



NC Student Connect

Digital Services: Government to Citizen
North Carolina

Initiated: 2020

Completed: 2020

Mary Penny Kelly

Executive Director of Hometown Strong

919-754-6956

mary.kelley@osbm.nc.gov

EXECUTIVE SUMMARY

North Carolina is the 9th largest state in the country with a population of just over 10 million people. Eighty of the state's 100 counties are considered rural. The disparity in connectivity between rural and urban counties contributes to a digital divide between those who are connected and those who are not; and during a global pandemic, between those who are learning successfully and those who are not.

In March 2020, the COVID-19 pandemic forced North Carolina to move from in-person learning in our schools to a 100% remote learning model. North Carolina was fortunate that expanding access to high-speed internet was already a top priority of Governor Roy Cooper's. He had already issued a directive for Cabinet agencies to take all available actions across state government to spur investment in broadband infrastructure, eliminate government obstacles to deployment, and close the digital divide.

As students and teachers moved to remote learning environments, multiple state agencies worked together to understand the challenges they were

facing and came up with plans to support those struggling to stay connected. NC Student Connect was the result of this partnership between the Department of Natural and Cultural Resources (DNCR), Hometown Strong, the Department of Information Technology, the Governor's Education Advisor and the NC Business Committee for Education. NC Student Connect, funded by the Coronavirus Aid, Relief, and Economic Security (CARES) Act, has three primary sub-programs:

- Distribution of 100,000 wireless high-speed hot spots for students to connect with their remote learning classes.
- Creation of accessible sites in convenient locations across the state such as school parking lots, municipal areas, and state parks, museums and historic sites. These NC Student Connect sites provide free high-speed internet for students to connect to the Internet to download lessons and complete assignments offline.
- Educator professional development, parent training and student involvement in a spectrum of activities that go into effective remote learning. More than 1,300 educators from rural North Carolina already participated in a virtual conference focused on remote learning to help them be better prepared to teach throughout the COVID-19 pandemic.

IDEA

North Carolina is the 9th largest state in the country with a population of just over 10 million people. Eighty of the state's 100 counties are considered rural. The disparity in internet connectivity between rural and urban counties contributes to a digital divide between those who are connected and those who are not, and during a global pandemic, between those who are learning successfully and those who are not.

When the Coronavirus pandemic hit North Carolina in March 2020 and k-12 education was disrupted, our state government initiated a rapid response effort. As part of that response, remote learning became a critical public health measure in maintaining social distance and continuing to educate our young people.

Education is critically important not only to our children and families but to the economy at large. Making the investments necessary to ensure that all North Carolina students have access to a high-quality public

"Long before COVID-19, expanding access to high-speed internet has been a top priority for my administration, and this pandemic has made the need even more urgent. NC Student Connect will make critical investments in high-speed internet access and remote learning that will help students, health care and businesses in our state."

Governor Roy Cooper

education has been a focus of Governor Roy Cooper’s administration. The COVID-19 pandemic highlighted and exacerbated the digital divide and resulting homework gap in the state. The state’s response efforts were designed to ensure that our residents had access to the services necessary to maintain the high-quality public education they deserve.

NC Student Connect was created in 2020 to improve internet connectivity and fill gaps that are a barrier to remote learning. The project is a partnership of state agencies, including the Department of Natural and Cultural Resources (DNCR), Hometown Strong, the Department of Information Technology (DIT), the Governor’s Education Advisor and the NC Business Committee for Education, to rapidly connect students with remote learning.

Connecting to remote learning requires action on at least three levels:

- 1. providing access to high-speed internet to every k-12 student and teacher outside the classroom,**
- 2. lowering the cost of connection, and**
- 3. providing support services for use of remote learning platforms.**

IMPLEMENTATION

Through the NC Student Connect program we leveraged physical resources and research from existing initiatives of Hometown Strong and DIT’s Broadband Infrastructure Office (BIO). With access to historical data previously collected through these initiatives, we were able to gain an understanding of where the connectivity gaps were largest and properly focus attention on those areas.

The federal government gave nearly \$40 million in Coronavirus Aid, Relief, and Economic Security (CARES) Act funds to the Hometown Strong program. The funds were used in part to further existing connectivity programs and introduce new ones to help mitigate the effects of COVID-19 on the education of our student population in rural counties. The \$40 million was split among primary programs - \$30 million for a personal hotspot program through school systems across the state, \$8 million for a Park and Learn program providing public WiFi access, and \$2 million for the establishment of the Tech Team pilot program and professional development for educators navigating remote work.

Hotspots:

Building on the success of the Homework Help program that was established through Hometown Strong in 2019, and BIO’s partnership with the State Library, DNCR used \$30 million of CARES funding to provide personal hotspots for students, including 85,000 individual hotspots available through approximately 200 school systems across the state. The NC Student Connect team reached out to every school system in the state to directly assess the needs of students. Each local district conducted surveys of the student population to determine who did not have access to internet. Any student or household that needed access was provided with a hotspot. The school district and state both provide oversight of usage to ensure all the hotspots are being utilized. Each district entered into a memorandum of understanding (MOU) with the state, acknowledging that the districts are responsible for the devices and allowing each district to set its own specific standards and methods for distribution.

“Expanding student access to the internet has become a priority as school systems across the state have adopted remote learning policies in response to the Covid-19 pandemic. Our state parks, historic sites and local libraries are locations that provide a safe and secure space for students to access the internet for remote learning. Partnering with Hometown Strong on this project to bring internet access to our students in rural North Carolina is one of the most important initiatives we have undertaken together.”

Susi H. Hamilton

Former secretary of the N.C. Department of Natural and Cultural Resources.

School systems and counties had different needs and were covered by different providers (ex. AT&T, Verizon), so the NC Student Connect initiated contracts with a majority of the major providers in the state. This allowed the program to offer the exact service(s) needed to each individual school system, including counties that needed multiple providers. NC Student Connect managed all hotspot orders, leveraging bulk order discounts rather than each school system managing its own order.

Park and Learn:

This program deployed 458 WiFi access points at 416 unique sites, including state parks, historic sites, schools, libraries, and other community centers. The sites serve their surrounding communities as accessible, safe and socially distanced hubs for free WiFi. Sites were selected based on conversations with school districts and local advocacy groups, including the NAACP, Hispanic advocacy groups, and Native American advocacy groups. Initial input generated a list of more than 1,100 possible sites which was eventually pared down to 416 for investment. These included sites around schools, day care centers, parks, and other facilities. The list of proposed sites was narrowed down based on the adequacy of cell service and logical use (ex. the Governor's Mansion and the Capitol building did not make sense as options).

DNCR worked with its vendor partners AT&T, Cradlepoint, and Data Valet to install routers and access points that rely on cellular signals and convert that to WiFi. These sites have 1 to 2 access points on the outside of buildings and use multidirectional antennas to maximize signal coverage across parking lots and surrounding areas. Most of these sites have unlimited data which means that the state does not have to worry about reaching data limits at any particular site.

Professional Development and Tech Team pilot program:

The program set aside \$2M for professional development for educators, part of a collective effort to make it possible for more students to engage in schoolwork remotely. NC Student Connect has offered free conferences over the last year with more to come. The 2020 conferences included:

- Remote Education & Learning (REAL) and REAL 2.0: a remote learning conference focused on supporting North Carolina's rural educators, which was expanded in the 2.0 version to include other counties and resources for parents.
- STEM in the Virtual Classroom: Attendees learned best practices from educators and businesses to incorporate STEM into the virtual classroom. This conference was open to all NC educators. Sessions were focused on CTE and STEM and aligned to standards at the middle and high school level.
- Cultural Arts Live: This conference was open to arts and humanities educators and their classes. In addition to learning best practices in remote education, attendees visited North Carolina's museums and historic sites, engaged with visual and performing artists, and celebrated our state's rich history and diverse arts and artists.

All conferences were recorded so educators and other prospective attendees who were unable to make the live date are still able to benefit.

In addition to the professional development programs for educators, this funding was used to develop a Tech Team program, including a comprehensive framework and toolkit for North Carolina schools and districts to access resources for starting, implementing, and scaling a student technology support desk. Six districts participated in the Tech Team pilot program – Edgecombe, Durham, Nash, Halifax, Sampson, and Bertie counties, as well as Elizabeth City Schools.

IMPACT

The NC Student Connect programs have eased the burden of remote learning for both educators and students, providing internet access, both in public and through hotspot assignment, professional development and support, and new ways to manage technical service.

Hotspots:

Hotspots were procured from five vendors – AT&T, Kajeet, T-Mobile, US Cellular, and Verizon. We have distributed 30,206 Kajeet devices, which accounts for just over 1/3 of the total hotspots distributed. Currently 71% of the Kajeet devices are in use, which is 11% higher than the target percentage. They have used more than 1,206,559,663 MB of data. Below is their 90-day usage from December-February.

	December	January	February
Average Data Usage (MBs)	3,734,406.33	4,104,764.56	4,244,880.02
GBs	3,646.88	4,008.56	4,145.39

Data from the other four vendors was not immediately available.

Park and Learn:

Early data suggest that the Park and Learn project has addressed connectivity issues across North Carolina with great success. Park and Learn sites have been accessed by the public, across the state, and site usage data reveals that the sites are used consistently and substantially. In February 2021, the sites hosted 19,863 sessions statewide, using 6,849 GB of data.

Additionally, data from December 2020 through February 2021 shows that sites were used with increasing frequency, and for longer periods of time. There was an average of 685 statewide sessions per day in February 2021, up from 377 sessions in December. The average session length during this period was 94 minutes.

While all 458 sites are active and accessible, some sites have drawn more visitors thus far than others. In February 2021, a variety of site types accounted for the top 10 most used sites in the state, including four schools, two tribal community sites, two public libraries, and two community centers. The top 10 sites were spread across nine unique counties, of which four were ranked as the most underserved counties in the state for broadband coverage. Of the 10 least used sites, the site types were equally varied. Interestingly, only one was a state-owned site.

Professional Development and Tech Team pilot program:

More than 1,300 educators from rural North Carolina participated in the first REAL virtual conference, held August 6, 2020, which focused on remote learning to help prepare educators in rural counties to teach throughout the COVID-19 pandemic. The second REAL conference, held October 28, 2020, had 1,100 attendees representing 89 of our 100 counties. The Cultural Arts Live conference, held December 15-16, 2020, had 1,500 attendees comprised of arts and humanities educators and their classes.

Hundreds of [videos](#) from the four previous virtual learning conferences are available for use in (and out) of the classroom. Videos are labeled for the intended audience and can be filtered by subject, grade level, audience, and more.

The Tech Team pilots have provided approximately 80 students across the six participating districts with the opportunity to earn valuable credentials through real-world IT experience and helping IT departments fix school devices.

In April 2021, NC Student Connect will be hosting a Tech Team summit, which is a statewide conference for local CTOs, CTE Directors, Computer Science Educators, Superintendents and Career Development Coordinators. The students of the current Tech Team pilots will also be able to attend. The conference will support LEAs who have launched Tech Teams and work with LEAs who have not and are interested in starting a program.

While the COVID-19 pandemic has put the spotlight on remote learning resources and connectivity, the programs that make up NC Student Connect are four unique approaches that can continue to serve our residents most in need once the pandemic is over. The NC Student Connect program and partner organizations have worked tirelessly to ensure that students and teachers have the resources they need to stay engaged academically and connected in their communities.