How Libraries Are Essential Broadband Partners in Their Communities
At a time when more students are learning remotely and many office spaces have remained closed, libraries have been instrumental in making sure that community members without home broadband access aren’t left behind.

A new Library Journal survey of public libraries across the United States, developed in coordination with Spectrum Enterprise, sought to identify the key challenges and opportunities libraries experience with providing internet and WiFi access to their constituents.

The survey results indicate that a large majority of librarians have confidence in the speed and quality of their internet service; however, cost remains a barrier. The survey suggests key opportunities for libraries to take an even more active role in supporting stakeholders’ connectivity needs — and to leverage resources like the federal E-rate program more effectively.

LIBRARIES PLAY A CRITICAL ROLE IN OFFERING BROADBAND SERVICE

Connecting patrons with digital resources is a fundamental aspect of public library services. Respondents estimate that 38 percent of the households in the communities they serve do not have broadband service at home.

Asked to rate the importance of providing broadband access to their communities on a six-point scale, 86 percent of respondents rated this as highly important (a 5 or 6). The overall average was 5.5, which was largely consistent across all demographics.

Nearly all respondents (99 percent) said they make both WiFi and public access computers available to their communities. Demand for public access computers is “very high” at 29 percent of responding libraries and “relatively high” for another 40 percent. Demand is highest in urban libraries, where 54 percent report “very high” demand for computers. Demand for WiFi is even greater, with 83 percent of libraries reporting “relatively high” to “very high” demand.

Survey respondents described many examples of how access to their library’s internet service has made a difference in their community. For instance, an Oklahoma librarian wrote: “A grandmother who has custody of her grandson does not have internet access at home. Our local school district has gone strictly virtual for the first nine weeks of classes. We have been able to help her with technology instruction for her grandson’s Chromebook and provided WiFi access so he can complete his school work on time.” A California librarian noted that library computers have been used by people who have been displaced by wildfires to file insurance claims.
HELPING COMMUNITIES DURING THE PANDEMIC

During the COVID-19 crisis, U.S. libraries have stepped up to help patrons continue to access the internet and digital resources, even as many schools and library branches have closed. Public libraries overwhelmingly see these efforts as an extension of their mission.

More than a third of respondents (37 percent) boosted their internet connectivity offerings in response to library and school closures caused by the pandemic. Another 24 percent said they might increase connectivity in the future as the pandemic continues. However, there’s a big disparity between the percentage of large libraries (52 percent) and small libraries (27 percent) that have boosted their connectivity, which suggests that large libraries are in a better position to do so.

Thirty-nine percent of libraries are lending out mobile WiFi hotspots to help patrons get online from home. Twenty-two percent are lending laptops, and 15 percent are lending tablets.

Evanston Public Library in Illinois allowed patrons to check out WiFi hotspots indefinitely until its libraries reopened. “We provided laptops to the homeless,” said Collection Development Manager Elizabeth Bird. “We also made ‘caring calls’ to patrons with the hotspots to ask how else we could help them during this difficult time.”

And Kathleen Cizek of the Nicholson Memorial Library System in Texas said, “We made our WiFi access public, meaning users no longer had to have a library card and log in to use the system.”

One in five libraries has partnered with local schools to bolster students’ web access for remote learning. For instance, the Topeka and Shawnee County Public Library reached out to the superintendents of the four largest school districts in its area to see how it could help make remote learning more accessible during the pandemic.

“The Shawnee Heights School District gave us specific locations of neighborhoods where they knew their students had broadband service gaps,” Millsap said. “We deployed WiFi-enabled bookmobiles to these locations for several weeks.”

THE STATE OF BROADBAND ACCESS IN U.S. LIBRARIES

To bridge access gaps in their communities, it’s essential for libraries themselves to have secure, reliable broadband connections.

About 44 percent of survey respondents described their libraries’ WiFi service as “fast.” Most, 50 percent, said it was “adequate.” Only 6 percent described it as “slow.” [Among large libraries serving at least 100,000 people, this figure was only 3 percent.]

When respondents were asked, “Can you rely on the internet connectivity available in your library to adequately support more bandwidth-intensive usage, such as video streaming,” 87 percent said at least “usually,” while another 10 percent said “sometimes.” Only 3 percent said “not usually” or
Librarian confidence in network security

72% VERY-EXTREMELY CONFIDENT
18% CONFIDENT
9% NOT CONFIDENT

“never.” Small town/rural libraries and those serving smaller populations are the least likely to be confident they have enough bandwidth.

Librarians are fairly confident that their networks are secure (4.8 on a six-point scale); only 9 percent rate their network security as a “3” or below.

Overall, 29 percent of respondents are “very satisfied” with their current internet service provider (ISP), and another 61 percent are “satisfied.” Only about 10 percent of libraries aren’t satisfied. There are some stark differences in ISP satisfaction levels across the survey. Rural librarians are more likely to be unsatisfied than their colleagues in urban areas.

“We are about 10 miles north of Mexico in the desert, with lots of hills and valleys and some impressive weather challenges,” says Jodi Ohlson, library manager of Caviglia Arivaca Library in Pima County, Arizona. “We lose connection if the wind blows, we lose connection if it rains. If we have more than three video gamers playing, everyone on our WiFi starts to lose connection. It’s not an easy place to do this kind of work in.”

COST REMAINS A BARRIER

About one in five survey respondents (18 percent) said the cost of internet access is a major concern. Not surprisingly, concern is highest in lower-income areas — and libraries in small towns and rural areas often struggle to have enough bandwidth to meet their needs.

“The costs for bandwidth keep growing, and our budget is not growing at the same rate,” Ohlson said, expressing a common concern among respondents.

Libraries use a variety of funding sources to pay for internet access, including their local technology budget, state or local government funding, grants and contributions.

SOURCES OF FUNDING FOR LIBRARY INTERNET ACCESS

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<th>Source</th>
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<tr>
<td>IT BUDGET</td>
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<tr>
<td>STATE/LOCAL GOVERNMENT</td>
<td>49%</td>
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<td>E-RATE</td>
<td>38%</td>
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<td>GRANTS</td>
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Interestingly, only 38 percent of libraries said they leverage federal E-rate funding to help pay for internet access. E-rate provides billions of dollars in connectivity funding each year to U.S. schools and libraries, and libraries that take advantage said the program covers 56 percent of the total cost of their broadband service, on average.

However, the program is quite complex, with a rigorous application process that could discourage many libraries from seeking funding. According to the survey, 7 percent of libraries overall — and 11 percent of small institutions — have experienced obstacles in applying for E-rate.

“The E-rate process is so exacting and difficult to navigate, and the rules are constantly changing,” said Mary Stein, assistant library director for the East Baton Rouge Parish Library in Louisiana. “The biggest challenge is having to simultaneously adhere to city/parish procurement rules and deadlines, as well as E-rate rules and deadlines.”

East Baton Rouge Parish Library’s application is completed by the library’s business manager. “She spends at least 20 hours on the application,” Stein said. “She usually gets minimal assistance from the state library liaison, but three of our own library IT people help her with technical data. Four members of the administrative staff also spend time on the bid process, and in the past couple of years, we have used a team of external consultants to investigate, draft and then analyze bids. If we had to add it all up, we spend more than 90 hours of library staff time in applying each year — plus about 40 hours of paid time for the consultants.”

**KEY OPPORTUNITIES MOVING FORWARD**

As librarians consider how to meet stakeholders’ digital needs more effectively, the survey revealed some key opportunities moving forward. These include:

1. **Explore additional ways to make WiFi readily available.**

Libraries are already using creative means to bring connectivity to patrons who don’t have home internet access, especially as buildings have been closed during the pandemic. However, the survey indicates that only a small percentage of libraries are taking advantage of certain strategies, leaving the door open for libraries to do even more.

As asked where they make WiFi available, for instance, 92 percent of respondents said “On the library grounds, as in a parking lot, playground, etc.” Another 18 percent have WiFi hotspots set up around the community, and 12 percent transmit WiFi via library outreach vehicles or bookmobiles roving around their service area. This suggests an opportunity for more libraries to adopt these latter ideas to extend access to as many stakeholders as possible.
2 Take full advantage of E-rate funding to build out broadband networks.

Although there are certainly challenges to applying for E-rate, public libraries might be missing out on a chance for significant funding if they don’t try. Yes, the process is complex — but the rewards can be considerable.

E-rate provides discounts of between 20 percent and 90 percent of the cost of internet service, depending on the degree of poverty in a library’s community — and up to 85 percent off the cost of internal connections such as the wiring, routers, switches, wireless access points and other gear needed to provide access.

Although there are restrictions about using E-rate funding to deliver access to families’ homes, these rules have been waived temporarily in response to the pandemic. Libraries can find help to guide them through the application process on the program website [https://www.usac.org/e-rate] and from their state library association.

3 Choose a reliable and experienced service provider.

Choosing the right internet service provider is critical. The company you choose should have a secure, reliable broadband network, as well as extensive experience in serving the unique needs of public libraries in your area. Your provider should be not just a technology vendor, but a full partner who is wholly invested in your library’s success and has experience with the E-rate program.

BOTTOM LINE

Public libraries are using innovative ways to keep their communities connected to the wealth of opportunities that exist online. Having secure, reliable broadband themselves is essential to these efforts, and while librarians are largely satisfied with their connectivity, some troubling gaps remain. The key opportunities identified in this study can help libraries to adopt additional strategies for bringing broadband to stakeholders and to leverage E-rate funding to build out networks further.
ABOUT THE SURVEY

Library Journal’s internet connectivity survey was created to learn whether U.S. public libraries have web access and affordability issues, and how COVID-19 has changed their approach to providing WiFi access to patrons. The survey was developed in coordination with Spectrum Enterprise. A survey invitation was emailed to a list of approximately 11,000 U.S. public libraries, with an emphasis on directors and IT specialists, in August 2020. The survey closed in September with 238 responses.

Forty-seven percent of survey responses come from small libraries (serving populations under 25,000), 26 percent come from medium-sized libraries (serving 25,000 to 99,999 people), and 27 percent come from large libraries (serving 100,000 or more). Library directors and assistant directors account for 37 percent of the sample, followed by 8 percent each from technology managers/specialists, branch managers, and public services managers. Tabulation and analysis of the survey results was conducted by Library Journal.

ABOUT SPECTRUM ENTERPRISE

Spectrum Enterprise, a part of Charter Communications, Inc., is a national provider of scalable, fiber technology solutions serving America’s largest businesses and communications service providers. The broad Spectrum Enterprise portfolio includes networking and managed services solutions: internet access, Ethernet access and networks, voice and TV solutions. Spectrum Enterprise’s industry-leading team of experts works closely with clients to achieve greater business success by providing solutions designed to meet their evolving needs. More information about Spectrum Enterprise can be found at enterprise.spectrum.com.

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