

Broadband & Young People: A Primer for Equity Advocates

by Jordan Pineda, Forum for Youth Investment
Elevating Insights | Lessons from local youth-serving work



Broadband. What is it *really*, and why do broadband access and equity matter for families, young people, and communities?

The COVID-19 pandemic showed us all in stark terms that digital inequity is harming young people—and that urban and rural communities face distinct challenges to accessing fast and reliable broadband. **This primer is designed to help youth development providers and advocates understand the needs and solutions, and advocate for effective policy change and implementation.**

In February 2020, before the global pandemic, Cady Barthe, a seventh-grade science teacher in North Carolina, had 96 students and a class attendance rate of approximately 85 percent. By the end of March, Ms. Barthe was teaching a total of 20 kids via Zoom.

Across the country, school attendance rates [dropped by 10 percent](#) in March 2020. The [decline was higher](#) in schools serving students from economically and racially isolated communities and English Language Learners, like Ms. Barthe's students. Many school leaders assumed drops in attendance were related to device access: In May 2020, only 24 percent of all public school teachers [reported that a quorum of their students had a device](#). Yet even after districts provided a laptop or device to each student, many continued to see low attendance rates.

In Ms. Barthe's class, every student had a laptop by October of the new school year, yet her average virtual show-rate was just 50 percent. Realizing many students lacked internet access at home, the district dispersed thousands of hotspots. By March 2021, virtual show-rates were nearing their pre-pandemic numbers.

Ms. Barthe's students are fortunate to attend a school district with an annual operating budget of \$2 billion that could absorb the costs of sending low-income students home with laptops and hotspots. Most importantly, Ms. Barthe's school district is in a metropolitan area with a broadband infrastructure that enables hotspots to work effectively.

A more rural district might not have been able to afford the costs of hotspots or laptops at all. And if it could, it's most likely that those hotspots would have been insufficient. Without broadband infrastructure, the cellular hotspot connection speeds would likely be too slow to enable students to fully participate.



Essential Terms to Know

Understanding the terms and concepts enables stakeholders to better advocate for the changes our communities need.

Broadband: Thousands of digital messages and data traveling through a physically wired, high-speed cable that connects a user to the internet. If traveling from Point A to Point B, broadband is simultaneously the road and the car.

Broadband Speed: The speed at which broadband travels from data centers, servers, cables, and eventually to a household router is measured in megabits per second (MBPS). The Federal Communications Commission (FCC) defines 25 MBPS as an acceptable speed, even though the modern standard is 100 MBPS. Across the country, speeds vary, ranging anywhere from 11 to 50 MBPS.

Infrastructure: Broadband cables are “laid” or “connected” from one data center to another, using the existing casing that cable wires run through. Internet Service Providers (ISPs) are responsible for laying these cables and controlling the speed that broadband travels through them.

Internet: A matrix of billions of digital devices, software, and hardware all connected to each other, sharing information and data across public and private networks.

Internet Service Provider (ISP): The company that provides individuals and companies with access to the internet, usually a phone or cable company, such as Spectrum, Comcast, or Verizon.

Upload/Download Speed: Upload speed is how fast one can send out information to the internet, for example, sending emails or video chatting. Download speed is how quickly one can pull information from the internet, example, downloading PDFs or streaming videos.

The Web: Originally called the “World Wide Web,” this is the compilation of code that creates the images, text, and digital content of billions of websites that a user interacts with via a web browser, for example, Google Chrome or Safari.

Wi-Fi: Short for “wireless fidelity,” Wi-Fi is the radio signal sent from a hardwired router (connected to broadband) that connects nearby devices to the internet without a physical wire. Wi-Fi is still dependent on a wired connection to the internet, usually through a hard cable line, unless using 4G or 5G.

A note on 4G and 5G: ISPs may provide fourth-generation (4G or 4G LTE) or fifth-generation (5G or 5G LTE) wireless internet without using broadband cables. Like radio, these signals are broadcast over the air from a tower to a router or a mobile device. At this stage in development, 4G is slower, less efficient, and less reliable than wired broadband.

Rural Challenges: Accessing Broadband

The pandemic further exposed and exacerbated a challenge that the 10 million students who live in rural communities across the country have experienced since the emergence of dial up: low broadband speeds.

In 2015, the FCC determined that 25 MBPS is the minimally acceptable speed for broadband internet. Yet as of 2022, 31 percent of rural communities in the United States struggle with much slower speeds. In Newcastle, California, for example, the average speed is 3.7 MBPS. In Qulin, Missouri, it's 4.3 MBPS; Erin, Tennessee, 4 MBPS; Westphalia, Michigan, 5.3 MBPS; and Sylva, North Carolina, 5.4 MBPS, according to TechRepublic. These areas are considered rural "cities," according to the U.S. Census Bureau. Broadband speeds are often even lower in more remote hamlets, hollers, hills, and plains.

Families with low broadband speed don't typically lack access to the internet—rather, they cannot fully access all its offerings. For example: Simultaneously sending and receiving emails, browsing the web, and using a video conference requires 10 to 15 MBPS per device. If a young person living in Westphalia, Michigan, is on a Zoom call for class while working on a Google document online, they're effectively using all the available MBPS in their home and are likely to encounter lags that inhibit their ability to work and interact online. If three devices are operating in a home, the minimum bandwidth recommendation ranges between 50 and 300 MPBS. Thus, multiple family members using multiple devices at the same time may quickly hit their limit, forcing them to prioritize critical activities such as school, work, virtual medical care, or any other virtually-dependent resources.

Ultimately, the lack of high-speed internet access in rural communities has a straightforward root cause: money. At an expense of approximately \$27,000 per mile, it's cost prohibitive for rural communities to lay broadband cables across so many square miles of land. ISPs might cover these costs up front if they believed that doing so would yield a return on their investment.

Urban Challenges: Affording & Utilizing Broadband

The challenges urban households navigate are distinctly different from those of their rural counterparts; instead of experiencing access issues as a whole community, access for urban families varies from household to household.

By the numbers, there are [nine million](#) more families who lack broadband access in urban communities compared to rural communities. However, urban families don't lack broadband because of inadequate infrastructure or slow speeds. Instead, they can't afford to use it.

A [2019 Pew Research Center study](#) found that 50 percent of the urban families who did not use broadband opted out due to its expense. In those families, 58 percent of young adults relied solely on their phone to access the internet, meaning they used free Wi-Fi or their cellular data plan.

Occasionally using a mobile phone as a hotspot may initially be more affordable than paying for wired broadband, but this is only true for short usage durations, for example, an hour or two per day. Relying on a phone for permanent internet quickly burns through data and is ultimately likely to cost more than a wired broadband subscription. Unlimited data plans are generally not an option for financially stressed families.

Even before the COVID-19 pandemic, this method of accessing the internet posed challenges; with the added strain of households working and learning remotely, it is largely unsustainable.

What Will it Take to Ensure Broadband Access for Rural & Urban Communities?

With youth programming and learning likely to retain virtual components in the future, it's clear that broadband access is an essential tool necessary for life and learning, and families should not be forced to live without it.

Most Americans [believe broadband should be considered a public utility](#) that every community can access. [Title II of the 2015 Federal Communications Act](#) is a good start, but does not go far enough to make broadband more affordable by treating it as a utility and increasing its usage through targeted public outreach campaigns. Reclassifying broadband as a utility means the FCC could work to provide universal service and regulate [digital red-lining](#). Congress could provide subsidies for low-income families, require schools to provide internet alternatives to students, fund the laying of fiber optic cables, and more. (Many of these reforms were included in the original version of the federal [Build Back Better Act](#).)

In May 2022, the Biden administration announced a public-private partnership to expand high-speed internet access and affordability in urban and rural areas that would cut costs for nearly 48 million Americans. While this should be considered progress, more significant federal reforms are needed. Until those reforms are implemented, advocates and stakeholders are continuing to address inequity, including through the creation of strong [advocacy toolkits](#), and attempts to pass state legislation, for example, in [New York State](#).

Resources to learn more and support action for greater broadband equity



- **Toolkit:** [Digital Equity: Supporting Students and Families in Out-of-School Learning](#) (The Consortium for School Networking)
- [Reducing Broadband Costs for Americans](#) (May 2022 White House Fact Sheet)
- [Expanding Broadband Access in American Indian and Alaska Native Communities](#) (U.S. Department of the Interior - Indian Affairs)
- [America's National Broadband Plan, Executive Summary](#) (Federal Communications Commission)
- [How States are Expanding Broadband Access](#) (Pew Charitable Trusts)
- [34% of lower-income home broadband users have had trouble paying for their service amid COVID-19](#) (Pew Charitable Trusts)
- [5 Steps to Get the Internet to All Americans](#) (Brookings Institution)
- [Closing the Digital Divide: 2021 National 4-H Survey](#). Young people say high-speed internet access is critical for equality. (National 4-H Council)

