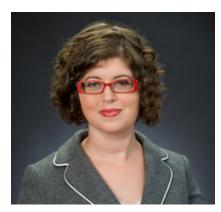


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About the Author



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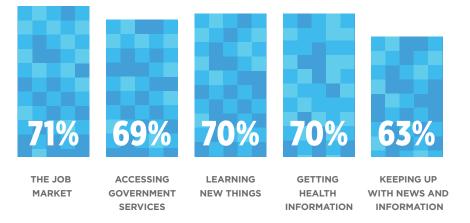
Introduction: WHERE ARE WE NOW?



For decades, libraries have been striving to close the digital divide. From providing public computers and WiFi to technology classes and resources, they have created lifelines for disconnected communities (Fallows 2021; NTIA 2021; PLA 2020; ULC, n.d.). Yet year after year, the problem persists—and in some ways, even worsens. It is time for a new approach. The framework of digital equity offers a fresh way forward.

Digital disconnection has enormous negative consequences that disproportionately impact marginalized communities. A large majority of American adults believe that people without adequate broadband access at home are at a disadvantage when it comes to the job market (71%), accessing government services (69%), learning new things (70%), getting health information (70%), and keeping up with news and information (63%) (Horrigan and Duggan 2015). Internet access is considered an important social determinant of health (Lin et al. 2022). Lack of in-home internet was even strongly correlated with COVID-19 deaths.

Many people struggle with these impacts on a daily basis. A recent survey by Pew Research found that, among households earning less than \$30,000 per year, 43% did not have a home broadband connection, and 41% did not own a computer (Vogels 2021). For 27% of adults in those households, their only internet access was through a smartphone—a 12% increase since 2013. A large majority of American adults believe that people without adequate broadband access at home are at a disadvantage when it comes to



(Horrigan and Duggan 2015)

Even in areas that may appear to be highly connected, like Seattle, barriers related to infrastructure, access, digital skills, and especially cost run deep. When King County, WA (2020), conducted a Broadband Access study, it discovered that nearly half of county residents experienced at least one of these limitations. Black, Indigenous, and Latinx people faced higher barriers, as did those with limited English proficiency, rural communities, low-income households, and seniors. Aggregated pictures

of digital connectivity and skills can mask such large disparate impacts on marginalized populations.

"Libraries have a key part to play in the ecosystem of building more equitably connected communities."

Libraries have been aware of these issues for many years and have been actively working to address them (ULC, n.d.). Almost 90% of libraries offer some kind of digital literacy support, and more than a third have dedicated staff for this purpose (PLA 2020). But these are complex and interconnected problems, both caused by and feeding into inequitable social systems with deep historical roots. Libraries cannot close the digital divide alone. Thankfully, they do not have to. Driven in part by a rapid pivot to virtual school and work during the COVID-19 pandemic, the push for digital inclusion has become a society-wide movement. Government, nonprofits, the private sector, and individuals are mobilizing around the idea of digital equity. Libraries have a key part to play in the ecosystem of building more equitably connected communities.

WHAT IS DIGITAL EQUITY?



Digital equity provides a strengths-based way of thinking about digital access and skills. The language of the digital divide is focused on problems and deficits, like the lack of connectivity or digital literacy, or the negative impacts on the people left behind. Digital equity, by contrast, provides a positive vision for a wholly connected community. It challenges librarians to ask: what would it look like if everyone could participate fully in online life? What would it mean if every person could choose to pursue their own goals in the way that worked best for them?

The National Digital Inclusion Alliance (NDIA) defines digital equity as "a condition in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy,

"Digital equity challenges librarians to ask: what would it look like if everyone could participate fully in online life? What would it mean if every person could choose to pursue their own goals in the way that worked best for them?" and economy. Digital equity is necessary for civic and cultural participation, employment, lifelong learning, and access to essential services" (NDIA, n.d.). In short: it is the goal.

Once libraries and communities know their goal, they can strategize about how to effectively build toward it. Instead of simply trying to move away from a problem, they can begin to determine how best to move toward a goal. Instead of feeling overwhelmed and demotivated by the failure to singlehandedly eradicate a complex and ongoing issue, they can feel empowered by seeing even their small successes as progress toward a meaningful objective.

The strategies that libraries and communities use to reach this goal—the "how" of digital equity—are called **digital inclusion**. If the digital divide is where we stand now, and digital equity is the destination we hope to reach, digital inclusion is the roadmap between them. NDIA defines digital inclusion as "the activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to and use of Information and Communication Technologies" (NDIA, n.d.). It is fundamentally systems-based, requiring "intentional strategies and investments to reduce and eliminate historical, institutional and structural barriers to access and use technology."

Digital inclusion has five elements:



Affordable, robust broadband internet service



Internet-enabled devices that meet the needs of the user



Quality technical support





Access to digital literacy training



Applications and online content designed to enable and encourage self-sufficiency, participation, and collaboration

(The National Digital Inclusion Alliance NDIA, n.d.)

Some of these elements may look familiar to librarians—for example, digital literacy training—while others might at first appear to be outside of a library's scope. Yet all five elements are required for full inclusion. And libraries are already playing vital roles across all five areas with their services, programs, and partnerships.

THE LIBRARY'S ROLE IN DIGITAL EQUITY AND INCLUSION



Digital equity takes a village. As a vision of a fully connected, participatory community, it cannot be accomplished by the library—or any single entity—alone. BroadbandUSA, an initiative of the National Telecommunications and Information Administration (NTIA), developed a helpful visualization of how a digitally equitable community might function (Fig. A). In the graphic, the library (#4) "connects residents to online education, job certification, and networking." But this work is complemented by the efforts of many other partners, from schools to local government to health care providers to private companies.



FIG. A.

Source: BroadbandUSA, n.d.a



"Just as powerful as starting something new, libraries can also reimagine their current services as part of a broader community effort."

> By working with partners across the digital ecosystem, libraries can meaningfully contribute to issues sometimes seen as out of scope. For example, libraries generally do not directly provide broadband infrastructure to individual homes or in-depth technical troubleshooting of an individual's personal device. However, it is not necessary for librarians to become technical experts in order to meaningfully contribute in these areas. Libraries can participate in communal efforts by offering their strengths as trusted navigators of information. To continue the previous examples, librarians can research subsidy programs for affordable in-home Internet access as part of a reference question. They can join community coalitions working on broadband infrastructure issues, providing those groups with valuable information, space, and connections (ULC, n.d.). Libraries can forge partnerships with organizations or volunteers that do provide complex technical support, making that help available at the library.

Just as powerful as starting something new, libraries can also reimagine their current services as part of a broader community effort. For example, what outside organizations might encounter people struggling with digital skills, and be able to refer them to the library's existing computer classes? What organizations or resources might be valuable to a patron after they complete that class? In this way, the acquisition of digital skills and access at the library becomes seamlessly interwoven into the community's digital inclusion work.

STRATEGIES FOR DIGITAL INCLUSION AT THE LIBRARY



Libraries are already employing a variety of strategies to participate in their communities' digital inclusion efforts. Nearly all libraries offer some level of public computer or Internet access in their buildings (PLA 2020). Almost one-third of libraries now circulate hotspots, with recent growth of this service driven by pandemic closures and supported by a flood of emergency funding (Bryne and Visser 2022). Outside of such core services, this section identifies four unique or emerging strategies for digital inclusion in public libraries. These are not the only possible strategies for digital inclusion. Rather, they are intended to provide concrete examples that inspire innovative local responses.

Strategy 1: Digital Navigators

During the pandemic, NDIA developed the Digital Navigators model to holistically address the interconnected elements of digital inclusion. NDIA defines Digital Navigators as "trusted guides who assist community members in internet adoption and the use of computing devices" (Balboa et al. 2021). While the model was not developed exclusively for libraries, this definition clearly resonates with the role of librarians and libraries in the community. Thus, libraries across the country have begun to offer Digital Navigator programs. Fundamentally, Digital Navigators provide a form of reference. The Navigator meets individually with a patron. Through a reference interview, the Navigator learns about the patron's goal and what types of digital access or skills they might need to accomplish it. Then they provide information and resources to help. Digital Navigators is a particularly effective model because it addresses broadband access, computer ownership, and digital literacy in the same service, without requiring the patron to find two or three different sources of support.

Envision patrons who want their children to be able to do homework online, but do not have in-home Internet access. The Navigator can direct the patrons to a tool that will help them understand the connection speed they need, then provide a list of reputable sources for private and public subsidies. Perhaps the patrons also need new computers, so the Navigator can refer them to a local nonprofit that provides refurbished laptops. If patrons lack the digital skills to fill out the online applications needed to obtain these services, the Navigator will assist. If the patrons are seeking further digital skill development, the Navigator can suggest books, websites, classes, and other resources the patrons can use to learn. As this example demonstrates, although Digital Navigators focus on technology topics, the skills they use are traditional reference skills. Like basic medical or legal reference, this service requires a librarian's core skills rather than deep subject matter expertise.

One of the earliest libraries to fully adopt this model was the Salt Lake City Public Library System. In partnership with NDIA, the Institute of Museum and Library Services (IMLS), and the Urban Libraries Council (ULC), they developed a freely available Digital Navigators Toolkit (Balboa et al. 2021). The toolkit, along with a variety of other resources for libraries and organizations launching Digital Navigators programs, is available on the NDIA website.

Digital Navigators programs pair neatly with other digital literacy programs or technology services already offered by the library. For example, Washington State Library provides career-connected technology assessments and certifications from industry-recognized sources like Microsoft, Adobe, Intuit, and Northstar. Individual libraries may offer technology help programs or databases, or have circulating hotspot and laptop collections. A Digital Navigator can help patrons learn about and access these library-provided resources.



"Digital Navigators is a particularly effective model because it addresses broadband access, computer ownership, and digital literacy in the same service, without requiring the patron to find two or three different sources of support."

Dive Deeper:

Digital Navigators Toolkit:

https://www.digitalinclusion.org/wp-content/uploads/2021/09/Digital-Navigators-Toolkit-Final.pdf

A soup-to-nuts overview of how to start a Digital Navigators program. The final page links out to a variety of more detailed resources.

Washington State Library Digital Inclusion Resource Collection: https://www.sos.wa.gov/library/libraries/projects/digitalliteracy.aspx

A listing of resources for researching broadband subsidy programs, affordable devices, and digital skills. Although based in Washington State, many resources are nationally available or potentially offered by other state libraries as well.

Infobase Learning Cloud

https://www.infobase.com/platforms/Learning-cloud

A cloud-based platform that provides upskilling, course authoring, and professional development solutions to meet the evolving needs of growing communities. Infobase Learning Cloud offers library staff and patrons unlimited, simultaneous access to online learning resources on the most popular software topics and in-demand soft skills, including computer literacy basics training.

Strategy 2: Community Networks

Community networks are cooperatives owned and managed by neighborhood residents, able to provide high-speed internet at low cost in otherwise neglected communities. Unlike circulating hotspot programs, which are a limited solution because they are temporary and slower (Urban Libraries Council, n.d.), community networks provide a higher standard of digital inclusion through permanent, in-home access. They exist around the world (Williams and Muller 2021), with Detroit providing one of the prominent early successes in the United States. The Detroit Community Technology Project (DCTP) brought together neighborhood coalitions, nonprofits, and faith communities as part of the Equitable Internet Initiative (EII). Neighborhood residents were trained as digital stewards, able to install access points and maintain the network. In addition to access, the project recognized that residents needed digital literacy education in order to achieve their mission of a "neighborhood-governed internet infrastructure that fosters accessibility, consent, safety, and resilience" (DCTP, n.d.).

Therefore, they developed a digital skills curriculum as well.

What is the role of a library in a community network? While most libraries would likely not start a "Community networks are cooperatives owned and managed by neighborhood residents, able to provide high-speed internet at low cost in otherwise neglected communities."

community network program on their own, they can be invaluable partners in efforts led by others. Often, the most important asset is the building itself (Williams and Muller 2021). The roof of the library can be an effective location for an antenna or repeater, especially if the library is centrally located in an underserved neighborhood. If digital stewards are trained to conduct installation, the library's commitment can be as low as allowing roof access and a connection to existing electricity or data lines. Additionally, the library can support the creation and delivery of digital literacy classes and information for network users. In 2020, the International Federation of Library Associations (IFLA) released a briefing explaining the important and varied roles that libraries can play in community networks, including hosting workshops, raising awareness, and sharing infrastructure.

A concern that may arise related to community networks is that the library may not fully understand its own internal technology infrastructure. Tribal, rural, and small libraries with limited or no IT support may encounter questions they are unsure how to address. The freely available *Toward Gigabit Libraries Toolkit* may be helpful in these cases, as it is intended to empower libraries to understand and improve their broadband and IT infrastructure (Spellman, Werle, and Block 2021).



Dive Deeper:

IFLA Briefing

https://cdn.ifla.org/wp-content/uploads/files/assets/faife/publications/ community_networks_-_a_briefing_for_libraries.pdf

A concise overview of community networks and the role of libraries.

Community Networking Toolkit from Seattle Community Network https://docs.seattlecommunitynetwork.org/community/communitynetworking-toolkit.html

For a deep dive into community networks, this toolkit contains resources for everything from the technical setup to urban planning to digital skills reports.

Toward Gigabit Libraries Toolkit https://internet2.edu/tgl/

A tool to help libraries without IT support understand and improve their Internet infrastructure.

Strategy 3: Facilitated Access

In some cases, the library can lower the barrier to entry for complex technologies. Librarians can minimize the need for the patron to interact with the technology, allowing the patron to engage directly with the content. For example, a library could stream an online program or class into a meeting room, with staff managing the technology, while inviting patrons to attend in person. Since the 2020 PLA Public Library Technology Survey found that approximately half of libraries offered streaming programs that year, this type of hybrid programming could provide a low-barrier way for libraries to begin offering facilitated access.

However, this strategy should be used only after consideration. True digital equity exists when each person has all the digital access and skills they need, while facilitated access works by avoiding the need to develop either. Thus, while this strategy can provide a useful short-term solution to an immediate need, it may not be ideal as an isolated solution for addressing an ongoing need. Additionally, services based on facilitated access can take a significant amount of time to manage, as they require staff to mediate the technology. However, in some unique cases, this can be a potent strategy for helping patrons meet infrequent or unique goals.

One growing example of facilitated access in libraries is telehealth (Brooks 2022; Settles 2021). A patient may want a virtual appointment with a provider but only need a single or occasional visit. An effective video call requires a high level of Internet speed, device access, and digital skill that may not be possible to develop in time to meet the urgent need for care. Additionally, telehealth visits at the library may offer benefits beyond technology, such as semi-private meeting room space, access to public transit if immediate follow-up care is recommended, and proximity to other library resources for learning about health topics. Even before telehealth services began gaining traction in libraries, 43% of people over age 65 and 44% of adults with household incomes below \$30,000 said that the library helped "a lot" with health care information (Horrigan 2015). Libraries have begun providing facilitated access that allows patients to participate in telemedicine or other virtual social service visits regardless of their digital skills or home access. While libraries have created different models for providing telehealth services, many core elements are the same: appointment-based access to a meeting room, a laptop or tablet, virtual meeting software, and staff technical support. Another key element to a successful telehealth initiative is community partnerships (Brooks 2022; Settles 2021). Partnering with health organizations can ensure that libraries have appropriate practices in place to avoid unnecessary access to private health information, ensure user health and safety, make effective choices about what software and hardware to adopt, and increase use.

Dive Deeper:

Pottsboro Library Telehealth Community of Practice

https://libguides.unthsc.edu/pottsboro-library

After Pottsboro Library created a robust telehealth initiative for its community, it created this CoP so that libraries could learn from each other's experiences.

Telehealth Services and Public Libraries—white paper and webinar by Craig Settles for the EveryLibrary Institute

https://www.everylibraryinstitute.org/telehealth_2021

When Craig Settles suffered a stroke, telehealth saved his life. As an industry-leading advocate for telehealth and broadband access, he provides insight into the role libraries can play.

Strategy 4: Community Organizing and Advocacy

The word "advocacy" may concern librarians who are aware of restrictions on political activity in a public workplace. Yet at the same time, advocacy resonates with librarians' professional values of equity, diversity, and inclusion. The goal of advocacy in this context is not to influence a particular ballot measure or candidate (generally not permitted during work time), but to advocate for the voice of the community and the inclusion of the library in community-based efforts. Many communities have grassroots coalitions organizing for better broadband infrastructure, for example. The library can participate in these efforts by sharing information, offering space, providing project management expertise, making connections between community groups, and more. Usually, the library does not lead this work; it participates in and shares its resources with existing efforts, especially those led by marginalized communities.

A particular source of likely collaboration at this time is the Digital Equity Act (DEA), a 2.5-billion-dollar component of the federal Infrastructure Investment and Jobs Act (Frisque 2021). Over the next five years, DEA will

"The goal of advocacy in this context is not to influence a particular ballot measure or candidate (generally not permitted during work time), but to advocate for the voice of the community and the inclusion of the library in community-based efforts." provide grants to states to create and implement digital equity plans. Libraries are natural partners in that work. As states create committees and solicit input to develop their plans, librarians can

help legislators and agencies understand the value libraries provide to communities. BroadbandUSA, an arm of the National Telecommunications and Infrastructure Administration (NTIA), has even created documentation to help states understand why they should include libraries in digital equity planning (BroadbandUSA, n.d.a).

By becoming an integrated part of DEA-related planning, libraries can share knowledge about what communities need and potentially receive significant

funding to serve them. But the value of participating in community-led efforts like this, from formal state processes to informal neighborhood coalitions, goes well beyond the end of any single initiative. Longer term, participating in broad community organizing efforts raises awareness of the importance of the library in digital inclusion. When future opportunities arise, legislators, government agencies, and communities may more readily turn to the library as an essential partner.

"Over the next five years, DEA will provide grants to states to create and implement digital equity plans. Libraries are natural partners in that work."



Dive Deeper: BroadbandUSA

https://broadbandusa.ntia.doc.gov/

Designed to help local organizations supporting digital inclusion, its website offers many resources and is particularly helpful in demystifying government policies and funding.

Interactive Map: How Has Your State Designed Its Broadband Program? https://www.pewtrusts.org/en/research-and-analysis/articles/2021/06/28/ which-states-have-dedicated-broadband-offices-task-forces-agencies-or-funds

Every state has different structures around broadband and digital equity policy. This map may help librarians determine whom to reach out to regarding statewide DEA or digital equity initiatives.

CONCLUSION



Digital equity envisions a future where all people have the digital skills and access they need to accomplish their goals. The strategies used to bring communities closer to that future are collectively called digital inclusion. Libraries are well positioned to engage in digital inclusion work because of their long history of combating the digital divide through technology access and digital literacy training. Four emerging digital inclusion strategies in libraries are explored: Digital Navigators, Community Networks, Facilitated Access, and Community Organizing and Advocacy.

Ultimately, libraries have an essential role to play in community-wide digital equity ecosystems. Librarians do not need to be technical experts, because they can partner with others who are. Librarians bring expertise to their communities. They are trusted conveners with wide-ranging relationships. Libraries provide welcoming spaces and safe places to ask difficult questions. All of these resources—all the things librarians already do every day—are as essential to digital equity as any technology. Libraries and librarians are necessary for a more equitably connected world.

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