device access to improve broadband adoption. At a cost of $330 per participant, TGH provides 15 hours of tailored digital literacy training for adults and children, access to a low-cost device upon training completion, and support for low-cost home internet service.[1] This program makes important strides in closing the digital divide by increasing technology access to more families and empowering them to use its full capabilities.

Releasing Devices: School districts deployed all available devices to students, sometimes more than one device per family to ensure that multiple students could be engaged in learning at the same time.

Bringing Wi-Fi to Students: Community partners and school districts purchased Wi-Fi hotspots for students and worked with families to obtain free or reduced-cost internet subscriptions. Some school districts equipped school buses with Wi-Fi devices to take internet access to remotely located students.

Extending Wireless Signals: Schools expanded access to Wi-Fi signals in their parking lots and in business locations through partnerships with business and community partners to help more students access the internet.

Ways To Narrow The Digital Divide

As education leaders begin planning for the future of learning, several approaches can help narrow the digital divide.

1. **Deploy all devices.** Ensure that districts leverage existing resources to put devices – laptops, tablets, and other non-phone devices that enable file submission, word processing, and other important learning features – into the hands of the students who need them the most. Hispanic and black students are more likely to lean on smartphones for Internet access, so districts should conduct student needs assessments to aid in a distribution plan.[9] Long-term device use and accessibility can also be improved by communicating with families and students about how to upkeep devices and developing internal best practices for preserving devices at the district level. Districts may also leverage emerging low-cost purchasing options negotiated by the Tennessee Department of Education to increase the number of available devices.
2. **Provide professional development for educators.** Prioritize professional development for educators with a focus on using technology for instruction in times of social distancing. While teachers are thoroughly trained and adept at teaching their classes the same material at the same time and in the same place, they are less familiar with teaching for what is called "asynchronous learning," which allows students to flexibly access content, assignments, and support at their own pace. Wider digital divide solutions will take time, so simultaneous group learning, such as live videoconferencing, may not reach all students. Districts may also consider loading high-quality digital content onto devices that can be used for learning without the internet.
3. **Increase creative wireless solutions.** Deploy wireless solutions like Wi-Fi enabled buses or extended Wi-Fi from school, community, and business buildings as a temporary solution while longer-term investments are implemented. As districts develop continuity of instruction plans, these short-term and lower-cost solutions should be positioned for rapid deployment in the event of school disruption. Partners should address privacy and regulatory requirements now to be ready for quick action during an emergency
4. **Incentivize broadband access and adoption partnerships through better data.** Organize district, community, and government leaders to identify household-level gaps in broadband and device access and address data gaps that can assist in closing the digital divide. With better data, leaders across sectors can mobilize and systematically address student-level gaps in access to broadband and devices.

The COVID-19 pandemic has brought greater urgency to closing the digital divide for students. Tennessee has made measured progress to narrow the divide, but students rely on digital resources for educational opportunity during these times of social distancing. By creatively making use of what resources are currently available as longer-term investments roll out, Tennessee can remove learning barriers for all students.

Additional Resources

For more research and visualizations of Tennessee's digital divide, explore these resources:

- The Tennessee Advisory Council on Intergovernmental Relations focused on the Tennessee Broadband Accessibility Act at its December 2019 meeting. The council heard presentations on Tennessee's efforts to improve broadband and research and maps that show the costs of providing full broadband access.
- The Brookings Institution's "Signs of digital distress: mapping broadband availability and subscription in American neighborhoods" report provides data and maps of neighborhood-level differences in digital access.

Endnotes

[1] Tennessee Advisory Commission on Intergovernmental Relations Meeting, December 11, 2019.
[2] Stegeman, Jim. *Broadband in Tennessee*. CostQuest Associates (December 2019);
[3] *How States Are Expanding Broadband Access*. The Pew Charitable Trusts (February 2020).
[4] SCORE COVID-19 interview panel; Tang, Peter. "Pandemics Don't Come With A Playbook, So Resourceful Educators Write Their Own." *State Collaborative on Reforming Education* (April 2020); Public Chapter 848.
[5] Anderson, Monica and Andrew Perrin. "Nearly one-in-five teems can't always finish their homework because of the digital divide." *Pew Research Center.* (October 2018).
[6] *Children's Access to and Use of the Internet*. National Center for Education Statistics (2019); Martin, Michael J. "Deconstructing the Digital Divide: Identifying the Supply and Demand Factors That Drive Internet Subscription Rates." *United States Census Bureau* (2019).
[7] Tomer, Adie, Elizabeth Kneebone, and Ranjitha Shivaram. "Signs of digital distress: Mapping broadband availability and subscription in American neighborhoods." *The Brookings Institution* (September 2017).
[8] Ibid.
[9] Perrin, Andrew and Erica Turner. "Smartphones help blacks, Hispanics bridge some – but not all – digital gaps with whites." *Pew Research Center* (August 2019).