

## THE IMPACTS OF FREE PUBLIC INTERNET ACCESS ON PUBLIC LIBRARY PATRONS AND COMMUNITIES

John Carlo Bertot,<sup>1</sup> Charles R. McClure,<sup>2</sup> and Paul T. Jaeger<sup>3</sup>

Public libraries have evolved into a primary source of Internet access in many communities, generating wide-ranging impacts in the communities that public libraries serve. Based on the findings of the 2007 Public Libraries and the Internet study, this article examines the ways in which the Internet access delivered by public libraries affects their communities. This article describes the public access technology roles of public libraries and explores the relationships among community impacts, community expectations, and public policies related to libraries. The analysis emphasizes the effects of future Internet platforms and applications and online communities on the community impacts. This article also examines ways in which to measure these impacts from other perspectives, including developing a means of assessing the users' perceptions of the impacts of public library Internet access in their own lives and in their communities.

---

### I. Introduction

This article presents findings from the 2007 Public Libraries and the Internet study related to the community impacts of the Internet access provided by public libraries. The 2007 Public Libraries and the Internet study continues the research of previous surveys conducted since 1994 to provide national and state policy makers, library advocates, practitioners, researchers, government and private funding organizations, and a range of other stakeholders with a better understanding of the issues and needs of libraries associated with providing Internet-based services and resources.<sup>4</sup>

1. Professor and associate director, Information Use Management and Policy Institute, College of Information, Florida State University; E-mail [jbortot@admin.fsu.edu](mailto:jbortot@admin.fsu.edu).
2. Professor and director, Information Use Management and Policy Institute, College of Information, Florida State University; E-mail [cmclure@mail.fsu.edu](mailto:cmclure@mail.fsu.edu).
3. Assistant professor and director, Center for Information Policy and Electronic Government, College of Information Studies, University of Maryland; E-mail [pjaeger@umd.edu](mailto:pjaeger@umd.edu).
4. Information about the 1994–2007 reports is available at <http://www.ii.fsu.edu/plinternet>.

[*Library Quarterly*, vol. 78, no. 3, pp. 285–301]

© 2008 by The University of Chicago. All rights reserved.

0024-2519/2008/7803-0003\$10.00

The 2007 study expanded on findings from previous surveys by exploring issues of library technology budgets and the funding of Internet access to better understand the community impacts of free public Internet access [1]. The 2007 study sampled 6,979 public libraries based on three library demographics—metropolitan status (roughly equating to their designation of urban, suburban, or rural libraries), poverty level of their service population (as derived through census data), and state in which they resided. The survey received a total of 4,027 responses for a response rate of 57.7 percent. Unless otherwise indicated, all data in this article are from the 2007 Public Libraries and the Internet study.

The findings of the 2007 study reaffirm the importance of Internet access to contemporary public libraries, their patrons, and their service communities. Virtually all libraries (99.1 percent) provide public Internet access to patrons through an average of 10.7 public access workstations in each public library, while 54.2 percent of public libraries now also offer wireless Internet access to patrons. In many communities, public libraries are the guarantor of free public Internet access, with 73.1 percent of libraries reporting that they are the only provider of free Internet access in their communities. The role of Internet access provider for the community is ingrained in the social perceptions of public libraries, and public Internet access has become a central part of community perceptions about libraries and the value of the library profession [2].

Around the United States, public library Internet access is relied upon by a wide range of segments of the community for a range of reasons—job seeking, educational resources, genealogy research, travelers looking to keep in touch with their families, e-government access, emergency information, and countless other activities in both everyday and extreme circumstances [2–6]. In fact, during the disastrous 2004 and 2005 hurricane seasons, public libraries were a lifeline to many individuals and entire communities that were recovering from the devastation [3, 4, 6].

Public libraries, however, also face significant challenges in the delivery of these Internet services to their patrons and communities. The continual need to increase the levels and quality of Internet and public computing access is becoming a considerable strain on libraries as the services and content of future Internet platforms and applications (online communities, social networking tools, and advanced media applications, among other technologies) continue to require greater bandwidth and computing capacity [7]. As a result, public libraries must address ever-increasing technological demands when using the Internet and providing computing access, often without corresponding increases in budget or forms of support, which creates disparities in the levels of access that different types of patrons in different regions of the country receive [5].

Libraries are also constrained by other practical and operational issues,

such as lack of sufficient telecommunications infrastructure and physical space to support additional computers or bandwidth [8, 9]. Libraries have a limited voice in the policy-making process, inhibiting their ability to make the case for additional forms of support, while, at the same time, governments place a range of constraints on the manner in which libraries operate in the Internet environment [2]. As such, public libraries are caught between trying to meet patron and community expectations to receive sufficient free public Internet access and an array of operational, governmental, and funding constraints that limit their ability to provide such access.

The data from the 2007 Public Libraries and the Internet study indicate that libraries are beginning to face a “disconnect” between what their communities expect and the levels of Internet access that they are able to provide to their communities. This article examines the ways in which public libraries’ Internet access seems to have direct impacts on their communities. These areas include technology training and assistance, e-government service delivery, education resources, services for job seekers, and disaster/emergency roles and services, among others. This article explores the relationships between these community impacts and public policies related to libraries. The article also examines ways in which to more extensively measure these impacts from other perspectives, including developing means of assessing the users’ perceptions of the impacts of public library Internet access in their own lives and in their communities. Finally, the article discusses selected issues related to the provision of free public Internet access that libraries could employ to try to meet community needs and expectations for Internet access.

## II. Internet Access and Communities

Many questions from the 2007 Public Libraries and the Internet study facilitate the understanding of the community roles and impacts of free public Internet access. This section discusses these roles and impacts in terms of community access, services and training, emergencies and e-government, wireless access, and e-rate.

### A. *Community Access*

A particularly significant finding from the study was how often public libraries indicated that they were the only provider of free public Internet access in their communities. Table 1 reveals that 73.1 percent of libraries are the only provider of free Internet access in their areas, thus often serving as the guarantors of public access to the Internet in the United States. Only 17.4 percent of communities have another public access point

TABLE 1  
PUBLIC LIBRARIES AS THE ONLY PROVIDER OF  
FREE PUBLIC INTERNET ACCESS

Free Public Access	% Response
Yes	73.1
No	17.4
Do not know	5.3
Other	2.8

on which they can rely beyond the library. In three-quarters of the communities in the country, the residents have only the public library to ensure public access, meaning that any diminution in the quality or capacity of the Internet access in these public libraries could negatively affect the access of the entire community.

#### *B. Services and Training*

A key way that public libraries serve their communities is by providing free training on how to use the Internet and a range of related computing services that are either subscription services or services developed by the library staff. As table 2 indicates, the types of public access Internet services that public libraries most frequently offer are licensed databases (85.6 percent), homework resources (68.1 percent), digital reference or virtual reference services (57.7 percent), e-books (38.3 percent), and audio content such as podcasts and audio books (38 percent). Beyond the options listed in the question on the survey, libraries suggested many other types of Internet services they offer, including community information, inter-library loans, genealogy databases, and obituary indexes.

The survey also asked libraries to indicate the Internet services that they provided to their communities in terms of content. Table 3 reveals that

TABLE 2  
TYPES OF PUBLIC ACCESS INTERNET SERVICES IN PUBLIC LIBRARIES

Internet Service	%
Licensed databases	85.6
Homework resources	68.1
Digital reference/virtual reference	57.7
E-books	38.3
Audio content (e.g., podcasts, audio books, other)	38.0
Online instructional courses/tutorials	34.4
Digitized special collections (e.g., letters, postcards, documents, other)	21.1
Video content	16.6
Video conferencing	4.3
Other	3.8

NOTE.—Does not total to 100%, as respondents could select more than one option.

TABLE 3  
 CONTENT OF PUBLIC ACCESS INTERNET SERVICES CRITICAL TO THE ROLE  
 OF THE PUBLIC LIBRARY

Public Internet Service	%
Provide education resources and databases for K–12 students	67.7
Provide services for job seekers	44.0
Provide computer and Internet skills training	29.8
Provide education resources and databases for adult/continuing education students	27.5
Provide education resources and databases for students in higher education	21.4
Provide education resources and databases for home schooling	14.5
Provide information about the library's community	14.1
Provide services to new citizens and residents	12.7
Provide access to federal government documents	8.3
Provide access to local public and local government documents	6.9
Provide information for college applicants	5.4
Provide information for local economic development	3.9
Provide information or databases regarding investments	3.2
Provide information about state and local business opportunities	2.9
Provide information for local business marketing	1.0
Other	12.4

NOTE.—Does not total to 100%, as respondents could select more than one option.

many libraries are using the Internet to provide educational resources to their communities. The top answer and three of the next five answers involved educational impacts—education resources and databases for K–12 students (67.7 percent), adult/continuing education (27.5 percent), higher education (21.4 percent), and home schooling (14.5 percent). The second and third most common answers related to providing services for job seekers (44 percent) and providing computer and Internet skills training (29.8 percent).

Table 4 identifies the major impacts of information technology training provided to patrons by public libraries. Respondents noted that providing information literacy skills was the most commonly reported impact of the technology training (45.7 percent), while technology skills training was the second (39.4 percent) and third (37.6 percent) most frequently provided information technology training by libraries. Helping students with school- and homework assignments was reported by 35.2 percent of libraries, which corresponds with the emphasis given to educational resources noted in table 3. Facilitating local economic development (2.3 percent) and helping local business owners (1.7 percent) were rarely cited as impacts, and 23.8 percent of libraries offer no training.

### *C. Emergencies and E-Government*

In recent years, public libraries and the Internet access they provide have taken on increasing importance as a means of e-government access and

TABLE 4  
 IMPACTS OF PUBLIC LIBRARY INFORMATION TECHNOLOGY TRAINING FOR PATRONS

Impact of Training	%
Provides information literacy skills	45.7
Offers technology training to those who would otherwise not have any	39.4
Provides general technology skills	37.6
Helps students with their school assignments and schoolwork	35.2
No training offered	23.8
Helps patrons complete job applications	21.5
Helps users access and use electronic government services and resources	19.9
Facilitates local economic development	2.3
Helps business owners understand and use technology, information resources, or both	1.7
Other	2.8

NOTE.—Does not total to 100%, as respondents could select more than one option.

as community support structures during emergencies [3, 4, 6]. Table 5 shows the roles public libraries play in the event of disaster or emergency situations. Nearly one-third of libraries (31.9 percent) noted that their computing and Internet services would be used by the public to access relief services and benefits. The percentages of libraries involved in disaster relief jump dramatically for states in which disasters occurred. For example, in the Gulf Coast states, 96.1 percent of Mississippi libraries, 87.9 percent of Louisiana public libraries, 87.3 percent of Florida public libraries, and 64.5 percent of Alabama public libraries report use of their public computing and Internet access services to access emergency relief services and benefits. Based on the experiences of the 2004 and 2005 hurricane seasons, it is likely that many public libraries in communities that have not recently experienced a major emergency would find that their computers would be used for access to relief services and benefits. Similarly, many more libraries than the 18.5 percent that indicated they planned to serve as an emergency shelter might be forced into that role, depending on the circumstances of an emergency. The other emergency

TABLE 5  
 DISASTER/EMERGENCY ROLES AND SERVICES OF THE PUBLIC LIBRARY

Disaster/Emergency Roles and Services	%
Library's public computing and Internet access services are used by the public to access emergency relief services and benefits	31.9
Library building serves as an emergency shelter	18.5
Library staff provide emergency responder services	7.5
Library's equipment is used by first responders	6.0
Other	7.8

NOTE.—Does not total to 100%, as respondents could select more than one option.

TABLE 6  
PUBLIC LIBRARY DISASTER/EMERGENCY PLANS

Disaster/Emergency Plan	%
There is no current written plan, and one is not in the process of being developed	28.2
There is no current written plan, but one is in the process of being developed	21.9
There is a current written plan, but it is more than one year old	21.9
There is a current written plan	15.6
Library is involved in disaster and emergency planning activities at the local level (e.g., town, city, county)	15.3
Library's existing plan, or plan that is under development, was developed in conjunction with local or other emergency service organizations (e.g., fire, police, disaster relief)	7.3
Do not know	3.2
Other	2.7

NOTE.—Does not total to 100%, as respondents could select more than one option.

roles reported by libraries included serving as command and control centers, temporary setups for local businesses, classrooms in the case of public school damage, and evacuation sites for local schools.

Table 6 shows the degree to which public library systems have established emergency or disaster plans. The highest number of libraries (28.2 percent) reported that they do not currently have any type of plan in place and that they are not developing one. Only 15.6 percent of libraries have a current, up-to-date written plan in place. More positively, 15.3 percent of libraries are in the process of developing an emergency preparedness plan, while another 21.9 percent are updating existing plans that are more than a year old. The experiences of public libraries in the aftermaths of the major hurricanes of 2004 and 2005 may serve as an impetus for these libraries that still need to develop or update an emergency plan.

Along with emergency roles, another key area in which Internet access in public libraries plays an increasingly important role is through providing access, assistance, and training using e-government sites and services. In fact, many local, state, and federal government agencies now direct citizens to the local library if they need help using an e-government site [3, 4]. As table 7 indicates, the vast majority of public libraries (78.5 percent) provide access to and assistance with government Web sites, programs, and services. Additionally, over half of public library systems (55 percent) provide assistance to patrons applying for or accessing e-government services, such as taxes or Medicare applications. More advanced forms of e-government assistance, such as partnering with government agencies (12.8 percent) and providing e-government training courses (8.4 percent), have not yet been as widely embraced by public libraries.

TABLE 7  
E-GOVERNMENT ROLES AND SERVICES OF THE PUBLIC LIBRARY

E-Government Roles and Services	%
Staff provide as-needed assistance to patrons for understanding how to access and use government Web sites, programs, and services	78.5
Staff provide assistance to patrons applying for or accessing e-government services	55.0
Library is partnering with government agencies, nonprofit organizations, and others to provide e-government services	12.8
Library offers training classes regarding the use of government Web sites, programs, and electronic forms	8.4
Other	2.1

NOTE.—Does not total to 100%, as respondents could select more than one option.

#### D. Wireless Access

In recent years, public libraries have adopted wireless access as a means of serving their communities. The number of public library outlets offering wireless Internet access has steadily increased since first measured in 2004. Wireless access was available in 17.9 percent of libraries in 2004 and 36.7 percent in 2006 [10, 11]. Table 8 shows that in 2007 wireless access was available in 54.2 percent of libraries, with an additional 17.4 percent of libraries that do not currently have wireless access planning to add it in the next year. Thus, if libraries follow through with their plans to add wireless access, 71.6 percent of public libraries will have it within a year. This is a substantial increase from 17.9 percent in 2004.

As a part of their wireless Internet access strategies, the majority of libraries (51.9 percent) provide wireless access for patrons with personal laptops, thus reducing the number of patrons who might wish to use the library workstations (see table 9). A much smaller number of libraries (7.0 percent) have purchased laptops for patron use instead of workstations. This does not increase the total number of computers available for use by patrons, but it does give patrons mobile Internet access within the library. Further, laptops consume less space than workstations, which may be a consideration for some of the libraries purchasing laptops.

#### E. E-Rate

The e-rate program is a federal government program intended to help

TABLE 8  
PUBLIC ACCESS WIRELESS INTERNET CONNECTIVITY IN PUBLIC LIBRARIES

Availability of Public Access Wireless Internet Services	%
Currently available	54.2
Not currently available, but there are plans to make it available within the next year	17.4
Not currently available and no plans to make it available within the next year	26.4

TABLE 9  
PUBLIC ACCESS WIRELESS INTERNET CONNECTIVITY USING LAPTOPS IN PUBLIC LIBRARIES

Availability of Public Access Wireless Internet Services through the Use of Laptops	%
Purchasing laptops for in-library patron use instead of Internet workstations	7.0
Not adding more Internet workstations or laptops but provide wireless access for patrons with personal laptops	51.9

libraries afford Internet access and services, and the e-rate program has already provided more than \$250 million to public libraries [12]. Assistance like the e-rate program can help libraries meet community Internet access needs. Table 10 shows the percentage of public libraries that applied for an e-rate discount in 2007. A slim majority of libraries (51.3 percent) applied for an e-rate discount, either directly (39.1 percent) or through some other organization (12.2 percent).

For those public library systems that receive e-rate discounts, table 11 demonstrates to which services those funds are being applied. A large majority of systems (83.2 percent) indicate that the funds were being used for telecommunications services. Slightly over half (52.6 percent) stated that e-rate funds were being used for Internet connectivity, but only 9.5 percent reported using the funds for Internal connection costs.

Given that e-rate is one of the few programs that offers funds to libraries specifically for Internet-related costs, it seems surprising that only about half of libraries apply for the funds. Table 12 identifies the reasons that public library systems did not apply for e-rate discounts. The most common reasons included the application process being too complicated (37.8 percent), the funding amount not being worth the time required to apply (36 percent), and compliance with the filtering requirements of the Children's Internet Protection Act (CIPA) being deemed as unacceptable (33.9 percent). In fact, this is a substantial increase from 2006, in which 15.3 percent of libraries did not apply for e-rate as a result of CIPA [11]. Ironically, the libraries that are not applying for e-rate funds due to the requirements of CIPA are being forced to turn down the chance for funding to help pay for the Internet access in order to preserve community access to the Internet.

TABLE 10  
PERCENTAGE OF PUBLIC LIBRARIES THAT APPLIED FOR E-RATE DISCOUNTS

E-Rate Application	%
Applied	39.1
Another organization applied on the library's behalf	12.2
Did not apply	43.8
Do not know	4.0

TABLE 11  
PERCENTAGE USE BY CATEGORY FOR PUBLIC LIBRARIES RECEIVING E-RATE DISCOUNT

E-Rate Discount Category	%
Telecommunications services	83.2
Internet connectivity	52.6
Internal connections cost	9.5

NOTE.—Does not total to 100%, as respondents could select more than one option.

### III. Community and Services Issues

The substantial majority of communities in the United States rely on their public libraries to ensure that free public Internet access is available. Not only do public libraries provide this access, but they also provide training for using the Internet and a large range of online services and content. They also ensure e-government access, provide wireless access for patrons with their own laptops, and play a part in disaster preparation and planning in many communities. Patrons, communities, and governments expect that public libraries will be able to meet their Internet access needs, and public libraries have spent fifteen years trying to meet these expectations.

#### A. *Libraries and Community Information Needs*

An important concept in this article is the notion of “community” and the role of the library in meeting community information needs, especially in the context of Internet and computing information needs. Typically a community has an identity—that is, people see themselves as part of a particular community [13]. Moreover, members of a community may have

TABLE 12  
PUBLIC LIBRARY REASONS FOR NOT APPLYING FOR E-RATE DISCOUNTS

Reason	%
E-rate application process is too complicated	37.8
Our total e-rate discount is fairly low and not worth the time needed to participate in the program	36.0
Library did not apply because of the need to comply with CIPA’s filtering requirements	33.9
Other	15.8
Library staff did not feel that the library would qualify	9.8
Library has applied for e-rate in the past but no longer finds it necessary	9.1
Library receives it as part of a consortium, so therefore it does not apply individually	8.4
Library was denied funding in the past	3.0

NOTE.—Does not total to 100%, as respondents could select more than one option. CIPA = Children’s Internet Protection Act.

shared beliefs, values, and goals. Communities are generally geographically based, although online communities continue to develop and evolve.

While these notions of community may be true at a macrolevel, on a day-to-day basis, librarians encounter and serve many groups of different individuals within one community. Indeed, the degree to which public libraries can successfully meet the information needs of all groups within the community is oftentimes problematic. From a historical perspective, the development of meeting community-based Internet information needs since roughly the early 1990s has seen a substantial shift in service orientation in a relatively limited amount of time.

The significant demands from those community groups to obtain Internet-based services and resources from the public library can come at the expense of other traditional library services. Given the significant costs for purchasing and deploying a technology infrastructure to support Internet-based services and the stagnant or limited growth in many public library budgets, a significant shift may be occurring in which public libraries are moving to better meet the needs of one group in the local community—those demanding more and better Internet-based services—at the expense of other community information needs.

One implication of this change in service provision is how public libraries define their community, and what services they will provide to which groups in the community may require considerable revision. This “service role” of moving toward meeting Internet-based information services demands may be occurring by default without adequate consideration of the impacts resulting from this change, for example, reduced or eliminated information services and resources in other library service areas.

#### *B. Rethinking Public Library Service Roles*

The notion of public library service roles, when first published in 1987, was a concept explained as “profiles of library service emphases. Taken as a group, they provide a catalog of library service images. Each [of the eight] roles is a shorthand way of describing a combination of factors important in planning: What the library is trying to do, Who the library is trying to serve, and What resources the library needs to achieve these ends” [14, p. 28]. Over the years, the notion of service roles has been revised, updated, and modified. The Public Library Association (PLA) published the most recent rendition as nearly twenty public library service “responses” [15].

Although the findings reported in the current study clearly emphasize an extensive effort on the part of public libraries to provide a range of Internet-based services, there is only one service response in the 2007 publication that explicitly describes any of the Internet-based or computing

services described earlier in this article—and that specific service response is “connect to the online world.” While one may argue that technology is a necessary resource for all the identified eighteen service responses, the service responses seem especially traditional and fail to adequately represent the Internet-based service activities that public libraries reported in the 2007 survey.

There may be a disconnect between the service activities being reported by public libraries in the 2007 survey and the service responses described in PLA’s 2007 publication. This disconnect may be indicative of the difficulty many public libraries face in meeting a broad range of demands for new, expanded, and updated Internet-based services as well as the more traditional services outlined in the PLA’s 2007 publication. A well-known public library adage is that the library “cannot be all things to all people all the time.” Thus, librarians make choices as to which community groups will be best served and what service roles (or responses) will best meet the needs of those groups.

### *C. Future Internet Platforms and Applications (Web 2.0, 3.0, and Beyond)*

The evolution of library Internet services that incorporate future Internet platforms and applications continues without abatement. The current environment, commonly referred to as Web 2.0, is one in which users increasingly develop their own applications “where digital tools allow users to create, change, and publish dynamic content of all kinds. Other Web 2.0 tools syndicate and aggregate this content” [16, p. 8]. Blogs, RSS feeds, wikis, and applications like Facebook and YouTube offer user-driven services that are likely to be only the beginning of a new generation of Internet services. This platform is as much a mental state of individualizing Internet applications and using social networking tools to create new applications as it is a state of new Internet, computer, and telecommunications technology applications.

How the public library continues to adapt to the evolving and increasingly complex Internet environment is unclear. But some of the implications for libraries include the

- need for significantly increased bandwidth at the desktop;
- rearrangement or renovation of existing library physical facilities to accommodate Internet-based services;
- need for increased staff and staff expertise with new Internet services and how to apply them in a library setting;
- need to determine how these new Internet-based services complement, replace, or change existing service roles; and
- redefinition of library resource sharing and multitype networking.

Also of interest is how the library and its community will relate to each

other. Will the library continue to serve as a primary source for Internet-based services at the expense of other more traditional services? Will community values and expectations regarding the library change considerably and vary widely from community to community? These are critical questions to which answers to date remain elusive.

Moving to Web 2.0 platforms and services may be an issue of interest today, but significant and additional change in Internet services will likely continue [17, pp. 10–14]. While the survey findings from 2007 paint a picture of current Internet-based services provided by libraries, how community expectations and demands for various library service roles will change in the future is largely unknown. What can be suggested, however, is that traditional notions of a library's community and traditional notions of library service roles or responses for that community may need rethinking.

#### *D. Meeting Internet-Based Service Roles*

The ability of libraries to fulfill Internet-based services may be declining. There have been signs for several years that libraries may be struggling to meet demands as a result of a combination of factors such as the limits on physical space in libraries, the increasing complexity of Internet content, the continual costs of Internet access and computer maintenance, the inherent limitations of the telecommunications grid, and the rising demands for bandwidth, processing speed, and numbers of workstations, among other factors [2, 5, 8, 9, 18].

The 2007 data indicate that many libraries have hit an infrastructure plateau for provision of and access to Internet services—these constraints are now preventing libraries from increasing connection speeds, numbers of workstation, processing capacities, and services [19]. In many cases, the infrastructure plateau relates directly to insufficient funding, physical space, and staffing to meet the Internet access expectations of patrons, communities, and governments [19]. This plateau comes precisely at a time in which demand for more and better Internet-based services expands. As such, a contradiction is developing between the expectations for free public library Internet access and what libraries can actually provide. Data from the 2007 survey, and previous surveys, indicate that many libraries are having trouble meeting the Internet access needs of their patrons and communities. Indeed, the 2007 survey found that only 22 percent of respondents reported that there were sufficient public Internet workstations available to patrons throughout the day. This situation raises the issue of how much longer libraries will be able to maintain a range of service roles related to Internet-based services without failing to meet patron and community expectations.

*E. Areas for Additional Research*

To prevent libraries from no longer being able to fulfill all of the important Internet-related community service roles that they currently provide, some consideration should be given to better understanding the Internet-based service that patrons and communities most need and expect from the public library to ensure that the public library meets essential service demands. There is a lack of studies conducted on a national level that would provide meaningful insight into the Internet services that patrons most highly value and that they feel have the most significant impacts on the community. Assessing the users' perceptions of the impacts of public library Internet access in their own lives and in their communities would be extremely helpful information for libraries to determine which Internet-based service roles are most important to their communities. Armed with such information, libraries facing an Internet services plateau could better target their services to provide the most important or needed patron and community Internet-based services.

Research can also help libraries better work with other elements of the community to maintain quality access or even improve access. Public libraries do not exist in isolation; they are one of many local community organizations. Research is necessary to identify best practices among libraries in working with other community organizations to provide Internet access. Such practices may include working with other local government agencies or nonprofit organizations to provide Internet access to reduce connection costs or find extra physical space. There is a pressing need to identify the community factors that affect the ability to provide better services and help libraries act on those findings. This research should also identify local and state government policies that help libraries meet community expectations for Internet access so that libraries in other areas can work to have similar policies implemented.

Although a new version of public library service responses was produced in 2007, it is important to initiate research into the range of Internet-based service responses. Clearly, the one current service response of connecting to the online world is inadequate in not sufficiently depicting the existing services environment but also in failing to prepare libraries for service responses in the future Internet environment. Based on a number of site visits to innovative public library Internet providers conducted as part of the larger public library Internet study, there are numerous Internet-based service responses that can be documented as models for other public libraries trying to accommodate, plan for, and participate in the future Internet platform and application environment.

The tension between the wide range of community expectations and the infrastructure plateau also indicates that it is time to consider and explore new models of Internet services delivery for public libraries. Most

libraries approach providing Internet access as individual entities or as part of a single library system. However, there are other models by which libraries could try to handle the issues of cost, space, staffing, and connectivity-related Internet access.

In addressing these new models, libraries can consider the potential roles of state libraries, multitype consortia, and library networks. Some state libraries, such as Wisconsin's, guarantee a minimum connection speed for all public libraries. The wider viability of approaches such as that model deserves additional review. Further, models of cost sharing between libraries through networks of the most rural and the least connected libraries may be another model worthy of consideration. As providing sufficient Internet access to meet patron and community expectations becomes more difficult, libraries must search for creative and new models in providing Internet access for the benefit of the community.

#### IV. Conclusion

The confluence of the wide variety of ways in which patrons and communities rely on free public library Internet access and the apparent infrastructure plateau being faced by libraries can be viewed as either a grave threat or an opportunity to reconsider how public libraries provide Internet access. Although three-quarters of communities rely entirely on public libraries to ensure free Internet access, libraries generally have to face these access challenges in isolation. One consideration is that free public library Internet access is not just the responsibility of libraries.

Public libraries will need to rethink their definitions of local community and the values, goals, and beliefs of those who identify with that community. In fact, there may be a number of communities that a public library serves within a particular geographic area or virtual space. In addition, there is a need to rethink the importance of specific Internet-based service roles and the appropriateness of these service roles in particular communities. Matching Internet-based service roles to the needs and demands of local communities is likely to take on increased importance as public libraries move into the Web 2.0 environment and beyond.

Simply because libraries have filled the role of community guarantor of free public Internet access does not mean that they must do so alone. Public libraries are a part of local government, and the burden of funding, providing space for, providing staffing for, and ensuring telecommunications infrastructure for public Internet access can be spread across local government and other agencies. Public libraries need to find ways to obtain more help from and better integrate their efforts with other parts of local government and other local organizations. Similarly, state government

agencies may be able to play a much greater support role for public libraries. Greater participation from other local and state government agencies is only one of many ways in which to reconsider and reevaluate the provision of free public Internet access by public libraries.

Campaigning for increased federal funding is also an important avenue to pursue. While the need for increased federal funding for public libraries is hardly a new or novel assertion, tying requests for greater funding to the specific community Internet-based service responses may be a persuasive approach. Libraries need to use data discussed in this article, as well as other data, as the evidence to show the dramatic impacts they make on their communities through the provision of free public Internet access and the reliance of communities on public libraries to provide this access and a range of Internet-based services. What else can the federal government fund that simultaneously serves so many educational, economic, employment, communication, government, and emergency preparedness functions? It is important to strongly articulate this point to legislators and policy makers.

Public libraries, by ensuring free public Internet access, have created new social roles, service responses, and professional values that are inextricably linked to the library in the minds of patrons, communities, governments, and librarians themselves [2]. This connection between public libraries and free public Internet access/services may make it more difficult for libraries to look beyond the library for ways to overcome challenges to providing sufficient Internet access to meet community needs. However, the tension between the infrastructure plateau and community access needs can be viewed as an opportunity to better understand community needs, Internet-based service responses, and expectations for access and to search for new models and approaches in providing free public Internet access. Public libraries have created vital and invaluable community services in guaranteeing Internet access and services to all community members, and libraries must be innovative to ensure that they can continue to provide these community services in an undiminished capacity.

#### REFERENCES

1. Bertot, John Carlo; McClure, Charles R.; Thomas, Susan; Barton, Kristin M.; and McGilvray, Jessica. "Public Libraries and the Internet, 2007: Report to the American Library Association." Information Institute, Tallahassee, FL, 2007. <http://www.ii.fsu.edu/plinternet>.
2. Jaeger, Paul T., and Fleischmann, Kenneth R. "Public Libraries, Values, Trust, and E-Government." *Information Technology and Libraries* 26, no. 4 (2007): 35–43.
3. Bertot, John Carlo; Jaeger, Paul T.; Langa, Lesley A.; and McClure, Charles R. "Drafted: I Want You to Deliver E-Government." *Library Journal* 131, no. 13 (2006): 34–39.
4. Bertot, John Carlo; Jaeger, Paul T.; Langa, Lesley A.; and McClure, Charles R. "Public

- Access Computing and Internet Access in Public Libraries: The Role of Public Libraries in E-Government and Emergency Situations." *First Monday* 11, no. 9 (2006). [http://www.firstmonday.org/issues/issue11\\_9/bertot/](http://www.firstmonday.org/issues/issue11_9/bertot/).
5. Jaeger, Paul T.; Bertot, John Carlo; McClure, Charles R.; and Rodriguez, Miranda. "Public Libraries and Internet Access across the United States: A Comparison by State from 2004 to 2006." *Information Technology and Libraries* 26, no. 2 (2007): 4–14.
  6. Jaeger, Paul T.; Langa, Lesley A.; McClure, Charles R.; and Bertot, John Carlo. "The 2004 and 2005 Gulf Coast Hurricanes: Evolving Roles and Lessons Learned for Public Libraries in Disaster Preparedness and Community Services." *Public Library Quarterly* 25, nos. 3–4 (2007): 199–214.
  7. Bertot, John Carlo, and McClure, Charles R. "Assessing Sufficiency and Quality of Bandwidth for Public Libraries." *Information Technology and Libraries* 26, no. 1 (2007): 14–22.
  8. Jaeger, Paul T.; Bertot, John Carlo; McClure, Charles R.; and Langa, Lesley A. "The Policy Implications of Internet Connectivity in Public Libraries." *Government Information Quarterly* 23, no. 1 (2006): 123–41.
  9. Jaeger, Paul T.; Bertot, John Carlo; and McClure, Charles R. "Public Libraries and the Internet, 2006: Issues, Funding, and Challenges." *Public Libraries* 46, no. 5 (2007): 71–78.
  10. Bertot, John Carlo; McClure, Charles R.; and Jaeger, Paul T. "Public Libraries and the Internet, 2004: Survey Results and Findings." Information Institute, Tallahassee, FL, 2005. <http://www.ii.fsu.edu/plinternet>.
  11. Bertot, John Carlo; McClure, Charles R.; Jaeger, Paul T.; and Ryan, Joe. "Public Libraries and the Internet, 2006: Study Results and Findings." Information Institute, Tallahassee, FL, 2006. <http://www.ii.fsu.edu/plinternet>.
  12. Jaeger, Paul T.; McClure, Charles R.; and Bertot, John Carlo. "The E-Rate Program and Libraries and Library Consortia, 2000–2004: Trends and Issues." *Information Technology and Libraries* 24, no. 2 (2005): 57–67.
  13. Putnam, Robert. *Bowling Alone: The Collapse and Renewal of American Community*. New York: Simon & Schuster, 2000.
  14. McClure, Charles R.; Owen, Amy; Zweizig, Douglas L.; Lynch, Mary Jo; and Van House, Nancy A. *Planning and Role Setting for Public Libraries: A Manual of Options and Procedures*. Chicago: American Library Association, 1987.
  15. García, June, and Nelson, Sandra. *2007 Public Library Service Responses*. Chicago: American Library Association, 2007.
  16. Stephens, Michael. "Web 2.0 and Libraries: Best Practices for Social Software." *Library Technology Reports* 42, no. 4 (July–August 2006): 8.
  17. Stephens, Michael. "Web 2.0 and Libraries, Part 2: Trends and Technologies." *Library Technology Reports* 43, no. 5 (September–October 2007): 10–14.
  18. Bertot, John Carlo; McClure, Charles R.; and Jaeger, Paul T. "Public Libraries Struggle to Meet Internet Demand: New Study Shows Libraries Need Support to Sustain Technology Services." *American Libraries* 36, no. 7 (2005): 78–79.
  19. McClure, Charles R.; Jaeger, Paul T.; and Bertot, John Carlo. "The Looming Infrastructure Plateau? Space, Funding, Connection Speed, and the Ability of Public Libraries to Meet the Demand for Free Internet Access." *First Monday* 12, no. 12 (2007). <http://www.uic.edu/htbin/cgiwrap/bin/ojs/index.php/fm/article/viewArticle/2017/1907>.