The Roles and Issues of the Public Library in Bridging the Digital Divide

Rebecca Croxton

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In the United States today, it has become an assumption that access to computers and information available through the Internet is a right of all citizens. Citizens use computers and Internet technology for a plethora of reasons including connecting with their communities, participating in education activities, conducting research, accessing health information, communicating with others, shopping, accessing government documents and forms, viewing videos, and a variety of other reasons. Students today are frequently required to access the Internet for research projects and daily assignments. While being able to access and learn from the available technology provides tremendous opportunities for individuals today, this surge in technology has created a “digital divide” in our society. “The term “digital divide” has been coined to describe a gap in understanding, capability, and access to technology in order to exploit the digital revolution in information” (Lester and Koehler 357). This gap leads to disparity between two groups – the “haves” and the “have nots”. The “haves” have access to information technology (computers, software, high speed Internet access) and the information to use that information technology and the “have nots” lack access to any or all of the facilities held by the “haves” (Lester and Koehler 357). There is concern that if the gap is not bridged, the “have nots” will not be able to achieve the competence required to access the same opportunities, goods, and services that the “haves” possess. The role of the public library in working to bridge the digital divide as well as the issues it faces in so doing is discussed below.

While efforts to bridge the digital divide have lessened the gap significantly since legislation was enacted in 1996 to address this matter, statistics show the digital divide is alive
and well in America. Metcalf states, “Access to a computer at home is affected by race and income: The higher the family income, the greater chance that the student has a computer at home. White non-Hispanics have a higher percentage of home computer ownership than blacks or Hispanics” (Metcalf 29). In addition to race and economic status, rural residents in America continue to be at a disadvantage with regards to technology access. Bertot, McClure and Jaeger report that rural public libraries lag behind their urban counterparts with regard to the number of workstations, non-filtered workstations, high-speed connectivity, and wireless Internet services for patron-owned computer use (126). Life stage factors are also important in terms of Internet access. Individuals born prior to the 1950s are less likely to seek access to the Internet (Schell 109). Finally, Chaudhurri and Flamm suggest, “…the gap between access and use statistics at home suggests the digital divide may be at least partially explained by individual apathy. In other words, people may be choosing not to subscribe to the Internet at home simply because they do not want to” (264).

Discussions of the digital divide need to move further beyond merely considering one’s ability to access computers and the Internet. In addition to considering whether an individual has ever accessed a computer or the Internet, one should also consider basic access, quality of access, technological literacy, and access to useful content (The Henry J. Kaiser Family Foundation 1). The term basic access can be used to describe a person’s ability to get to a computer that is wired to the Internet. Quality of access describes whether an individual has a high-speed Internet connection or a slower “dial-up” connection. Technological literacy, or the degree to which a user “knows” what they are doing, should also be considered in discussions of the digital divide. Finally, access to useful content must be considered when participating in conversations regarding the digital divide.
The United States has made great strides in ensuring all citizens have access to computers and the Internet. In a 2004 study, Jaeger, Bertot, and McClure reported, “…public libraries provide Internet connectivity for almost all U.S. residents. Compared to 1994 when only 20.9% of public libraries were connected to the Internet, 99.6% of all public library outlets are connected to the Internet in 2004” (125). As noted above, the dominant challenge today is not merely providing access to computers and the Internet, but providing access that is equivalent for all, regardless of race, socioeconomic status, age, or where one resides. American public libraries play a vital role in helping to bridge the digital divide by providing the high-quality access citizens have come to expect. “Public libraries are the third most common place where children go online. While significantly fewer children access the Internet from libraries than from home or school, they are a particularly important source for those without home access” (The Henry J. Kaiser Family Foundation 11). In a survey conducted in 63 libraries across eight states, Barber and Wallace found that the library’s role in bridging the digital divide was evident everywhere they went. They found, “Most of those interviewed – 70% - said they own computers, but about the same number (69%) said they do not have Internet access at home, either because it’s not available or they can’t afford it. As is true generally, people living in less-affluent communities and seniors were least likely to report having computers at home” (Barber and Wallace 55).

While public libraries play a vital role in ensuring technological access for all, they require a great deal of financial support from the federal government and private sector donations. The government’s role in assisting public libraries in bridging the digital divide is discussed below.
The Government’s Role in Bridging the Digital Divide

As the technological infrastructure has become more sophisticated since the mid 1990s, the federal government has come to recognize the importance of providing free and equal access to technology for all users. In 1996, President Clinton signed the Telecommunications Act of 1996. Within the Snowe-Rockefeller-Kerry-Exon provision of this act, the legislation authorized reduced rates (e-rates) for libraries, schools, and health care providers for access to the Internet (Rubin 154). “E-rate, for example, provided libraries with more than $250 million in technology-related discounts between 2000 and 2003. The expenditures of these funds have allowed public libraries, in a period of about a decade, to become nearly universal providers of Internet access” (Bertot, McClure and Jaeger 125).

Library Service and Technology Act (LSTA) grants are another way federal monies are provided to help libraries support closing the gap in the digital divide. LSTA grants are awarded to state agencies from the Institute of Museum and Library Services. “These grants are meant to help link libraries electronically with other social and educational agencies or promoting linking with electronic information networks. Nearly $150 million was appropriated for libraries in 2002 for this purpose, and in 2004, more than 95 percent of public libraries have Internet access” (Rubin 156). Without the assistance of government funding, public libraries would likely be continuing to struggle to provide basic access to computers and the Internet.

The Issues

Despite the tremendous amount of funding provided by the federal government and great efforts among public libraries and schools to close the gap in access to computers and the Internet, evidence still abounds that a digital divide continues in America. Discussions of the gap in the digital divide are less focused on whether an individual simply has access to a
computer and the Internet, but now consider the quality of access to information as a primary basis for concern. While public libraries play a vital role in closing the digital gap, several key issues prevent them from being completely successful in reaching this goal. These key issues include: (1) the libraries’ struggle to meet the public demand, (2) the need for ongoing support to sustain public access computing, (3) the need for an increase in connectivity bandwidth, (4) the need for unfiltered workstations, and (5) a continued disparity between rural and urban libraries. These issues are further addressed below.

**Libraries struggle to meet the public demand**

Public libraries are struggling to meet the increased public demand from users to access computers and the Internet. Libraries are often limited by space, time, staffers who are technologically savvy enough to provide training classes, and the increase of e-government and the public’s expectation that the library staff both understand and know how to use or access this governmental information.

A primary issue libraries face in meeting the technological needs of their patrons relates to space and their ability to provide enough workstations within their space to meet the public demands. In a survey conducted by Florida State University, researchers found that 85 percent of libraries reported not being able to meet the demand for computers consistently or at certain times during the day (Bertot, McClure and Jaeger i). Most libraries were built before the information technology revolution. Therefore, these libraries are often limited by building and space constraints. In the report, “Libraries Connect Communities: Public Library Funding & Technology Access Study 2007-2008,” Oder notes, “While the number of public access Internet computers grew for the first time in six years – 12 per branch, up from 10.7 in a year – nearly
20% of public libraries say demand for computers exceeds supply all the time, while 63% say that occurs some of the time” (14).

A second issue public libraries face in meeting public demands for computer and Internet access relates to time. If this was a truly equitable society with regards to access of technology, then time would not be a constraint on information seekers. However, public library patrons are limited due to the hours of operation of their libraries. Not only are patrons limited by the hours of operation, but severe budget cuts nationwide have caused some libraries to cut operating hours, lay off staff members or close altogether (Clark). Further, the majority of public libraries have time limits on the use of the computer terminals. If there are other users waiting for a turn, then a patron must close his computer session when his time limit is up, whether or not he was finished with his work.

Librarians also struggle to meet the ever increasing technological demands of their users. Librarians and staff members must seek continued technology training to assist patrons and troubleshoot equipment (Clark). Not only do librarians and staff members need to be trained on how to use the available technology themselves, but they must also ensure usage of the technology by the patrons by providing both formal and informal training to patrons. Patrons, however, are at the mercy of the librarians to provide training classes. “Computer classes are offered only if there is a staff person who feels capable and is willing to teach. If that person leaves, the classes end” (Barber and Wallace 53). The three prevalent audiences for patron training are seniors (57.3%), those patrons who do not have Internet access at home (52.6%), and adults seeking continuing education (51.2%) (Bertot, McClure and Jaeger 125). It is apparent that libraries play a significant role in providing computer and Internet training opportunities for individuals who would otherwise likely have no access. However, technology training for patrons is not always available when the patrons need it. “Of those libraries that do offer patron
Another challenge both public library patrons and the library staff face is the increase of e-government services. With the growing trend of the government to rely more and more upon the Internet to conduct their business with citizens, library patrons and staff find themselves having to quickly “learn the ropes” of e-government demands. “Some 74% of libraries report their staffers help patrons understand and use e-government services, including enrolling in Medicare and applying for unemployment” (Oder 14). Many librarians are noting a shift in their duties towards becoming more of a “caseworker”. According to a report entitled, “Florida Public Libraries and E-Government: Services, Issues, and Recommendations,” librarians have expressed concern and anxiety about their lack of preparation with regards to e-government services including knowledge about food stamps, public assistance, child welfare, and tax preparation (Oder 14). The Florida Department of Children and Families (FDCF) which handles child welfare issues, has closed most of its offices according to the report (Oder 14). With the closing of government offices, it appears there is a trend of shifting of social services from face-to-face interactions to Internet based interactions. It is interesting to note that many of those who rely most upon the government social services agencies are also among the poorest. The poorest are among those who are often at a disadvantage concerning the digital divide and find themselves using the public library services to access the e-government services they require. It then falls upon the library staff to assist these patrons who need to access e-government, despite their lack of training in the social services and the liability which may befall them. Some library staffers in Florida have been instructed not to help with e-government forms because of liability fears (Oder 15). This situation further exacerbates the divide between the “haves” and the “have nots”.
The need for ongoing support to provide public access computing

Another challenge public libraries face in bridging the digital divide is their continuing need for resources. “In keeping pace with ever changing technology, libraries often lack sufficient resources and technical support to upgrade computer hardware, software and Internet connections” (Clark). Computer software and hardware quickly become outdated in today’s fast moving technology world and frequent technical updates are vital in order for public libraries to remain a viable provider of computer and Internet connections for the public. Not only are libraries facing challenges in keeping their technology current; many libraries are also facing cuts in their technology budget. In a 2004 survey of nearly 7,000 libraries nationwide, 13.3% of libraries reported a decrease in their budgets from the previous year, and 50.6% indicated their technology budgets stayed the same with no increase for inflation or demand for service (Bertot, McClure and Jaeger i). If libraries are unable to keep their technology current, then those who rely upon the public library to access computers and the Internet remain at a disadvantage compared to others who are able to access more up-to-date technology through their homes or other means.

Public libraries continue to need an increase in connectivity bandwidth

In discussing the digital divide, one must consider the quality of access a user has. While a 2004 survey found that 98.9% of U.S. public libraries have Internet access, there is great disparity with regards to the quality of the access (Bertot, McClure and Jaeger i). In order to access and download particular files from the Internet, users must have appropriate high-speed connectivity. In 2005, Bertot, McClure and Jaeger reported, “High-speed connectivity is still not evenly distributed across libraries or necessarily sufficient for increased
bandwidth-intensive applications. While 42% of public libraries have connection speeds of 769kbps or greater, 73% of urban libraries have connection speeds of greater than 769kbps as compared to only 34% of rural libraries” (i). In 2008, Oder goes on to report, “Nearly two-thirds of public libraries provided 1.5Mbps or faster Internet speeds with urban libraries (90%) far outpacing rural ones (51.5%). Still, nearly 58% of libraries consider their current connection speed insufficient” (14). With vast differences in connectivity bandwidths across public libraries, a disparity continues for many with regard to their ability to access information. It is interesting to note that while rural libraries may struggle to provide high-speed access, patrons in high poverty areas have access to the highest levels of connectivity, bandwidth, and wireless access, as high poverty outlets tend to be part of urban library systems (Bertot, McClure and Jaeger i). Until public libraries are able to eliminate the disparity with regard to providing high-speed connectivity for all, the digital divide will continue.

**The need for unfiltered workstations**

While there is Internet connectivity in nearly all of the public libraries in the United States, the content one is able to access is frequently limited due to filtering software. In 2000, Congress passed the Children’s Internet Protection Act (CIPA) to control access to adult materials by minors. “Under this act, public and school libraries cannot receive federal monies to provide access to the Internet unless they have an Internet access policy, and employ filtering software that blocks child pornography, images that are obscene, or items deemed harmful to juveniles” (Rubin 155). While the mission of protecting juveniles from harm is important, this filtering also presents users with a barrier to the information they may seek. Though users can ask permission from library staff to access blocked sites, this over blocking still presents a barrier between the user and the information by requiring them to go through a process that they may
find too cumbersome to pursue. Bertot, McClure and Jaeger found that nearly 40% of all public libraries filter their public access Internet connectivity in some way, thus limiting access to a variety of Internet-based content (i). These researchers further report that patrons served by rural libraries have less access to non-filtered workstations than their urban counterparts (126).

**Continuing disparity between rural and urban libraries**

While the gap in the digital divide has significantly narrowed over the past decade with regards to access to computers and the Internet, rural public libraries continue to be among those that struggle the most with providing equitable access to all. Schell states, “…Internet access is far greater for citizens in cities than in rural areas…” (108). Rural public libraries lag behind their urban counterparts with regard to the number of workstations, non-filtered workstations, high-speed connectivity, and wireless Internet services for patron-owned computer use (Bertot, McClure and Jaeger 126). For example, nearly two-thirds of public libraries provide 1.5Mbps or faster Internet speeds, with urban libraries (90%) far outpacing rural ones (51.5%) (Oder 14).

A disparity between rural and urban libraries also continues today with regards to patron training opportunities. “Of those libraries that do offer patron training…only 28% offer such training on a scheduled basis (either weekly or monthly). That percentage drops to approximately 16% for patrons served by rural libraries but increases to nearly 64% for patrons served by urban libraries (Bertot, McClure and Jaeger 125).

As noted above, disparities continue between rural and urban libraries with regards to workstation availability, unfiltered workstations, high-speed connectivity, and training opportunities. As these disparities continue to exist for rural citizens, then so does the digital divide.
What Next?

In attempting to close the digital divide, public libraries need increased support from the government and private sector with regards to funding. Further, there needs to be some policy changes at the federal level which will help level the playing field for those citizens who rely upon the library to access computers and the Internet.

With an increase in funding, libraries could begin to address their insufficiencies of space and available workstations. Further, libraries may consider increasing their hours of operation to further meet the needs of their patrons. Libraries must continue to keep technology improvement in their budgets. Though libraries may all now be “connected” to the Internet, they need to keep their hardware, software, and Internet connectivity speeds at the technological forefront in order for their patrons to remain on an equal playing field with those users who rely upon other means for computer and Internet access. Finally, with additional funding perhaps libraries could ensure that a more consistently available formal computer training program is available to those patrons who may benefit from these services.

High speed connectivity to the Internet also remains a huge barrier for many individuals, especially those in rural areas, in obtaining equal and high quality access to the Internet. The government needs to shift its focus from merely providing access to computers for everyone to building a better infrastructure which allows for high-speed connectivity throughout all areas of the United States. If high-speed connections to the Internet were available throughout all areas of the nation, then all citizens would be able to better access high-quality information.

In addition to the need for additional funding, new and/or improved policies must also be put into place. The first policy which must be amended relates to filtering. In order for public libraries to receive federal monies to provide Internet access, they must employ filtering software on their workstations. Perhaps the policy could be amended in such a way that not all public
computers would require this filtering, but only those workstations available for children under the age of 18.

A second policy change which may assist both library staffers and patrons relates to e-government. If government agencies are going to shift to e-government and continue with their trend of downsizing or closing their offices, then it would be prudent for these agencies to consider providing public libraries with a government liaison to assist patrons who need to utilize e-government services. This would take both the burden and liability off librarians to provide e-government support to patrons.

**Conclusion**

The digital divide remains alive in America today. While research supports the claim that virtually all individuals have access to computers and the Internet through home, school, work, or public libraries, a disparity continues between the “haves” and “have nots” with regard to the quality of access available to them. High quality access to computers and the Internet requires that individuals have no restrictions placed upon them with regards to time, space, workstation availability, training opportunities, hardware and software updates, high-speed connections, unfiltered workstations, and whether they live in rural or urban areas. Unfortunately, those issues still continue in many communities today. Through increased funding through federal initiatives and private sector grants as well as amendments to existing policies and initiation of new policies, perhaps the nation will become truly successful in bridging the digital divide for all citizens within the next decade.
Bibliography


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