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PUBLIC LIBRARIES AND THE INTERNET 2009: STUDY RESULTS AND FINDINGS

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Findings from the Public Libraries and the Internet National Survey 2008-2009

EXECUTIVE SUMMARY

The national survey identified a number of issues related to the current state of public access computing and Internet services provided by public libraries to the communities they serve. The following presents selected key findings from the survey and their implications. The discussion is not exhaustive. Rather, it highlights a range of findings and implications that the survey identified. This report serves as a companion to the *Libraries Connect Communities* book series published by the American Library Association.[1] This report includes additional national survey data tables as well as detailed state data tables not available in the *Libraries Connect Communities* book. This report also contains additional detail regarding the survey methodology and approach not included in the ALA book. The complete set of data tables and findings from previous surveys are available at http://www.ii.fsu.edu/plinternet/ and http://www.liicenter.org/plinternet/.

Public Access Connectivity and Infrastructure

Public libraries offer a range of public access computing and Internet access services at no charge to users. As community-based public access venues, libraries employ a range of strategies to maintain, upgrade and make available public access resources and services. The findings indicate that, though public libraries provide substantial public access services and resources across a range of areas, they continue to be challenged in their ability to do so successfully — particularly in their ability to maintain, enhance and grow public access technology services. Indeed, the findings suggest that even as public libraries add more capacity such as increased broadband and wireless (Wi-Fi), such enhancements still fall short of meeting growing demand and needs. Moreover, in the case of public access workstations, public libraries have scaled back to the average numbers of workstations reported in the 2006-2007 survey, although reasons for this are unclear.

Libraries as Community Access Computing and Internet Access Points

Public libraries continue to provide important public access computing environments and Internet access in their communities:

- More than 98 percent of public library outlets offer public Internet access (Figure 5), nearly identical to the percentage found in the 2007-2008 survey (98.9 percent).
- More than 71 percent of library outlets report that they are the only provider of free public computer and Internet access in their communities (Figure 6), a

[1] See http://www.ala.org/ala/aboutala/offices/ors/plftas/ for information regarding the study and the book series.

number consistent with and within the margin of error of the number reported in 2007-2008 (72.5 percent).

- Overall, public library outlets report an average of 11.0 public access workstations, down from 12.0 in 2007-2008 (Figure 7), but consistent with figures reported in the 2006-2007 survey).[2] Rural libraries offer an average of 7.6 (nearly identical to the 7.5 reported in 2007-2008) public computers; suburban libraries an average of 12.7 computers (down from 13.9 reported in 2007-2008); and urban libraries an average of 18.7 (down from 21.0 reported in 2007-2008).
- Slightly more than 76 percent of public library outlets offer wireless Internet access, up from 65.9 percent reported in 2007-2008 (Figure 20).

Infrastructure Challenges

The 2008-2009 survey asked libraries to identify issues related to their ability to maintain public access Internet and computing services. The responses offer insights into libraries' capacity and capabilities. As in the 2007-2008 survey, respondents report that they face a range of challenges with their buildings, costs and staffs. This year's survey identified additional challenges that libraries face in terms of maintaining and supporting their public access technology infrastructure (see Figures 12, 13, 15, 16, 17):

- Cost: Respondents indicate that funding workstation replacements, upgrades, bandwidth enhancements and a range of other services related to public Internet access and computing (e.g., online access to databases) are difficult and increasingly problematic (Figures 12 and 13). Importantly, the 2008-2008 survey marks the first survey in which libraries report cost as more of a factor that influenced library decisions to add workstations/laptops (77.4 percent and 75.9 percent, respectively).
- Buildings: Library buildings are increasingly 1) out of space and unable to support more workstations; 2) insufficiently wired to support more cable drops; and 3) insufficiently wired for the power requirements of desktop computers and patron-provided laptops (Figures 12 and 13).
- Staff: By and large, public libraries rely on non-technical staff to support their public access computers and Internet access. This is particularly true for rural public libraries, though urban public libraries are more likely to have access to technology staff (Figure 16). In fact, in nearly half of rural public libraries (47.2 percent) it is the library director who provides IT support, compared to 72.2 percent of urban libraries that report IT support provided by system-level IT staff.
    - A new question in the 2008-2009 survey explores the number of IT full-time equivalents (FTEs), whether true IT specialists or non-technical staff providing IT support (Figure 17). Overall, libraries have access to few IT FTEs, ranging from an average of .53 FTEs to 3.9 FTEs. It is important to note, however, that by and large, rural libraries report FTEs in the .5 to 1.8

[2] *Libraries Connect Communities: Public Library Funding & Technology Access Study 2006-2007.* Chicago: American Library Association, 2007. Available: http://www.ala.org/ala/aboutala/offices/ors/plftas/plftas0607study.cfm; *Libraries Connect Communities: Public Library Funding & Technology Access Study 2007-2008*. Chicago: American Library Association, 2008. Available: http://www.ala.org/ala/aboutala/offices/ors/plftas/0708report.cfm.

range, with a majority of rural libraries deriving their IT support from non-technical staff (predominantly public service staff or the library director). Urban and suburban libraries, in contrast, tend to derive technical support from system-level IT staff, though public service staff do also provide IT support. Urban and suburban library technical support FTEs ranged from .78 to 6.0 and .36 to 3.9, respectively.

- Keeping workstations in service: New to the 2008-2009 survey is a question about how long it takes to get a public access computer that has stopped working back into service (Figure 15). In general, nearly a quarter of libraries (23.9 percent to 24.6 percent) report that it takes one, two, or more than two days. In general, urban and suburban libraries have a turn-around time of two or fewer days, but nearly a third of rural libraries (31.2 percent) indicate that it can take two or more days to get a computer back into service.

Together, these data further support a trend regarding the management of public access technology resources identified in the 2007-2008 survey, while expanding our understanding of the issues that public libraries confront in maintaining their public access computing and Internet access services.

In a continuing trend reported in the 2007-2008 survey, libraries are accelerating their attempts to add more public technology services. For example, the percentage of libraries that now provide wireless access increased to 76.4 percent, up from 65.2 percent from last year (see Figure 20). Unfortunately, as Figure 21 shows, this wireless service has been simply added to the existing telecommunication connection: 74.8 percent of libraries indicate that the wireless connection shares the library's existing connection (consistent with the 74.9 percent in 2007-2008); although 24.9 percent do indicate that they are using some type of bandwidth management technique to accommodate the wireless connection.

Quality of Public Access

As with previous survey findings, public libraries continue to provide substantial public access Internet and computing services. However, what is notable about the survey's findings this year is that even with increases in bandwidth, libraries continue to report that their connection speeds do not meet their needs. Direct comparisons to previous year bandwidth reporting is not possible due to the changes in speed groupings. However, where possible, reasonable comparisons are made:

- More than 79 percent of public libraries report connection speeds greater than 769 kbps, up from 73 percent in 2007-2008 (Figure 18). Of all libraries, 44.5 percent of libraries report connection speeds greater than 1.5 Mbps, up from 25.7 percent in 2007-2008. This represents a significant increase in bandwidth.
- At the same time, 59.6 percent (up from 57.5 percent in 2007-2008) of respondents report that their connectivity speed is insufficient some or all of the time (Figure 22). Though this reported increase is within the margin of error, it is significant to note that essentially the same percentage of libraries report

inadequate bandwidth for their public access patrons even with the reported increases in bandwidth.

- Nearly 23 percent of libraries report that though they have an interest in increasing their current Internet speed, they cannot afford to do so (Figure 23).
- Slightly more than 81 percent of libraries report that they have insufficient availability of workstations some or all of the time, about the same (82.5 percent) as reported last year (Figure 9).
- Nearly 75 percent of public libraries report that their wireless connections share the same bandwidth as their public desktop computers, though 24.9 percent indicate that they use bandwidth management techniques. This is nearly identical (74.9 percent) to libraries that reported a shared connection in 2007-2008 (Figure 21).
- Consistent with 2007-2008 findings, over 90 percent (94.1 percent) of libraries have time limits on the use of their public access workstations (Figure 24). Of those, 22.4 percent have time limits up to 30 minutes, 45.2 percent have time limits of 31-60 minutes, and only six percent have time limits of greater than 60 minutes. Only 17 percent of libraries report that they had unlimited time limits so long as no one is waiting to use the workstations (Figure 25). As was found last year, over 40 percent (43.5 percent) of libraries manage the user sessions manually (Figure 27), imposing a burden on staff.

Together, these data point to a technology infrastructure that struggles to keep up with the demands of the networked environment — even when improvements are made to the infrastructure. Indeed, libraries continue to limit their resource availability using time limits, and by sharing bandwidth with wireless connectivity in order to accommodate more users. In doing so, libraries are adversely affecting the quality of their public access technology environment.

Extensive Range of Library Services Provided

The data from the survey show that public libraries continue to provide a range of Internet-based services. As Figure 28 shows, 35 percent of libraries offer formal technology training classes, and 52.6 percent offer informal point-of-use assistance. Of the libraries that offer formal training classes, 92.8 percent offer general Internet use training classes, 91.3 percent offer general computer skills training classes, 76.9 percent offer general online/Web searching classes, and 70.5 percent offer general software use (such as word processing, spreadsheets and presentation) training classes (Figure 29).

As Figure 37 indicates, and consistent with the 2007-2008 survey findings, public libraries provide an impressive array of services that are critical to the communities they serve. Of most importance are the education resources and databases purchased for K-12 students (78.6 percent), services for job-seekers (60.9 percent) and educational resources for adult/continuing education students (49.5 percent).

More specifically, libraries broker and provide access to a wide range of Internet services and resources (Figures 30 and 31), including:

- Licensed databases (89.6 percent, up 1.9 percent from 2007-2008, but within the margin of error).
- Homework resources (79.6 percent, down 2.7 percent, but within the margin of error).
- Audio content, such as podcasts and audiobooks (72.9 percent, up from 71.2 percent, but within the margin of error).
- Digital reference (62.4 percent, nearly identical to the 62.5 percent reported in 2007-2008).
- E-books (55.4 percent, up 3.6 percent from 51.8 percent).

As Figure 31 depicts, public libraries continue to incorporate peripheral technologies into their public technology services, allowing users to:

- Access and store content on USB storage devices (e.g., flash drives, portable drives) or other devices (81.4 percent, up from 72.0 percent in 2007-2008).
- Access to gaming consoles, software or Web sites (57.2 percent, nearly identical to the 57.7 percent reported in 2007-2008).
- Connect digital cameras and manipulate content (47.9 percent, up from 37.4 percent in 2007-2008).
- Burn CDs/DVDs (42.9 percent, up from 34.7 percent in 2007-2008).

An emerging and increasingly significant service that public libraries provide involves e-government — that is, access to, use of and instruction related to federal, state and local government information, forms and services (Figure 38). A vast majority of public libraries — 80.5 percent (up from 74.0 percent in 2007-2008) — indicate that their staff members provide as-needed assistance to patrons for understanding how to access and use government Web sites, programs and services. Another 54.1 percent of public libraries (up from 51.9 percent in 2007-2008) report that staff provide assistance to patrons applying for or accessing e-government services, and 32.1 percent (up from 28.6 percent in 2007-2008) of libraries provide immigrants with assistance in locating immigration-related information, Web sites, and other services and resources.

The challenge for public librarians is the extent to which they can maintain and/or expand upon these Internet services while ensuring the bandwidth, infrastructure and trained staff necessary to support the services for millions of library users.

Moving Connectivity and Public Access Forward

Public libraries are struggling to prepare for the future of their public access Internet services, resources and infrastructure. Public libraries continue to face a range of challenges as they seek to enhance and/or maintain their public access technology services and resources.

Enhancing Public Access Infrastructure

Public libraries plan to add, replace, or upgrade workstations and make other enhancements to their public access computing and Internet access services in the coming year:

- Slightly less than 17 percent, up less than one percent from 2007-2008) of public library outlets plan to add more workstations within the next year, while 16.3 percent of public library outlets (down sharply from 26.1 percent) are considering doing so (Figure 10).
- Nearly 62 percent of public libraries have a workstation/laptop replacement schedule that essentially replaces hardware every three (15.9 percent), four (18.4 percent), or five (14.2 percent) years (Figure 11).
- About 9 percent plan to add wireless access within the next year; if they do so, more than 85 percent of public libraries will offer wireless access by the end of 2009 (Figure 20). Wireless access is rapidly approaching the same percentage of libraries that offer public Internet access, thus becoming a core service.

These data demonstrate that library public access technologies reside within an evolving context that requires continued upgrades, replacements and enhancements. Libraries, however, continue to adopt strategies that rely on user devices (e.g., wireless, the use of USB devices, etc.) to extend library infrastructure. While adding a level of convenience for users, this also places stress on the existing library infrastructure through shared connections for wireless and public access workstations.

Library Infrastructure Continues to Experience Stress

There are significant challenges to the improvement of libraries' public access computing environment and Internet access services:

- Nearly 60 percent (up from 57.5 percent in 2007-2008) of public library outlets indicate that their connection speeds are inadequate to meet user demands some or all of the time. This is particularly significant as overall public access library bandwidth increased substantially since 2007-2008 (Figure 18).
- Slightly more than 80 percent (up from 75.1 percent in 2007-2008) of libraries indicate that they will not be increasing their bandwidth for a range of reasons — affordability, ability, interest or availability (Figure 23). Specifically, 26 percent (up from 17.1 percent in 2007-2008) of respondents report that their current connection is the maximum speed that they can acquire, 22.9 percent (up from 21.2 percent in 2007-2008) cannot afford to increase their bandwidth, 16.8 percent (down from 19.7 percent in 2007-2008) indicated that they have no interest in increasing their bandwidth and 14.7 percent (down from 17.1 percent in 2007-2008) indicate that they could increase their bandwidth but have no plans to do so.
- Sixty-one percent (up from 56.1 percent in 2007-2008) of public library outlets have no plans to add workstations in the next year (Figure 12), largely due to cost factors (77.4 percent), space factors (75.9 percent), and the availability of electrical outlets, cabling or other infrastructure (34 percent).

- Overall, libraries have access to few IT FTEs, ranging from an average of .53 FTEs to 3.9 FTEs (Figure 17). Libraries with multiple IT staff tend to be in urban or suburban service areas.
- Rural public libraries, compared to suburban and urban libraries, face a range of challenges in a number of key areas, such the number of hours open (38.2 hours per week, compared with 49.4 for suburban and 50.3 for urban libraries), average number of workstations (7.6 as compared to 12.7 in suburban libraries and 18.7 in urban libraries), bandwidth available (31 percent of rural libraries have less than T1 speeds, compared with 16 percent of suburban and 7.1 percent of urban libraries), and the availability of formal training classes (24.1 percent), compared to 42.1 percent of suburban and 52.5 percent of urban libraries (Figures 2, 7, 18, and 28).
- Libraries that do not offer technology services or offer limited Internet services (e.g., databases, e-books) also indicate that they cannot afford to purchase and/or support the services (58.9 percent, down from 63.6 percent in 2007-2008), library computer hardware/software will not support the services (55.4 percent, up from 46.3 percent in 2007-2008), or library policy restricts the provision of the service(s) (33.2 percent, down from 42.8 percent) (Figure 36).

Public libraries continue to report that they are unable to meet patron demands for services due to inadequate technology infrastructure, costs associated with operating and maintaining that infrastructure, and bandwidth quality/availability issues — all the while trying to enhance their services.

What is unclear is how libraries will maintain their levels of public access computer and Internet access services, much less extend and augment them given the current economic downturn. The American Recovery and Reinvestment Act of 2009 (ARRA) does include $7.2 billion for broadband investments in rural and underserved communities, and $200 million for public computer centers, including libraries. The extent to which public libraries will apply for and gain access to these broadband stimulus dollars is unclear due to the nature of the rules governing the funding as well as the requirements of the programs.