Pandemic Relief Efforts and Sustainability

Dr. Vanessa Wrenn
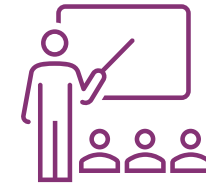
Chief Information Officer

NC Department of Public Instruction

Discussion Points

Foundational Elements

Supporting During Covid

Funding and Impact

Sustainability

Foundational Elements

Each PSU was at a different level of readiness for leveraging these tools.

NC School Connectivity Initiative

- 100% PSUs connected to high speed, scalable fiber
- 100% WiFi classrooms
- Services
  - Engineering
  - Content filtering
  - Firewall management
- Single-sign-on identity provider
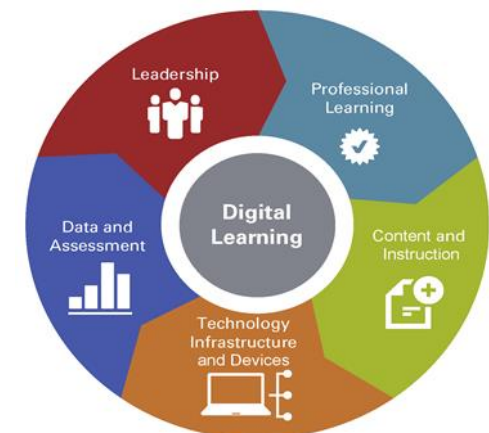- Each dollar of state funds yields $3.41 in value

Statewide Systems Platform

- Student Information
- Learning Management
- Formative assessment
- Educator professional learning
- Open Educational Resources

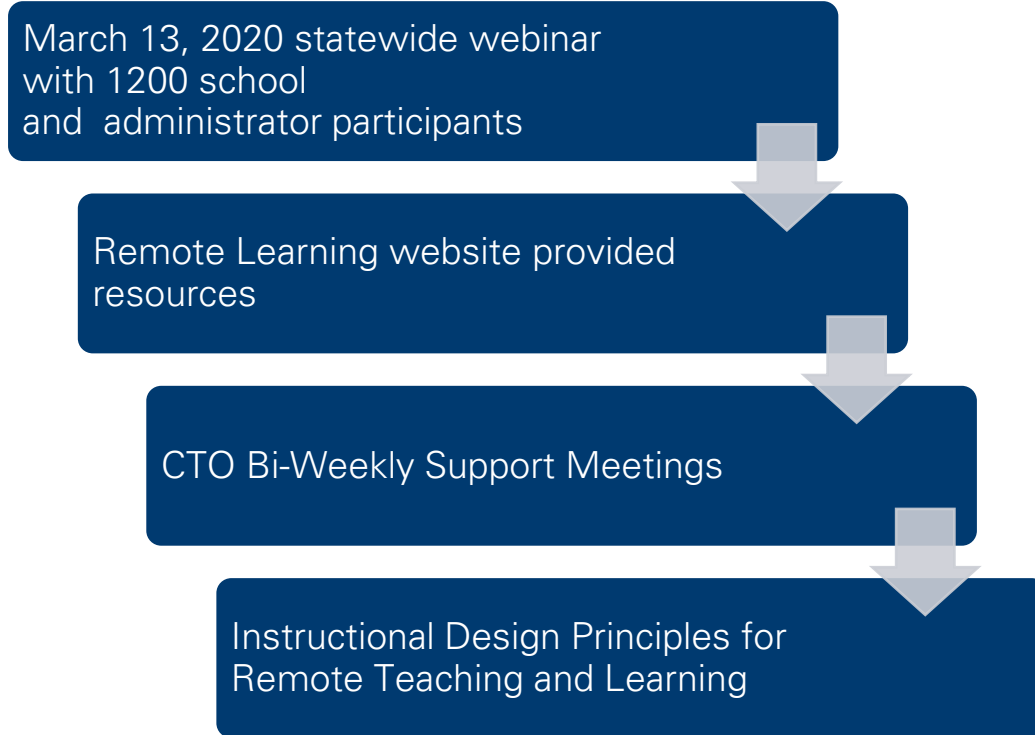- Provides parent access to student progress.

NC Digital Learning Initiative

- Provides the technology plan and framework
- $8 million in Digital Learning Grants awarded to PSUs since 2018

Immediate Response Efforts

March 13, 2020 statewide webinar with 1200 school and administrator participants

Remote Learning website provided resources

CTO Bi-Weekly Support Meetings

Instructional Design Principles for Remote Teaching and Learning

Instructional Design Principles for Remote Teaching & Learning

- Social & Emotional Learning
- Instructional Time
- Connection to Families & Students
- Student Engagement Aligned to Standards
- Equity, Choice, & Flexibility
- Feedback on Student Work
- Collaboration among Students

2022 State of At-Home Internet

Key Success Metrics

		N.C. Today	N.C. 2025
	Households with broadband internet access	"95.5%"	98%
	Households with broadband internet subscriptions	73%	80%
	Households with children with broadband internet subscriptions	81%	100%
	Adoption rates across racial subgroups		
	• Native American	57%	80%
	• Black	64%	80%
	• Latinx	68%	80%
	• White	76%	80%

NCDIT
NORTH CAROLINA DEPARTMENT OF INFORMATION TECHNOLOGY

At-Home Internet Access

- Supporting immediate needs
  - T-Mobile Million Dollar Project
  - FCC Lifeline Program
  - Hotspot Programs, including NC Student Connect
  - Provided 62,695 mobile hotspots through nearly $21 million allocated to PSUs

- Exploring new options
  - $250,000 to explore cutting-edge technologies including Low Earth Orbit satellites, TV Whitespace Service, and Citizens Broadband Radio Service.
  - Pilots with 209 families in four counties

Preparing Educators for Remote Teaching and Learning

75,000 educators participated in one or more workshops provided by Digital Teaching and Learning

Professional learning focusing on best practices for effective remote learning, digital literacies, and skills to increase online engagement and participation

$75,000 to the Friday Institute to train coaches for effective remote instruction

Training for PSU Technology Directors to receive industry certification

#GoOpenNC

- Open Educational Resources repository
- Standards-aligned resources from multiple vendors
- Educators can create, rate, and share resources

AT-HOME LEARNING

A Free Resource from UNC-TV Public Media North Carolina

UNC-TV Public Media North Carolina | North Carolina Department of PUBLIC INSTRUCTION | PBS LearningMedia

- 192 standards-aligned video lessons created by NC teachers and broadcast on PBS North Carolina
- Resources may be used online or in print

RETHINK EDUCATION
North Carolina Department of Public Instruction

- $17.8 million USED grant
- K-8 course content created by NC Educators
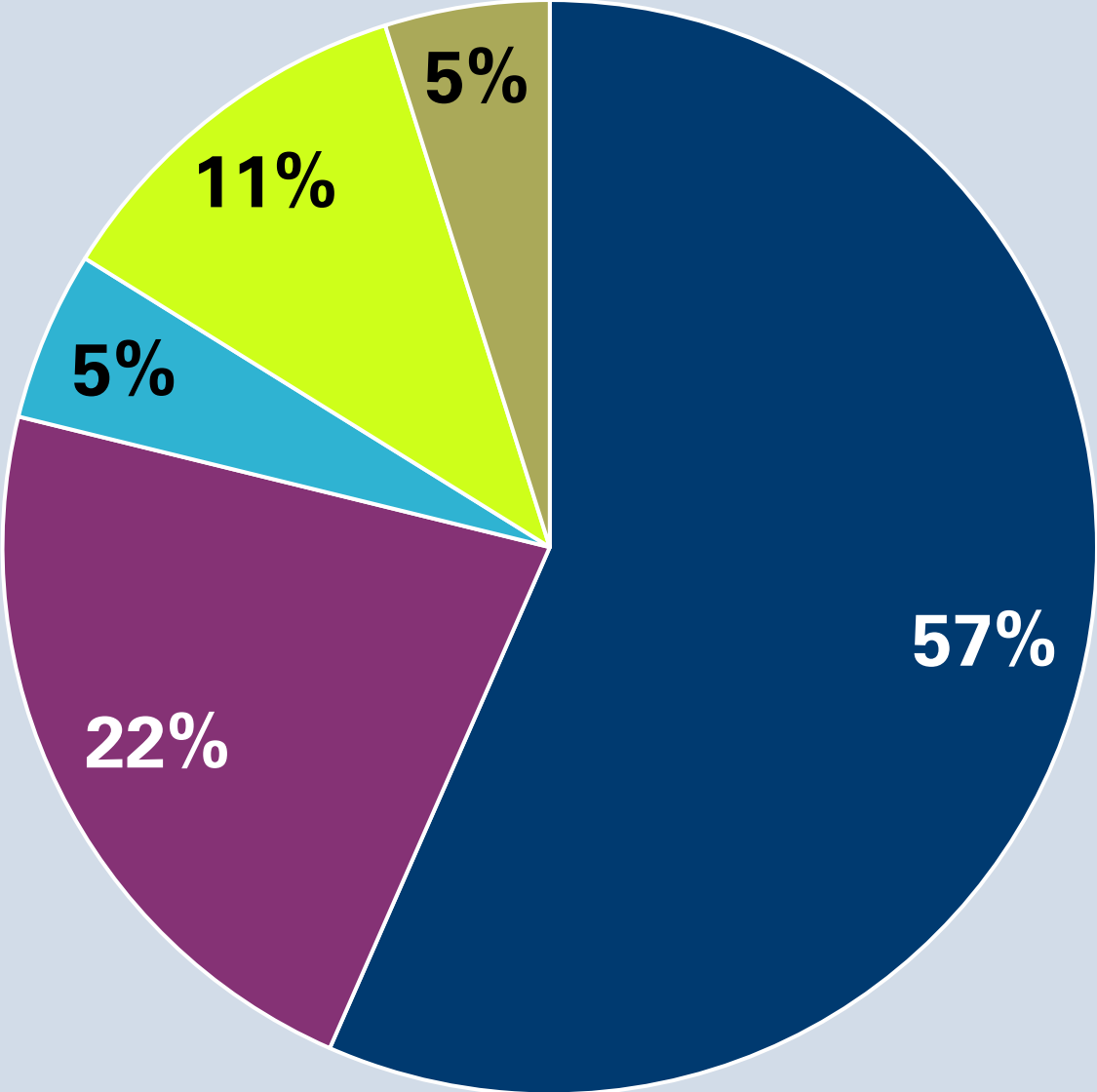- Provides parent guides and training
- Made available through GoOpen NC

Digital Learning Instructional Supports

Funding

Item	Funding
Student Devices	$45,037,330
Staff Devices	$9,103,365
School Bus Connectivity	$501,922
Student Mobile Internet Access	$20,789,908
Learning Management System	$4,794,783
Gaggle Internet Safety	$891,948
Digital Curricula	$10,800,000
Cybersecurity Training for all PSU Staff	$547,600
Cybersecurity Assessment	$500,000
Cybersecurity Infrastructure Allocations to PSUs	$3,760,563
Total	$96,727,419

Allotments by Category

Legend:
- Devices — 57%
- Connectivity — 22%
- Learning Management System — 5%
- Curriculum — 11%
- Safety and Security — 5%

Impacts

📱	**Devices**	196,934 student devices 17,392 staff devices
🚌	**School Bus Connectivity**	621 busses connected
📶	**Home Connectivity**	62,695 student mobile hotspots 2,090 community access points
✓	**Learning Management System**	109 LEAs leveraging a state contract for learning management system Significant growth in usage (900,969 users in 2019 to 1,407,000 users in 2021)
🔒	**Cybersecurity**	190,000 training licenses provisioned for all Completed security health assessment for all 115 PSUs

Emergency Connectivity Fund (ECF): Devices

Item	Quantity	PSU Requests
Apple Devices	28,737	$10,345,732
Chromebooks	247,599	$87,120,379
Hotspots	27,231	$5,483,006
Other Laptops	62,080	$36,383,205
Mobile Broadband and Satellite Service	60	$63,588
Total	365,707	$139,395,910

Source: Universal Service Administrative Company
This program is administered by the Federal Communications Commission and Universal Service Administrative Company (USAC).
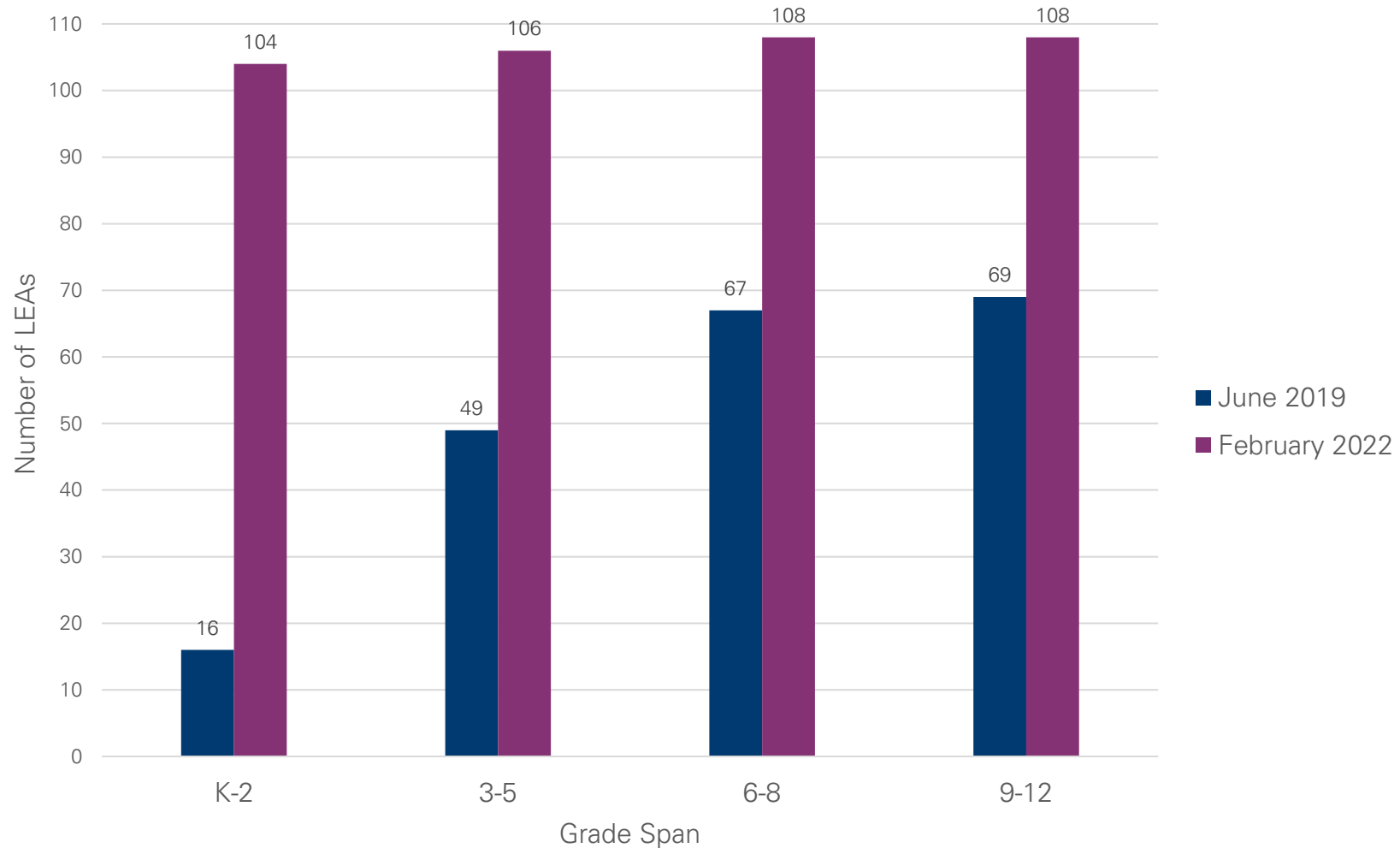
Emergency Connectivity Fund (ECF): Services

Item	Quantity	PSU Requests
Chromebook Configuration	3,504	$23,854
Mobile Wifi Subscriptions	78,263	$17,704,118
DSL Subscriptions	1	$1,599
School Bus Wifi Subscriptions	1,065	$336,741
Bus Wifi Configurations	3	$41,892
Total	82,836	$18,108,204

Source: Universal Service Administrative Company
This program is administered by the Federal Communications Commission and Universal Service Administrative Company (USAC).

Impacts – LEAs with 1:1 Implementations

Impacts – LEAs with K-12 1:1 Implementations

16
June 2019

104
February 2022

Managing and Recovery Devices

Annually, PSUs are required to submit aggregate inventory and utilization data

PSUs track and mange devices through inventory and configuration management systems

Mobile Device Management Systems are used to locate, disable and retrieve devices MDM to retrieve lost device

SROs assigned to school buildings help recover technology if needed

Current Initiatives

Cybersecurity

Pilot for comprehensive network inventory

Advanced Endpoint Security for every employee

Digital Learning Media Inventory

Revision underway to provide better data to adapt and answer questions

Better understand student home connectivity and device access

Digital Learning Plan

In process of updating to reflect gains, cybersecurity needs, and blended/virtual instruction shifts

What happens after Federal funding is depleted and devices reach end-of-life?

Systemic replacement is an ongoing concern PSU technology directors when one-time funding is used

Consistent replacement cycles and full-coverage warranties aligned with replacement cycles

$100 per student per year for devices ($150 million)

Technical support and digital coaching in each school building

PUBLIC SCHOOLS OF NORTH CAROLINA
State Board of Education | Department of Public Instruction