



Broadband Access & Library Services

Illinois Heartland Library System examined broadband access in 38 central and southern Illinois libraries. Nine libraries came from areas largely unserved by broadband (Edgar, Greene, and Union counties, with internet service speeds below 25 Mbps). The remaining 29 libraries came from areas with better speeds (Champaign, Franklin, Sangamon, and St. Clair counties, whose speeds range 45 Mbps–2 Gbps). We then cross-referenced their responses in the 2021 IPLAR report and our 2021 Library Technology Survey to better understand how broadband access may affect library services and usage.

What digital services and spaces do these libraries provide their communities?

Private space for personal video conferencing (telehealth appointments, job interviews, etc.).

Unserved Libraries in Largely Unserved Areas	Better Served Libraries in Largely Better Served Areas
33% offer the space	45% offer the space
56% don't but wish they could	41% don't but wish they could

Public Wi-Fi access in 2020.

Unserved Libraries in Largely Unserved Areas	Better Served Libraries in Largely Better Served Areas
78% offered access inside or outside the building	96% offered access inside or outside the building

Public Wi-Fi access in 2021.

Unserved Libraries in Largely Unserved Areas	Better Served Libraries in Largely Better Served Areas
100% offered access inside the building	100% offered access inside the building
89% offered access from the parking lot	97% offered access from the parking lot

How do broadband speeds affect the quality of digital services?

The internet service at unserved libraries cannot support much more than web browsing and sending emails. Wi-Fi access means little without adequate speed and bandwidth. Internet speed requirements vary with the number of simultaneous online users and their activities—browsing the web, streaming videos, etc. The heavier the use, the more bandwidth and higher speeds needed. Thus, even generally sufficient service, such as packages with 100 Mbps, will slow down when multiple users are on the same network—and even more so with heavier use. And with lower speeds, even less is possible.

For example, the FCC says telehealth visits require **at least 25/3 Mbps** for one computer at a time. Of the nine libraries in our selected unserved areas, **only one reaches that minimum**. So, that library alone may adequately support a telehealth session, and that activity on a shared network may hinder the library's ability to use Polaris.

How does library usage differ depending on community broadband access?

Higher speeds correlate with more program attendance and visits.

On average, libraries with better speeds receive **over twice the in-person visits per resident** of unserved libraries. This trend holds **across population sizes**, from 1,200–81,055 in the (under)served libraries to 1,003–14,000 in our unserved libraries. This correlation suggests that higher speeds may be essential to raising library usage overall.

Unserved areas rely on library Wi-Fi more frequently.

When we control for outliers, the number of Wi-Fi use sessions per in-person visit is **over five and a half times greater** at libraries in unserved areas than at higher-speed libraries. This shows that Wi-Fi is among the most essential services libraries can provide in places where the need for internet access is more significant.

