

Broadband Impact on Education and Workforce during the COVID-19 Pandemic

SRDC BROADBAND ISSUES BRIEFING, PART TWO
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Introduction

The Study

- University of Tennessee Extension partnered with libraries in eight rural counties to offer a mobile hotspot lending program
- We compared participant usage of the hotspot lending program during the pandemic to pre-pandemic usage to see:
 - Any changes to broadband equity challenges for rural residents
 - Indications of impacts of the pandemic on the work productivity of adults and children's educational progress

Rural Library Mobile Hotspot Lending Program



Phase II Program:
Hancock – 2 hotspots
Morgan – 2 hotspots
Cannon – 2 hotspots
Grundy – 2 hotspots
Bradley – 11 hotspots
Polk – 2 hotspots
Wayne – 2 hotspots

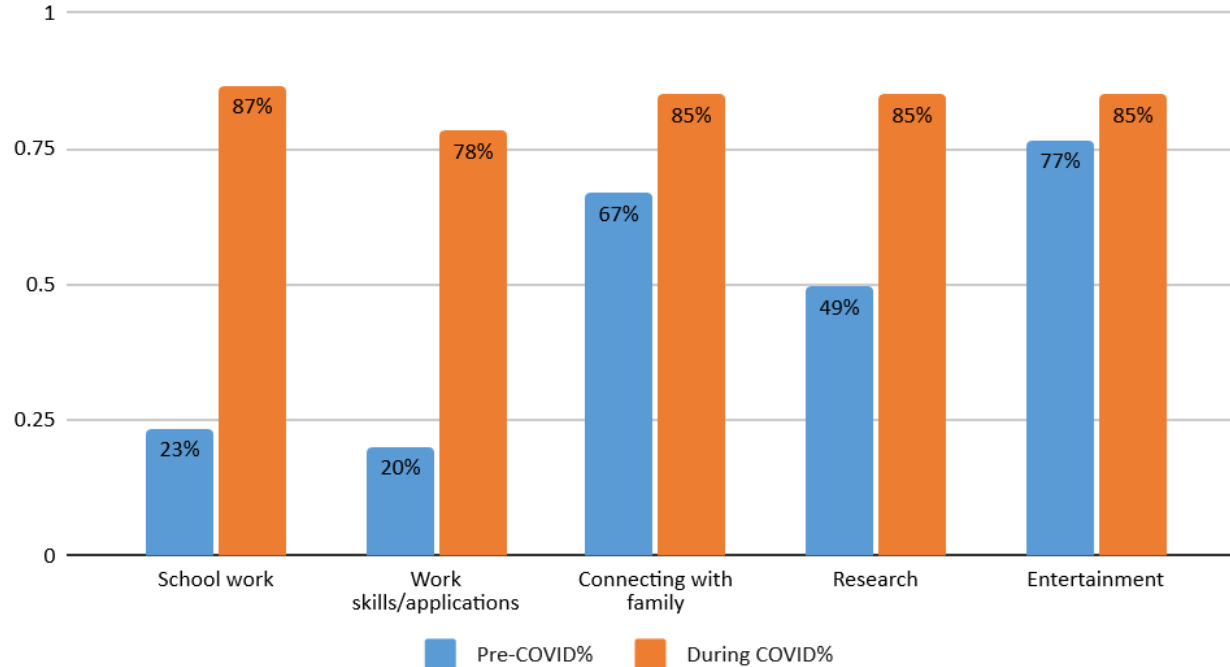
- Pilot program had 162 rural households provided with internet access in Hancock, Bledsoe and Wayne counties, by partnering with public libraries. Mobile hotspots were checked out more than 13 times per month, on average.

Data and Methods

- Hotspot lending program in 8 economically distressed rural Tennessee counties
 - Hancock, Bledsoe, Wayne, Bradley, Morgan, Cannon, Grundy, and Perry Counties.
- Paper surveys collected between 2018-2019 and 2020-2021
- 244 total surveys
- Collected socioeconomic information, as well as data on participants willingness to pay for broadband, and their general usage of the Internet while using the mobile internet hotspot.

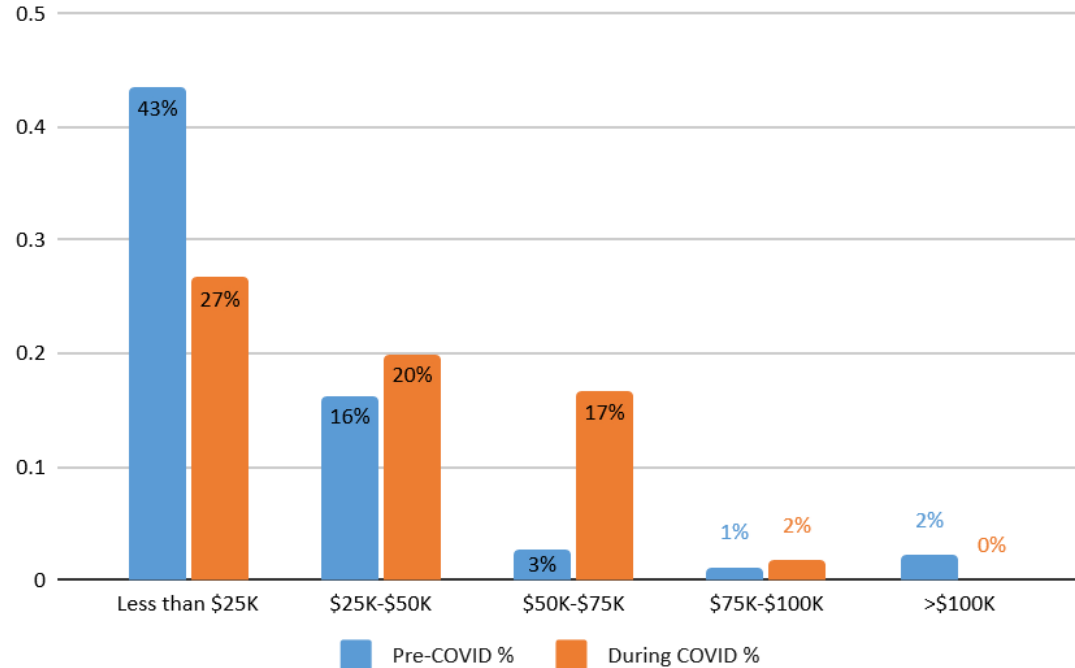
Findings

Participants Use of the Hotspots



Large increase in use for schoolwork, work, and research

Participant's Income Distribution

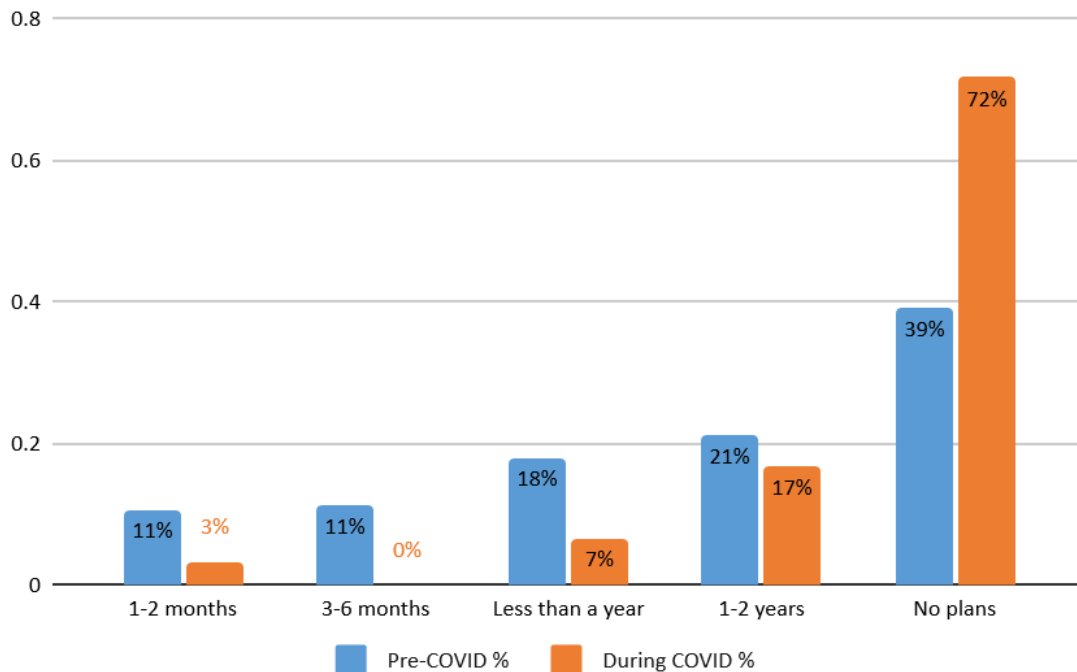


More participants with higher incomes utilized the hotspot program during the pandemic

Participant Distance from Library

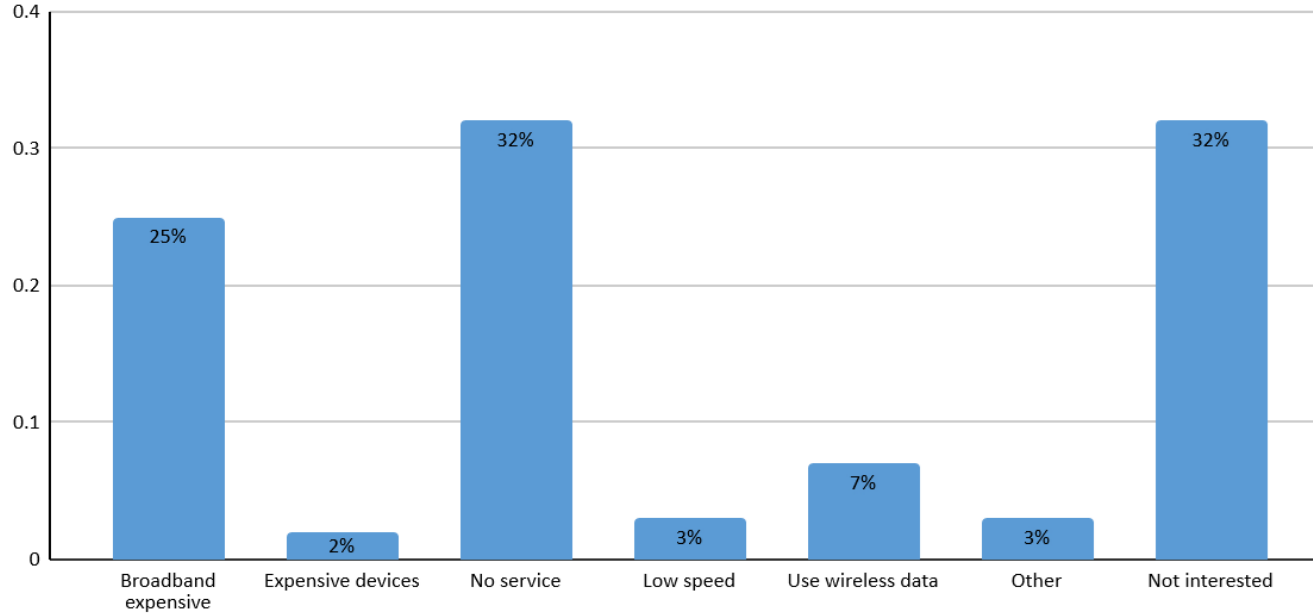
- During the 2020-2021 program, 65% of 2021 participants lived between 5-20 miles from the library and 25% of participants lived less than 5 miles from the library
- In the 2018-2019 program, participants were equally split between these distances
- During COVID-19 more participants were willing to come from further away to check-out the hotspots

Plans to Subscribe to Internet



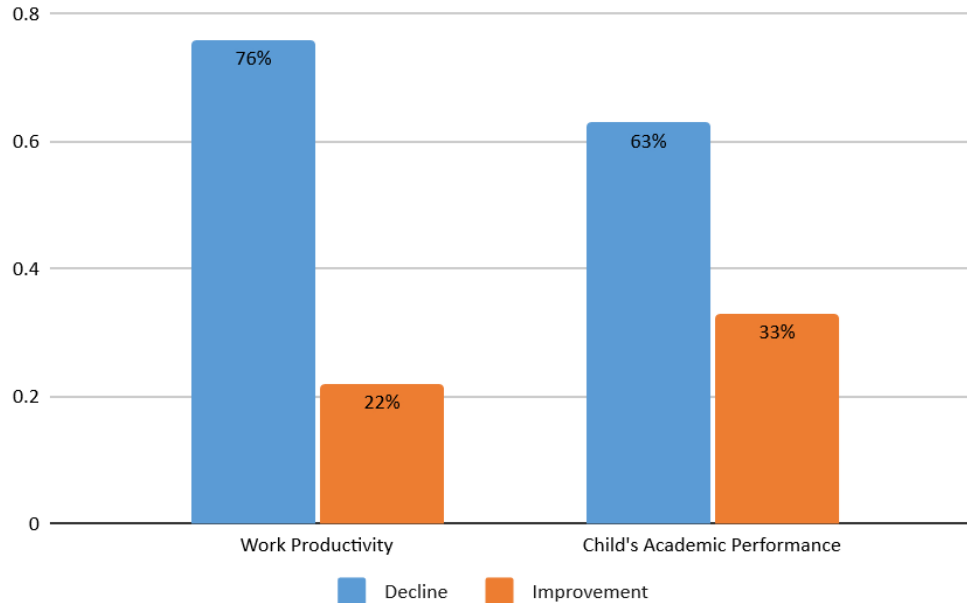
Most participants during both programs had no plans to subscribe

Participants' Reasons for Not Subscribing to Internet During COVID-19



Lack of reliable plans and expensive plans were the main reasons for not subscribing

Work Productivity and Academic Performance of Participants During COVID-19



- 17% of hotspot users were working from home
- 38% reported their children were in virtual school
- People assisting children with schoolwork was the greatest change in usage for the program during the pandemic

Recommendations

Community Capitals Framework

- A way to view community development
- Can be utilized as a strategy to address broadband access and adoption using the capitals present in a community

CCF Applied to Broadband Access

Human capital - people using broadband to connect with others and increase education

Social capital - using libraries, cooperatives, social networks for shared access

Cultural capital - using broadband to promote community cultural events

Financial capital - using government funds, public, or private grants to improve access

Political capital - leadership passing laws and regulations to improve access and adoption

Natural capital - optimal use of geographic features, which can impact access

Built capital - infrastructure improvements of broadband technologies

Community Push for Public Broadband Programs

- Use social and financial capitals, communities can partner and create or apply for programs
- Hotspot lending program was expanded and replicated due to community requests
- Federal E-Rate program
- State programs that support broadband access to underserved areas. In Tennessee the Department of Economic and Community Development offers such programs

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