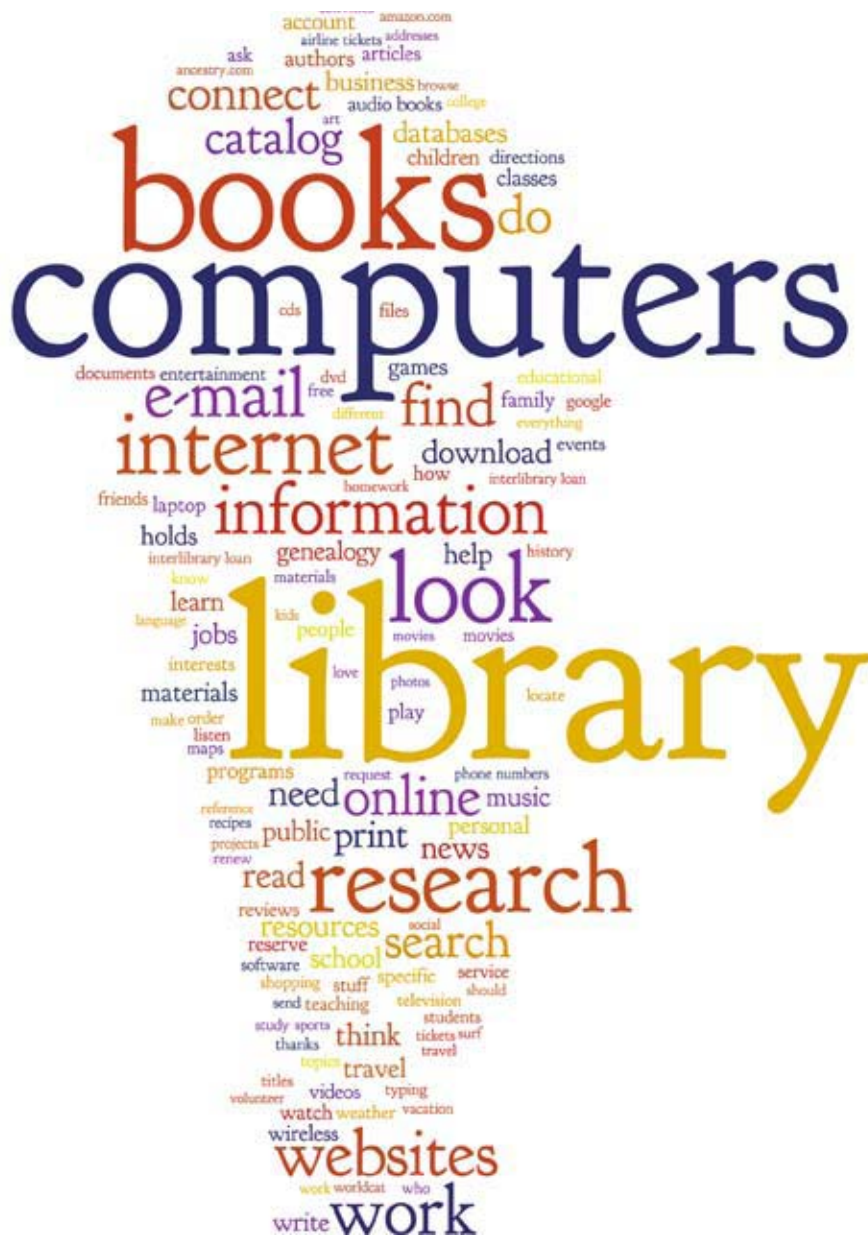


# Opportunity for All

## How the American Public Benefits from Internet Access at U.S. Libraries



### The U.S. IMPACT Study

A research initiative examining the impact of free access to computers and the Internet in public libraries.

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# Foreword

The rapid adoption of the Internet and computing technologies by all sectors of modern society has made them an indispensable part of our daily work and life. Access to these resources is taken for granted by public agencies providing services to the community, by those who conduct business and commerce, and by those who use them to stay current on public affairs and in touch with their families and friends on a daily basis. Yet not all individuals have consistent access to these resources—they may be unable to afford them, they may need basic training in how to use them, or they may be displaced from their normal access points.

Fortunately, public libraries have taken on the role as the provider of free public access to the Internet and computers for those who are not able to gain access elsewhere, for whatever reason. Whether it's a business traveler who needs to check his or her office email when out of town or a homeless person who has no other means for finding social services to meet his or her needs, all Americans can count on the public library in their community for access to the Internet and computers, supported by staff trained to help users be successful in their interactions. This access has also proven to be critical in times of disaster, where libraries may be the only access point still operating that can provide a delivery point for government and social services to those displaced.

To better understand how the provision of free access to the Internet and computers in public libraries is impacting the lives of individuals, families, and communities across the United States, the Institute of Museum and Library Services issued a request for proposals for research targeted at documenting, describing, and analyzing the use and results of this use in libraries throughout the nation. The present report outlines the first part of that research, describing the characteristics of people who use public access computers and Internet connections, the types of use they engage in, and the impact that use has on their own lives, that of their families and friends, and the communities they live in. A second report will follow that examines the effect of library characteristics and policies on public access computing use and impact, as a first step toward helping libraries understand how some of their services may be affecting the overall success of their efforts in providing public access services to their communities.

The results of this study clearly show that public libraries are a key element of America's digital infrastructure, and that large numbers of people are using libraries' public access services to meet their needs in health, education, employment, and other important areas. But it also shows that beyond the

Internet connections and computers that libraries provide to make this possible, the one-on-one help and other resources librarians, library staff, and volunteers provide to the users is an important element in the success of these services.

We are grateful to the Institute of Museum and Library Services and the Bill & Melinda Gates Foundation for their support of this project, to our expert committee for their advice and counsel in shaping the research, to the Chief Officers of State Library Agencies for their assistance and enthusiasm in helping make the fieldwork possible, to the libraries across the country that donated their time and effort to help with data collection, to our research partners who helped with the design and analysis of the data, to the students who worked diligently in the field and the office, and to all the library users who took the time to complete our surveys and interviews.

We hope that this report and its forthcoming companion will be useful for libraries as an aid in informing the public of the value of their free public access services, and that funders and policy makers will find the results of interest as they consider future efforts in this area. Public libraries have become an essential part of the fabric of access to the Internet and computers in this country, and we believe the results of our research show that the impact of these services is well worth the investment of public dollars and resources to make this possible.

Mike Crandall, MLIS  
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As hosts of our case study visits, the Enoch Pratt Free Library, Fayetteville Public Library, Oakland Public Library, and Marshalltown Public Library, as well as the Mount Vernon City Library (which served as our test site), provided unlimited access to their amazing librarians and information technology staff, board members, and patrons. We are incredibly grateful to the leadership teams and staff at each of these, and especially their directors and following key staff: Carla Hayden, Ann Smith, Pat Costello, Louise Schaper, Shawna Thorup, Carmen Martinez, Diane Satchwell, Carole Winkleblack, and Brian Soneda.

In addition to our case study libraries, we also want to express our deep appreciation to the 400 libraries and their directors and staff who made the U.S. IMPACT web survey available to patrons through their library computers and websites and for the work of the Chief Officers of State Library Agencies, especially Suzanne Miller and Peggy Rudd of the Research and Statistics Committee and all the state librarians and designees who helped coordinate the web survey. Special thanks also go to the Seattle Public Library and Jennifer Giltrop for allowing us to conduct survey pretesting with their patrons and to Michael Shapiro and Jennifer Peterson from WebJunction who helped us communicate with the participating libraries. The web survey would not have been possible without the creativity and resourcefulness of the University of

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With members from academic, library, and policy communities, the U.S. IMPACT Study Expert Committee was invaluable for advice, guidance, and helpful critiques of our research approach and instruments. The committee included Rick Ashton (Urban Libraries Council), Michael Barndt (Nonprofit Center of Milwaukee), Susan Benton (International City/County Management Association), John Carlo Bertot (Information Use Management and Policy Institute), Cathy Burroughs (National Network of Libraries of Medicine Pacific Northwest Libraries Health Sciences Libraries), Sarah Earl (International Development Research Centre Evaluation Unit), Carla Hayden (Enoch Pratt Free Library), Peggy Rudd (Texas State Library and Archives Commission), Ross Todd (Center for International Scholarship in School Libraries), and Bernard Vavrek (Center for the Study of Rural Librarianship).

We also received invaluable advice and assistance in our research design and analysis from the Urban Institute, particularly Rob Santos and Timothy Triplett, the University of Washington Center for the Studies of Demography and Ecology and the Social Development Research Group, and Glen and Leslie Holt. We are grateful for the advice and expertise of Rachel Garshick Kleit from the University of Washington Evans School of Public Affairs and Sunghee Lee from the University of California, Los Angeles Department of Biostatistics.

Throughout the project we were fortunate to have the enthusiastic participation of many students enrolled at the University of Washington. Student volunteers from the Information School came from the undergraduate Informatics program, as well as from the Master in Library and Information Science and the Master of Science in Information Management Program, and the Information Science PhD program. We also had several students from the Master of Public Administration program at the Evans School of Public Affairs.

Among our star student helpers are Elizabeth Mitchell, Melody Clark, Rebecca Blakewood, and Christine Lee, each of whom made unique and critical contributions to the project. Also participating in fieldwork and other support activities were Jennie Abrahamson, Ellie Bair, David Lee Bassett, Jack Baur, Amber Duginske, Audrey Kentor, Sherry Edwards, Melissa Mather, Jordan McOwen, Liz Moffat, Cadi Russell-Sauve, Alice Tsoi, Kathy Weigert, Seung-yon Yu, and Wei-Chih (Vicki) Chen. Finally, we want to acknowledge the contribution of Jan Boyd and the Graduate Assistant Crew at the University of Washington Information School for their background research and responsiveness to the needs of the project.



# Executive Summary

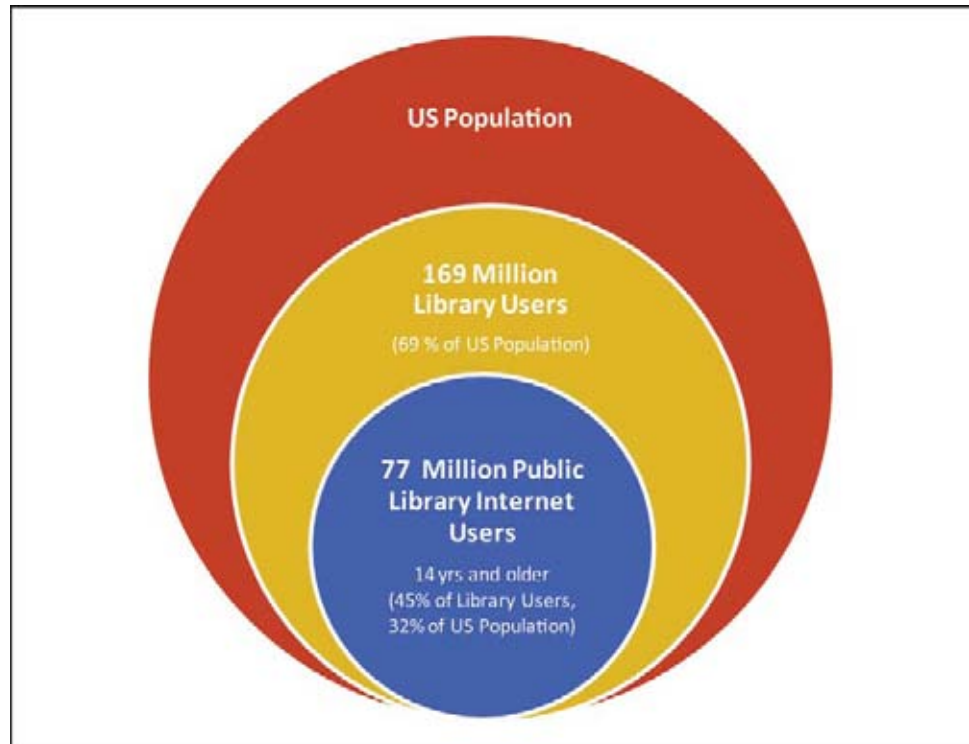
Over the past decade and a half, free access to computers and the Internet in U.S. public libraries evolved from a rare commodity into a core service. Now, people from all walks of life rely on this service every day to look for jobs, find health care, and read the latest news. As the nation struggled through a historic recession, nearly one-third of the U.S. population over the age of 14 used library Internet computers and those in poverty relied on these resources even more.

This study provides the first large-scale investigation of the ways library patrons use this service, why they use it, and how it affects their lives. A national telephone survey, nearly 45,000 online surveys at public libraries, and hundreds of interviews reveal the central role modern libraries play in a digital society.

The library's role as a technology resource and training center has exploded since 1996, when only 28 percent of libraries offered visitors access to the Internet. Today, almost all public library branches offer visitors free access to computers and the Internet, thanks to a sustained effort by federal, state, and local governments; private philanthropy; and the work of librarians. Until now, though, there has been no systematic study that provided a national picture of how people use this important community resource.

**Internet access is now one of the most sought after public library services, and it is used by nearly half of all visitors.** Over the past year, 45 percent of the 169 million visitors to public libraries connected to the Internet using a library computer or wireless network during their visit, even though more than three-quarters of these people had Internet access at home, work, or elsewhere. The widespread use of these services by people of varying age, income, and experience is an indication of the unique role that public libraries play in the evolving digital landscape. Public libraries stand out as one of the few community institutions that can address the computing and information needs of all kinds of users, from seniors who have never touched a keyboard to young entrepreneurs launching a new eBusinesses strategy.

**Chart 1: Library users and public library access users as a percentage of the U.S. population 14 years and older**



**Libraries offer a technological lifeline to children and families in need.**

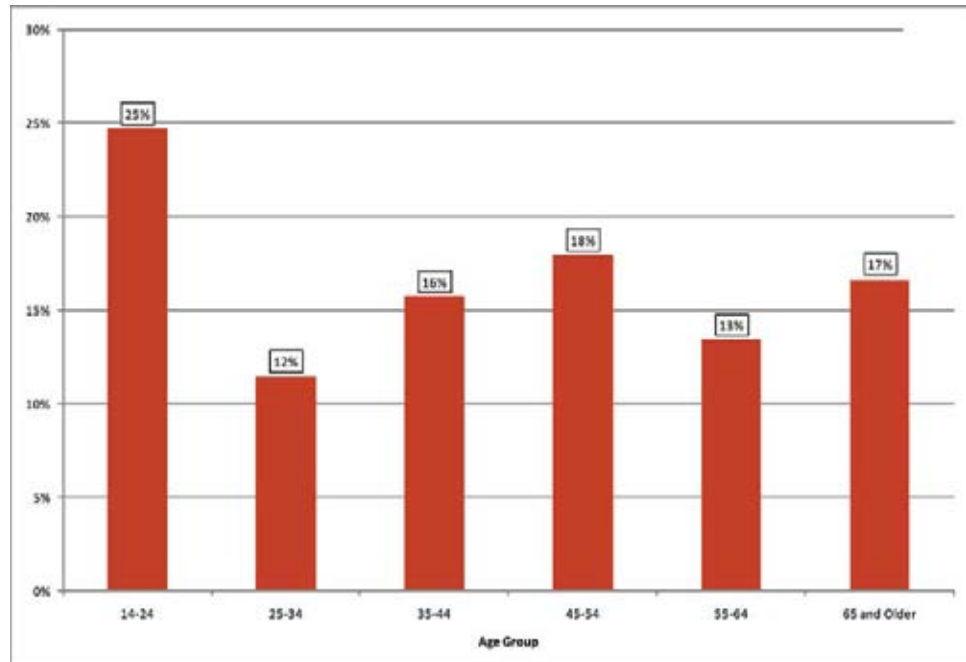
Although many different types of residents use public library computer and Internet services, libraries appear to be particularly effective in addressing the needs of families who still lack access elsewhere. But for libraries, millions of Americans would not have reliable Internet access in a digital age when a connection is often needed to complete school assignments, apply for jobs, or secure government services. Overall, 44 percent of people in households living below the federal poverty line (\$22,000 a year for a family of four) used public library computers and Internet access. Among young adults (14–24 years of age) in households below the federal poverty line, 61 percent used public library computers and Internet for educational purposes. Among seniors (65 and older) living in poverty, 54 percent used public library computers for health or wellness needs.

**People of all ages, incomes, races, and levels of education go to the library for Internet access, whether they have a connection at home or not.**

Users turned to computers at the public library for a wide range of reasons, whether it was because they did not have access elsewhere, needed faster Internet speed, wanted technical help from a librarian, competed for access to a computer at home, or simply wanted to work somewhere more peaceful and inviting than a crowded coffee shop or a hectic unemployment office.

The chart below displays the different age categories of public access users, as a percentage of all users. Overall, youth (between 14 and 24 years old) make up a quarter of all users. However, the distribution is not heavily skewed toward youth. There is a strong representation of users from youth to seniors. The second and third largest groupings of users are people in their middle years (45–54) and seniors older than 65, respectively.

**Chart 2: Public library Internet users by age as a percentage of all users**



**Technology draws teens to the library.** Young adults were among the most active, with nearly half of the nation’s 14 to 18 year olds (an estimated 11.8 million users) reporting they used a library computer during the last year, and one quarter did so once a week or more. One of the most common uses of library computers reported among these teenagers was to do homework.

**Overall, people use library computers to perform both life-changing and routine tasks.** Regardless of income, patrons relied on library computers to take fundamental steps in their lives. For example, they used these resources to find work, apply to college, secure government benefits, and learn about critical medical treatments. They also used library computers to connect with family and friends, plan family outings, manage bank accounts, apply for permits, start local clubs, and read the daily newspaper.

**In extreme conditions, people turned to public library Internet terminals when they had nowhere else to go.** In the wake of natural disasters, such as

Hurricane Katrina, public libraries were often some of the last remaining places where people could search online for housing and FEMA aid.

**Patrons use library computers to help others in their community.** Apart from addressing their own computing needs, nearly two-thirds of library computer users (63 percent) logged on to help others. Fifty-six percent reported helping friends or family with health matters, 46 percent helped find information on education and learning opportunities, and 37 percent helping friends or family find employment or career information. An estimated 48 million people reported using library computers and Internet access to helping their friends, family, coworkers, and even strangers with a wide range of problems, from resolving tax questions to finding medical equipment.

**Public libraries provide access to government agencies that now offer many forms and services online.** More than 26 million people used public library computers to get government or legal information or to access government services. Of these, 58 percent downloaded a government forms, such as Social Security paperwork, tax forms, and Medicare enrollment documents. Nearly half of these people wound up submitting a government form using a library computer. When it came to government services, the vast majority who sought help from government officials over a library's Internet connection (84 percent) reported they received the help they were seeking.

**Public libraries are extensions of the nation's education system.** Another important use of computers at public libraries was to further one's education. More than 32 million visitors reported using library computers for a variety of educational activities: doing their homework, searching for and applying to GED and graduate programs, completing online courses and tests, and even applying for financial aid. More than half of library patrons who used library computers to seek financial aid received funding.

**Librarians enhance the computing and Internet experience.** The availability of the Internet at the library coupled with the vast number of online transactions has expanded the librarian's job and mission, creating a new set of opportunities and service challenges. Librarians have begun serving as informal job coaches, college counselors, test monitors, and technology trainers for the growing number of patrons navigating government aid, the job market, and all levels of education on library computers.

Many librarians have embraced this change as a natural extension of their role as highly trained information guides. They now offer beginning and advanced computer classes, host job training seminars, and provide countless patrons one-on-one computer training. Overall, two-thirds of people who used library

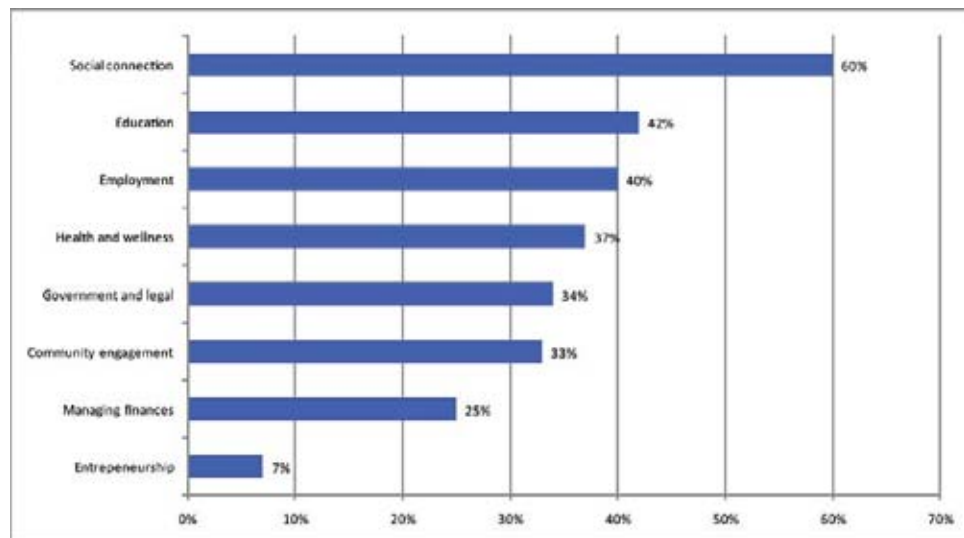
computers received help from library staff or volunteers on computer or wireless network issues.

## Key Uses of Library Computers

The study explored eight areas where people reported using library computers in the past 12 months: education, employment, health and wellness, accessing government and legal services and information, participating in community life, managing household finances, entrepreneurship, and building and maintaining social connections. The most commonly reported use was social connection, which included connecting with family and friends, finding support for an issue or problem, as well as leisure activities such as watching videos, pursuing hobbies, or maintaining blogs and personal websites.

Library patrons reported using computers and the Internet to address a range of basic needs. The three most common uses were: education (42 percent), employment (40 percent), and health (37 percent). The sections below highlight report statistics for the largest use areas.

**Chart 3: Rank of Library Internet Use by Subject Area**



## Social Connections

- Sixty percent of the public access computer users reported using library resources to maintain person connections. Among these users, 74 percent reported using library computers to connect with friends or family, 66 percent communicated with family or friends in the local community, and 35 percent reported connection with family outside of the United States.

A Fayetteville, Arkansas, user talked about growing closer to his family using library computers: *My mother, sister and father—I'm 12 hours away from anyone who could claim me as kin. They benefit from hearing that their son is still alive. I have more time to chat with my sister, we catch up when I don't have that much time during work hours. I've grown quite close to my sister because of those silly computers.*

## Education

- Forty-two percent of the library computer users (an estimated 32.5 million people) leveraged the library technology resources to help them achieve their educational goals. For example, nearly 37 percent of these users relied on library computers to learn about college degree or certificate programs.
- Youth relied heavily on public library computers and internet access: 42 percent of 14 –18 year old respondents reported using library computers to do schoolwork.
- Twenty-four percent of the education users reported taking online classes or worked on online assignments at the library

*A principal at an Oakland high school had this to say about the way the local library addressed his student's needs: "100 percent of our graduates are accepted to college...We work with largely disadvantaged and at-risk youth, and they don't have computers at home, so they come here to the library. They [the students] get support here. The librarians help them attain the online and print materials they need.*

## Employment

- In the study, 40 percent of the respondents (30 million people) used library computers and internet access for employment or career purposes.
- Among the employment users, 76 percent used a library's computers or Internet connection specifically for their search for job opportunities.
- Sixty-eight percent of the users who searched for a job submitted an application online.
- Forty six percent or the employment users used library computers to work on their resumes.

- Twenty three percent of the employment users obtained job related training.

A computer user in the Oakland Public Library system summed it up this way: “You know how the economy is right now. But if you’re just out there filling out applications and walking around, you get so tired and you give up...But in the library, you can do what would take you a week to do in one day.”

## Health and Wellness

- Overall, 37 percent of library computer users, an estimated 28 million people, focused on health and wellness issues, including learning about medical conditions, finding health care providers, and assessing health insurance options.
- Many of these people (83 percent) reported doing research about a disease, illness, or medical condition; 60 percent logged on to learn about diet and nutrition; and 53 percent used the library computers to learn about a medical procedure.
- Roughly half of the people who used a public library computer to find doctors or health care providers reported that they made follow-up appointments.
- Among the people who reported researching diet and nutrition issues online at the library, 83 percent decided to change their diet. Among users who searched for exercise and fitness information, 84 percent decided to change their exercise habits.

## eGovernment

- For more than 26 million users, libraries serve as the neighborhood-based extension of a government agency, linking users to government officials, programs, and services.
- Among these users, 60 percent logged on to learn about laws and regulations, 58 percent reported using a library computer to download government forms, and 56 percent reported logging on to find out about a government program or service.
- Fifty-three percent of these users (over 13 million people) reported that they sought help from specific government official or agency. Many of these people found it. Approximately 83 percent of the people who looked for help from a specific government official or agency reported that they got the help they needed.

*A Fayetteville Public Library staff member described the support his library provided to hurricane victims: “One story I remember after Hurricane Katrina—we’re only an eleven-hour drive north of New Orleans—the hotels were so full, people just kept coming and there was an older gentleman here. We had him on a research computer and our staff helped him fill out the FEMA paperwork.”*

## Community and Civic Engagement

- Many people (33 percent) used library computers to learn about politics, news, and their community. Among these users, 81 percent reported keeping up with current events, 80 percent reported learning about candidates or issues, and 25 percent reported managing a club or nonprofit organization.

*A public library user in Fayetteville, AR: “I watched Obama’s inauguration here...I couldn’t go to Washington but it still felt like a historical moment watching it with the community here.”*

## Personal Finance

- A significant number of people (19 million or 25 percent of all public access users) logged on at their public library for commercial needs or to manage their personal finances.
- More than one quarter of these people (28 percent) reported that they did not have Internet access through other means.
- Two out of every five personal finance users (42 percent) were from low and moderate income households (at or below 200 percent of poverty).
- The majority of these users reported using library computers for online banking (62 percent) and 53 percent used the computer for making purchases online.
- Half of these personal finance users reported paying bills using library public access computers.

## Recommendations

The U.S. IMPACT Study provides compelling evidence for the way in which one public library service—free computer and Internet access—helps address a wide range of needs for residents in communities large and small. This report demonstrates that libraries have been a silent partner in workforce

development, educational achievement, health information delivery, and bringing government services to citizens. It also documents the significant public benefit of investments in library technology and calls on policy makers to develop and implement coordinated strategies to more fully integrate libraries' roles in achieving positive public outcomes. The following recommendations highlight strategies that policy makers could help develop, fund, and implement to achieve positive policy outcomes. With library resources already stretched, new policies and mandates should be supported with both new funding and partnerships.

**State and local government should include libraries in comprehensive broadband deployment and adoption strategies.** The national broadband plan provides an important framework for communities hoping to extend broadband access to all residents. State and local broadband strategies should account for the varied ways that libraries address the technology needs of many different groups in their community, including people who may have access but are in need of the value-added resources and services that libraries provide.

**Business and government agencies should engage libraries in economic and workforce development strategies.** Libraries are a very effective way to reach job seekers and connect them to employment support services. Partnerships between libraries, workforce development, and small business development agencies can strengthen the impact of local economic development efforts by building broader and more seamless workforce information networks for the public.

**State and local education reform initiatives should partner with and invest in public libraries to broaden educational opportunities for K–12 students and adults.** Strategic partnerships between schools, nongovernmental organizations, and libraries can help build stronger educational interventions by marshalling the resources and capabilities of a variety of community learning institutions toward a common set of educational goals.

**Public and private health officials and organizations should support the public library as a partner in disseminating health and wellness information and as a resource for future health communications research.** The report provides evidence that many people are turning to their local library as a resource when looking for health information and for making important decisions about their own health and wellness behaviors. Libraries provide access to a health information seeking public that can be leveraged for targeted health and wellness campaigns. Hospitals, doctors, public health agencies, insurance companies, and other health care providers should work with and invest in

libraries to build a stronger health communications network in urban and rural communities across the country.

**Federal, state, and local government agencies should support libraries as points of access for eGovernment services.** Government agencies are moving a tremendous amount of information onto the Internet. Given the high use of public library technologies, particularly among vulnerable populations, communication strategies developed with public libraries in advance of major Internet-based initiatives could lessen the burden on local libraries and further the goals of sponsoring agencies by reaching the broadest possible audience. The reliance on the public library as an emergency backup to other government and social agencies also should be considered in distributing emergency aid.

**Support technology services that build communities.** Respondents of all ages reported that library technologies helped them connect with family (locally and around the globe), keep up with current events, and identify volunteer opportunities. New technology services in libraries have preserved the role of libraries as the information commons in the 21st century. Local civic and government organizations should consider ways to promote and support this vital role that libraries continue to play in the information age.

## Conclusion

The wiring of public libraries has transformed one of the nation's most established community resources into a critical digital hub, where patrons can compete more effectively for jobs, improve their health, find key government services, and manage their finances. Computer and Internet access allow librarians to go beyond library stacks to connect patrons to all of the resources, services, and tools available online. In a world increasingly defined by technology, the public library is one of the widest bridges to the Internet and computers, not only for those who cannot afford their own connection, but for those who find the library is an easier, faster, friendlier, or more effective way to use these tools.

Over the years, libraries have made significant investments to keep pace with digital developments, but surging demand quickly wears out equipment, taps available bandwidth, and strains library resources. As resources and services increasingly migrate online and devour greater bandwidth, more patrons will need access to fully participate in the digital age. That means libraries will require more resources, not less, to meet this growing need.

Unfortunately, some states are now cutting library budgets, which puts quality access in jeopardy. The situation is worsening because the lingering recession

leads state and local governments to cut library funding and libraries to cut hours, services, and staff—two developments that will only lengthen the growing lines of those waiting to use library computers.

This groundbreaking research shows people of all types not only use computers and Internet lines at the public library, but they rely on this access. The findings signal this is a moment when federal, state, and local governments should invest more, not less, in the computing capacity of the nation’s libraries to help advance a wide range of policy goals.

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### Methodology

This study’s findings were based on nearly 50,000 completed surveys, including 3176 from a national telephone survey and 44,881 web survey responses from patrons of over 400 public libraries across the country. Another 319 interviews were conducted with users, non-users, staff, administrators, funding agencies, and other community agencies in four case study sites around the country (Baltimore, Maryland; Fayetteville, Arkansas; Marshalltown, Iowa; and Oakland, California) to provide greater depth to the findings.

In addition to demographic characteristics and general use patterns, researchers looked at eight different ways people use Internet and computer resources at libraries in their daily lives: education, employment and entrepreneurship, health and wellness, accessing government and legal services and information, participating in community life, managing household finances, and building and maintaining social connections.

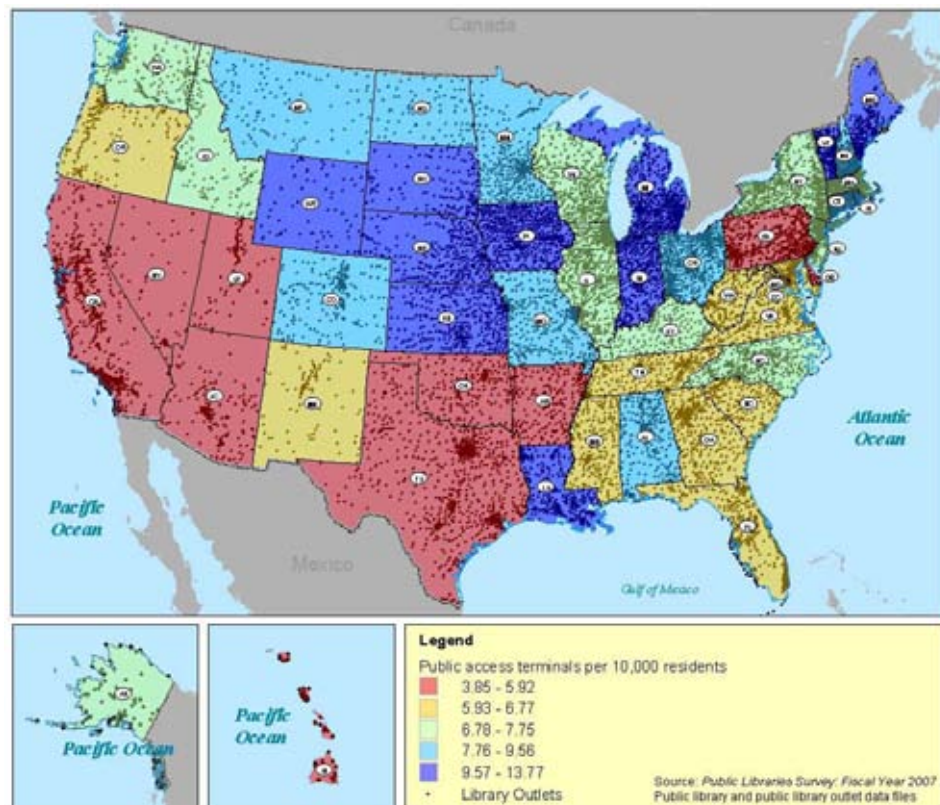
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# 1 Introduction

Computer technology has become ubiquitous in American society. Without access to computers and the Internet, people are excluded from many jobs, government services, educational opportunities, and social networks. To help ensure all Americans can participate in digital culture, public libraries have been at the forefront of mobilizing resources to support free access to technology. Through partnerships with the Bill & Melinda Gates Foundation, the Institute of Museum and Library Services (IMLS), and advocacy in their own communities, virtually all public library systems in the United States have public computers and Internet access, with an average of seven terminals available for every 10,000 residents (Figure 1). These resources are well used: in 2007, libraries recorded 357 million sessions on public access computer terminals (Henderson et al. 2009).

**Figure 1: Distribution of library outlets and density of public access computer terminals by state**



Computer terminals are only the most visible manifestation of a vast public information infrastructure in U.S. public libraries that includes Internet access, digital books, audio recordings, images, databases, electronic reference services, and the knowledgeable and dedicated staff who maintain these

resources and help patrons navigate the digital universe. In 2008, two out of three Americans accessed electronic resources through a public library computer or website, and one out of three used a public library computer or wireless network to access the Internet.

*Opportunity for All: How the American Public Benefits from Internet Access at U.S. Libraries* is the first installment of a two-part report representing the findings from four public library case studies, a national telephone survey, and a web survey administered through 400 U.S. public libraries. This report focuses on the characteristics of public access computer and Internet users and the types of activities and outcomes they reported through surveys and interviews. The second report will address library operational and policy issues and how they affect the outcomes of public access computing use.

The next section in this report (Section 2) is a review of the role of libraries in providing access to technology and the Internet to people who have been excluded from full participation in digital culture. As technology extends into every facet of daily life, being on the wrong side of the digital divide, even temporarily, exacts an ever increasing toll on well-being. Using the research methods described in Section 3, the U.S. IMPACT Study focused on the contribution public access technology makes toward bridging the divide and providing the means for accomplishing important tasks.

Using data from the surveys and stories from public access technology users, librarians, and community stakeholders, Section 4 discusses the reasons users visit public libraries, followed by an examination in Section 5 of how those users take advantage of the technology resources provided by those libraries. In Section 6, a more in-depth look at the characteristics of the users of public library Internet services is provided.

Section 7 provides a detailed discussion of types of uses and users in the areas of pursuing educational goals, job seeking and employment-related activities, learning about health and wellness, accessing government information and services, participating in community life, managing finances, and building and maintaining social connections. Section 8 discusses policy recommendations and Section 9 discusses directions for future research.

The goal of the U.S. IMPACT Study is to help librarians and library staff, policy makers, community stakeholders, and the public understand who the users of public library computers and Internet connections are and how the availability of this important public resource benefits individuals, families, and communities. The results are provocative, sometimes surprising, and touch virtually every corner of American life.

# 2 Background

This study is groundbreaking in the sense that it is the first large-scale generalizable investigation of the characteristics of patrons who use the computers and Internet access in public libraries and examines how they make use of these resources. The research builds on previous studies that have examined the *digital divide*, or the effect of lack of access to the Internet, and how libraries help bridge the gap for underserved populations. It also expands on and updates previous research concerned with how patrons use public library technology resources and services.

By reaching large numbers of users, asking more detailed questions about instrumental tasks performed using library computers, as well as looking for the outcomes of use, the U.S. IMPACT Study offers a more complete depiction than has previously been available of the extent of public library technology use and the benefits of access to technology in public libraries to individuals, families, and communities. The following brief overview of some of the major results from previous studies will help set the context for the findings from the present work.

## 2.1 The Digital Divide

The idea of a digital divide that separated information “haves and have-nots” was introduced by the U.S. Department of Commerce’s (USDC) National Telecommunications and Infrastructure Administration (NTIA) in a series of reports entitled *Falling Through the Net*. These reports, released from 1995–2000, extend the concept of universal service from telephone service to computer and Internet access:

The concept of “universal service” in U.S. telecommunications policy has traditionally referred to the goal that all Americans should have access to affordable telephone service. As America has increasingly become an information society, however, that concept has broadened to include access to information services. Now that a considerable portion of today's business, communication, and research takes place on the Internet, access to the computers and networks may be as important as access to traditional telephone services. (USDC 1998, § 1 [“Introduction”])

In the decade since the NTIA reports were released, the extent of day-to-day activities occurring online has grown in every sector, with many activities, such as submitting job applications and resumes, having moved almost entirely to the

Internet, making efforts to ameliorate the digital divide even more urgent for people without access to computers and the Internet. The NTIA reports, along with other studies, demonstrated that the most persistent digital divides separate Americans of differing income and education levels, race, and language (cf. Fairlie 2005; Hoffman and Novak 1998; Lenhart et al. 2000; Liu 1996; Rainie et al. 2005; Spooner, Meredith, and Rainie 2003; U.S. Government Accountability Office 2001). Additional divides exist along lines of region or urbanization, age, and disability (Lenhart et al. 2003; Liu 1996).

Furthermore, there has not been one single digital divide separating people who do or do not have access to computers and the Internet, but rather a series of divides that attend the introduction of new technology. The new divides exist in terms of available Internet bandwidth, quality of computer equipment, and the ability of users to successfully navigate the Internet to accomplish their goals. As information technologies advance and greater numbers of people join telecommunications networks, the increasingly small number of information “have-nots” will suffer even greater disadvantages (Tongia and Wilson 2007).

Along these lines, a new gap is opening with the rapidly increasing use of mobile devices for connecting to the Internet. In 2008, a panel of technology experts surveyed by the Pew Internet and American Life Project predicted that mobile devices would be the primary means of Internet connection by 2020 (Anderson and Rainie 2008).

Relieving disparities of access to computers and the Internet is important for a number of reasons. Several studies have shown at least moderate benefits to computer access and information technology skills in several categories, including educational advancement, community participation, access to government services, and access to health information (Fairlie 2005; USDC 2000, 2002).

Internet access can also provide economic benefits, both indirectly, through development of marketable technology skills, and directly, through eCommerce. Goss and Phillips (2002), for example, found that developing Internet skills can positively affect wages, and Morton, Zettermeyer, and Silva-Risso (2003) observed minorities can gain an economic advantage from shopping online, because the Internet facilitates information search and removes cues to a consumer' willingness to pay and other characteristics that may disadvantage them in negotiating offline. The Internet can also benefit people in everyday life by helping people find information to make major decisions and (potentially) to increase social capital (Horrigan and Rainie 2006).

Insofar as there are benefits to Internet access in general, these benefits increase with broadband access. For one reason, broadband users participate in more online activities (Horrigan and Rainie 2002). The USDC, in a 2008 report on broadband access in the United States, identified numerous benefits of broadband access:

By making it possible to access, use, and share information, news, and entertainment with ever increasing speed, broadband technology knits geographically-distant individuals and businesses more closely together, increases productivity, and enriches the quality of life. In so doing, it catalyzes economic growth and job creation that, in turn, provide unparalleled new opportunities for our nation's citizens. (USDC 2008, i)

Whatever the reason, exclusion from access to computers and the Internet can have profound repercussions for those on the wrong side of the digital divide. The NTIA *Falling Through the Net* reports emphasize the importance of public access points such as public libraries in providing Internet access, particularly to disadvantaged groups. The 1998 report, for example, concludes, "Because it may take time before these groups become connected at home, it is still essential that schools, libraries, and other community access centers...provide computer access in order to connect significant portions of our population" (USDC 1998, § 4 ["Policy Implications"]).

## 2.2 Libraries Bridge the Digital Divide

Public libraries were identified early on as important players in the task of equalizing computer and Internet access. In 1993, Vice President Al Gore suggested that public libraries could serve as a "safety net" in providing Internet access. In his 1994 State of the Union Address, President Clinton declared his intention "to connect every classroom, every clinic, every library, and every hospital in America to a national information superhighway by the year 2000" (McClure, Bertot, and Zweizig 1994, 1).

Public libraries quickly adopted public computer and Internet access as an extension of their traditional role of providing access to information and information literacy training. Today, virtually all public libraries provide Internet access, and the majority are the only provider of free access in their communities (American Library Association [ALA] 2009; Bertot et al. 2007; Bertot, McClure, and Jaeger 2008).

Empirical and anecdotal evidence, including that produced by the U.S. IMPACT Study and included in this report, supports the observation that the digitally disadvantaged are heavy users of library computers and that libraries have a

major role in lowering the barriers to digital inclusion. Compared to other public access providers such as employment centers and cybercafés, the library model for public access technology stands out because of the presence of librarians who provide training and assist users in navigating the Internet, thus helping not only to overcome divides of access, but of computer skills and information literacy as well.

In addition to the significant investments made by local jurisdictions, several major external funding initiatives have helped libraries' investment in public computer and Internet access. Sustaining access requires ongoing expenditures to support software and hardware upgrades, increased bandwidth and connection speeds, continuous staff time and skills training, and maintenance of open hours, all without shifting funding away from the other services or activities that libraries provide and communities depend on.

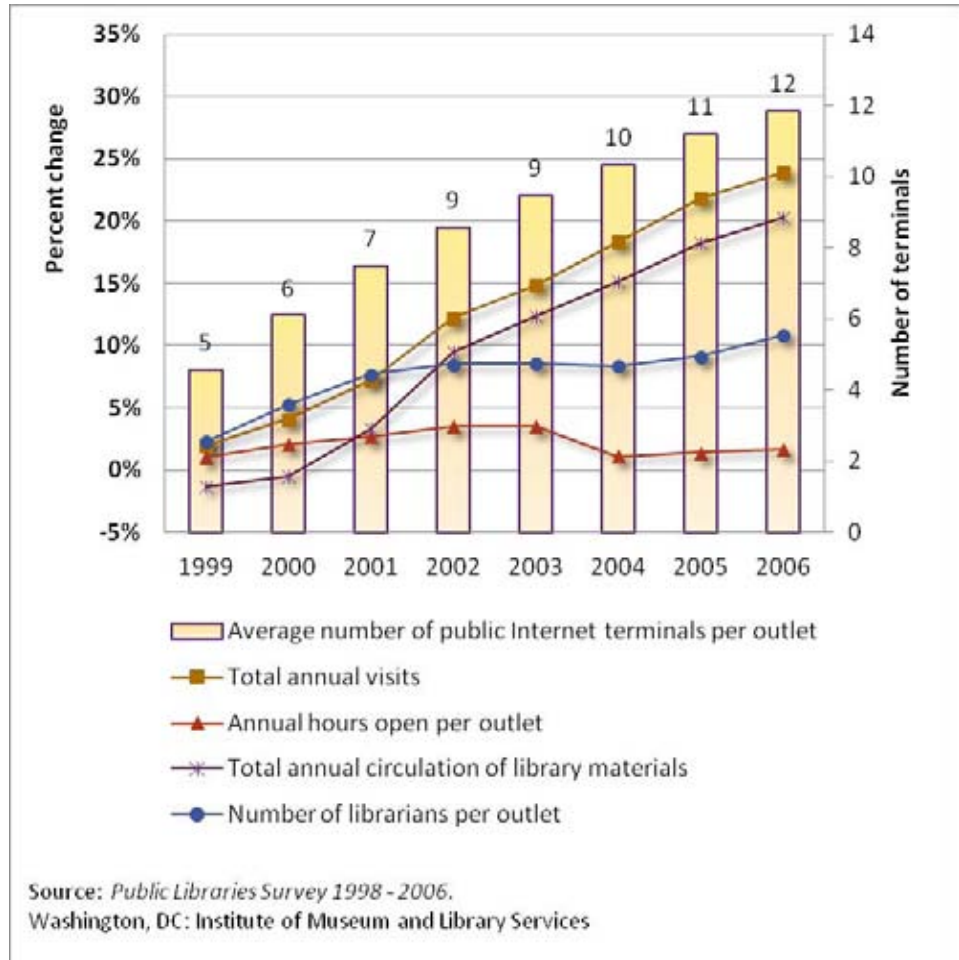
As seen in Figure 2, from 1998 to 2006 the average number of public access computer terminals in public libraries grew by more than 300 percent. To a lesser extent, this mirrors the growth in library visits and circulation of books and other materials. However, although demand for library computers is high and continues to grow, since 2001 the number of librarians available to assist patrons has not grown at the same pace as the rapid increase in visits, circulation, and availability of public access computers. Further, the number of hours libraries are open has remained flat or in some years fallen. Supporting these observations further, the latest Public Library and Internet Study for the American Library Association (Clark et al., 2009, p. 8), shows that 81 percent of libraries cite insufficient availability of workstations, time limitations are being placed on the use of work stations, and that 63 percent of libraries rely on non-professional IT staff or library directors to carry out technical support. (Data pertaining to these themes were collected as part of the U.S. IMPACT Study and will be discussed in a second report.)

The *Public Library and the Internet* studies, which measured public library connectivity and access, found a leveling off in the number of Internet workstations per public library outlet beginning in 2002, an “infrastructure plateau” which is influenced heavily by library size, space limitations, and technical or telecommunications issues. Many libraries report adding wireless access rather than new workstations to meet patron demand, although this can place substantial strain on library bandwidth (Bertot, McClure, and Jaeger 2008; Bertot and Davis 2007; Davis, Bertot, McClure, and Clark, 2009; McClure, Jaeger, and Bertot 2007).

Partly fueled by this solution to infrastructure limitations, the proportion of public libraries providing wireless Internet access grew from 18 percent in 2004

to over 76 percent in 2008. Library connection speeds have also increased steadily. Some libraries have even gone beyond providing access inside library buildings by using computer loans, cybermobiles, or community partnerships to help their communities access the Internet (ALA 2009; Bertot et al. 2006, 2007; Bertot, McClure, and Jaeger 2008).

**Figure 2: Change in library use and resources since 1998**



Longitudinal analysis of *Public Libraries Survey* data (1998–2006) suggests that despite external funding initiatives, overall library funding has not kept pace with the growth of patron demands or library service provision; while Internet provision has skyrocketed, operating income, staffing levels, and open hours have remained flat or increased only moderately. Furthermore, libraries are depending more heavily on local government sources for operating income, and less on state and other sources, and spending a smaller portion of operating expenditures on collections. In short, provision of public access to computers and the Internet has been a story of libraries stretching their already limited resources to provide an increasing array of services (Kinney 2009).

## 2.3 Previous Findings

Public library computers have become a critical resource for many underserved populations and for others who do not have access to the Internet and computers through other means. Several smaller scale studies have investigated the question of use, with most agreeing that the most frequent activities accomplished on library computers are email, general web surfing, educational activities, research, information-seeking, and entertainment (ALA 2007; Bertot et al. 2006a, 2006b; Curry 2002; Gordon, Moore, and Gordon 2003; Gordon et al. 2003; Gross, Dresang, and Holt 2004; Heuertz et al. 2002; Martell 2008; Moe 2004; Slone 2007).

Other common uses include job seeking (ALA et al. 2007), social networking (Curry 2002), activities related to eCommerce and eBusiness (Heuertz et al. 2002), and eGovernment (Bertot et al. 2006a, 2006b; Bertot, McClure, and Jaeger 2008). Several other noteworthy uses of the Internet in libraries include word processing and using spreadsheets (Heuertz et al. 2002), learning basic computer skills (Moe 2004; Gordon, Moore, and Gordon 2003), and printing documents (Heuertz et al. 2002; McClure, Bertot, and Zweizig 1994).

Several studies have also identified differences in use between social or demographic groups, some of which are confirmed in the current study. The Public Access Computing Project (PACP) studies found some differences in use between users with and without other ways of accessing the Internet: users with no other access were more likely to use library computers for email, whereas those with other access were more likely to use the computers for education, business, and monitoring stocks and bonds (Heuertz et al. 2002). PACP also observed that low income patrons were more likely to use library computers for employment-related functions such as job seeking and resume preparation, and economic downturns have brought greater attention to this role (Brustein 2009; Gordon, Moore, and Gordon 2003; Gronowska 2009; Saulny and Cullotta 2009; Yates 2009).

The U.S. IMPACT Study expands on previous research about the types of information seeking and instrumental tasks most frequently reported by public access technology users. By asking more detailed questions about types of use previously reported in other studies and by producing estimates of the extent and relative distribution of these activities among users, the current study confirms many previous findings and also provides deeper insight into the outcomes of public access technology.

# 3 Purpose and Methods

The U.S. IMPACT Study picks up where much of the previously discussed research leaves off, and makes an important original contribution to the literature about public access computing and Internet use by seeking out the users' perspectives and providing a comprehensive understanding about who patrons are and what they are doing when they use library computer resources.

The research methods were designed to answer questions about the users and uses of public library computing services, develop a basis for outcome evaluation through the development of indicators to demonstrate the impact of public library computing in multiple policy areas, and to involve the public library community in the research process.

## 3.1 Purpose

In June 2007, the IMLS articulated the scope of the U.S. IMPACT Study as follows:

[T]o undertake original research and analysis to identify measurable indicators of the social, economic, personal, and/or professional value of free access to computers, the Internet, and related services at public libraries, and of negative impact where service is weak or absent, and to provide new, reliable data on the benefits to individuals, families, and communities of these services and resources at public libraries. (IMLS 2007, 4)

The studies were framed around the following seven specific research questions, also defined by the IMLS:

1. What are the demographics of people who use computers, the Internet, and related services in public libraries?
2. What information and resources provided by free access to computers, the Internet, and related services in public libraries are people using, across the spectrum of on-site and off-site use?
3. How do individuals, families, and communities benefit (with a focus on social, economic, personal, and professional well-being) from free access to computers, the Internet, and related services at public libraries?
4. What reliable indicators can measure the social, economic, personal, and/or professional well-being of individuals, families, and communities

that result from access to computers, the Internet, and related services at public libraries?

5. What correlations can be made between the benefits obtained through access to computers and the Internet and a range of demographic variables?
6. What computer and Internet services and resources are lacking at public libraries that, if provided, could bring about greater benefit?
7. What indicators of negative impact can be identified where free access to computers and the Internet is weak or absent?

In addition to answering these questions, the research has been designed to provide a framework that libraries can use to evaluate their computing services and to communicate the value of these services with funding agencies, community partners, and patrons; this framework will be discussed in a forthcoming report. An online toolkit and supporting resources will also be available to help libraries make the best use of the results of the research.

## 3.2 Theoretical Frameworks

The U.S. IMPACT Study employed five theoretical frameworks to bring structure to the research methods and guide our analysis. The five frameworks include:

- The Strategic Triangle provided overall guidance for framing the research questions in terms of showing the value of public access computing resources to the public (Moore 1995).
- The Situated Logic Model, an extension of a typical performance evaluation logic model, helped connect the research questions to policy goals to which public access computing resources may contribute (Naumer 2009).
- The Common Outcome Framework guided the identification and evaluation of candidate indicators (Lampkin et al. 2006).
- The Lay Information Mediator Behavior (LIMB) model provided a framework for measuring the effect of public access computing resources use on other individuals besides the actual resource users (Abrahamson and Fisher 2007; Abrahamson et al. 2008).
- A concurrent triangulated mixed methods research design guided the process of validating findings and identifying areas of emergence and

divergence that may be of interest for future research (Creswell and Plano Clark 2007).

These frameworks represent a progression from general theoretical guidance for the conceptualization of the provision of free access to computers and Internet connections within the public policy arena to the connections between the research methods employed to examine and discuss the use of these services in public libraries. Appendix 1 expands on the discussion of these theoretical frameworks and their role in the research design and analysis of the data.

### 3.3 Research Methods

Data collection for the U.S. IMPACT Study took place in three concurrent phases: a nationwide representative telephone survey, a web survey administered through a sample of U.S. public libraries, and case studies in four U.S. public libraries. These methods created quantitative data through the surveys, as well as contextual information on the public library computing environment and patron behaviors through observations and interviews with case studies participants. The following section is a brief description of the major characteristics of each of the methods; more detailed information about the project methodology is contained in Appendix 2.

#### Surveys

The telephone and web surveys included some questions that were asked of all respondents, as well as specific questions about library technology use asked only of those who had used public computing resources or services in the past year. Public access computing users were defined as someone who had either used a computer in a public library to access the Internet or had used a public library wireless network to access the Internet using their own computer in the previous 12 months. Both the telephone and web surveys were available in Spanish.

##### *Telephone Survey*

The telephone survey employed a dual frame probability sample of households that combined a list assisted random digit dialing sample procedure with a cell phone exchange sample. Calls were placed from April 28, 2009, through August 1, 2009. The final disposition of the telephone survey is presented in Table 1.

**Table 1: Telephone survey final disposition**

	Number of Interviews
Qualified users	1,131
Non-users	2,045
<b>Total complete</b>	<b>3,176</b>

### *Web Survey*

The questions contained in the U.S. IMPACT Study web survey were essentially the same as those asked of telephone survey respondents with minor adjustments to accommodate the different platforms. The web survey was intended to permit a smaller, less costly telephone sample, while extending the number of users available for analysis. Though Internet-based surveys are still largely experimental, they offer a promising method of reaching populations commonly missed in the telephone surveys, specifically homeless persons and youth, but also lower income persons and others who are more likely to live in cell phone only households (Blumberg and Luke 2008).

The web survey was administered through 401 public library systems selected using a stratified random sampling procedure. The final disposition of the web survey is presented in Table 2.

**Table 2: Web survey library and interview disposition**

Library Type	Participating Libraries	Qualified Users	Total Completed Interviews
Large (self-representing)	91	19,671	28,263
Multiple outlet systems	153	8,954	12,445
Single outlet systems	76	1,863	2,469
Small systems	47	473	524
Volunteer systems	34	876	1,180
<b>Total</b>	<b>401</b>	<b>31,837</b>	<b>44,881</b>

The sampled libraries were randomly assigned to 1 of 10 two-week fielding periods beginning in April and running until the second week in June 2009.

### *Weighting*

To reduce the errors introduced as a result of sampling error and non-coverage, the telephone and web survey data were weighted using a propensity scoring technique that takes advantage of the telephone survey data as a reference point for calibration of the web survey. Weights to match national parameters for gender, age, race, and library use were developed using an iterative weighting adjustment to balance the distribution of these variables. The

parameters come from the 2009 Current Population Survey’s Annual Social and Economic Supplement. The final weights used for the analysis in this report are a product of the propensity score and the calibration weights. Margins of error for reported statistics can be found in the Appendix Tables.

## Case Studies

In order to provide greater context for interpreting and validating findings, the following four public libraries participated in case studies:

- **Fayetteville Public Library:** Single outlet library in Fayetteville, Arkansas (population 57,491).
- **Enoch Pratt Free Library:** Multiple outlet library system in Baltimore, Maryland (population 632,941). In addition to the central building, the branches studied included South East Anchor and Orleans.
- **Marshalltown Public Library:** Single outlet library in Marshalltown, Iowa (population 30,353).
- **Oakland Public Library:** Multiple outlet library system in Oakland, California (population 431,634). In addition to the central building, the branches studied included Asian, Cesar Chavez, Eastmont, and Rockridge.

The case study teams conducted interviews and focus groups with public access technology users during one-week site visits between March and May 2009. Key library staff, administrators, board members, as well as representatives of local government agencies and community service organizations also participated in interviews and focus groups. Table 3 shows the number and types of interviews conducted at each site.

**Table 3: Case study interview disposition**

	Qualified Users	Library Staff	Community Stakeholders	Total
Fayetteville	41	8	18	67
Enoch Pratt	38	16	6	70
Marshalltown	43	6	16	65
Oakland	42	30	16	88
<b>Total</b>	<b>164</b>	<b>60</b>	<b>56</b>	<b>280</b>

Community stakeholders included local agency staff, policy makers/elected officials, and staff or volunteers at other community Internet access locations and were interviewed either individually or in focus groups. Adult public access

computing users were interviewed individually, whereas youth users aged 14–18 years were interviewed in focus groups.

All of the case study interviews and focus groups were recorded and later transcribed. Two types of analysis were applied to the transcripts: the first is a traditional qualitative approach to content analysis where transcripts from administrator and community stakeholder interviews were analyzed and probed for emergent themes. The second was a directed content analysis which applied codes derived from the surveys to the public access computing user transcripts. The directed approach in this study allows the qualitative findings from the case study interviews and focus groups to inform, validate, and provide critical context for the quantitative findings of the survey component of the study. Comments left by survey respondents in open-ended questions regarding other types of use and suggestions for improvements were also coded using the directed approach.

# 4

## Public Library Visits

*“The library is a quiet safe place; it’s a productive place.”*

*Reese, Oakland, CA*

In the previous 12 months, 169 million (69 percent) Americans 14 years of age and older visited a public library. They also do so frequently: one out of three Americans 14 years or older (35 percent) visit once a week or more often. Some of the most striking observations from the U.S. IMPACT Study site visits came from the recognition of the sheer magnitude and variety of the resources, services, and materials public libraries provide and the care with which librarians build their collections to satisfy the needs of their particular patrons. This dedication to serving local communities is perhaps the reason why public libraries continue to enjoy high use among the U.S. population.

### Overall Public Library Use

Over **69 percent** of U.S. residents age 14 or older have **visited a public library** at least once in the past 12 months. Library visits are highest among:

- The working poor (earning 100–200 percent of federal poverty guidelines) and those with income more than 300 percent of the poverty guidelines;
- People of mixed race, Asians, Native Hawaiians or Pacific Islanders, and Whites;
- 14–18, 35–44, and 65–74 year olds;
- Women; and
- People with educational attainment beyond high school.

Like many patrons interviewed in the course of this study, Reese a 30-year-old unemployed college graduate from Oakland, conveyed her appreciation for having a quiet and safe place for people to visit and engage in productive activities. Reese explained that she visits a library branch “a bus ride away” from her home a couple of times a week to browse books, DVDs, pick up fliers about community events, and, about once a month, to use the library’s computers for Internet access because they’re faster than the computer she has at home. During her library visits, Reese also uses the library’s computers to access the catalog and to request interlibrary loans through the library website. Although some patrons use the library for more limited purposes, as shown throughout this report, the research strongly suggests that most patrons are like Reese and use a full range of library resources.

Approximately 70 percent of people with income between 100 and 300 percent of the poverty limit for their household size visited a public library in the past year. Americans whose household income is below the federal poverty limit are

**169 MILLION VISIT A PUBLIC LIBRARY OR BOOKMOBILE**

**86 MILLION GO ONCE A WEEK OR MORE FREQUENTLY**

*“I was able to borrow materials to learn about management, sales, investing, retirement, finding a job, resume preparation, raising my child, learning music, etc.,... I have the potential to learn anything I would like to. I feel more thankful to my public library than my alma mater.”*

WEB SURVEY COMMENT  
CHARLOTTE, NC

less likely to visit the library compared to those in higher income classes (Appendix Table 1). However, as seen in Table 4, low income people are more likely to visit public libraries frequently, with 28 percent of people whose household income is below the poverty guidelines visiting public libraries everyday or most days, compared with only 6 percent of people earning more than 300 percent of the poverty limit who visit libraries as frequently.

**Table 4: Frequency of library visits by income level**

	Household Income as Percent of Poverty Guidelines				
	All Respondents	<100%	100%–200%	200%–300%	>300%
Every day or most days	12%	28%	19%	11%	6%
At least once a week	38%	38%	40%	41%	36%
About 1–3 times a month	37%	22%	29%	36%	45%
Several times a year	11%	9%	10%	10%	11%
About once a year	2%	3%	2%	2%	2%

Source: 2009 U.S. IMPACT Study telephone and web survey  
Asked of all library visitors

Youth between 14 and 18 years of age are the most likely age group to be library visitors, followed by adults aged 35 to 44 and 65 to 74 years. The high likelihood of library visits by people in these age groups are probably reflective of typical life-cycle use of libraries with youth using libraries while in school for doing homework, parents visiting with children, and older adults increasing use after retirement. Although those aged 19 to 24 years are the least likely to visit the library relative to the other age groups, they are the most likely to be frequent visitors: 23 percent make daily visits compared to 11 percent of those aged 25 to 44. Youth aged 14–18 years are nearly as frequent library visitors, with 20 percent visiting every day or most days.

Race and gender are also significant factors in the likelihood of library visits. Women are more likely to visit a public library than men, with about 72 percent of women making library visits in the past year compared to 67 percent of men. Although currently only about 1 percent of the U.S. population identifies with two or more racial categories, 79 percent of multiracial people report visiting a public library or bookmobile in the past year compared to 73 percent of Asians and 71 percent of Whites and Native Hawaiians or Pacific Islanders. Blacks or African Americans and American Indians or Alaska Natives are least likely to visit public libraries; however, a greater percent of these patrons visit libraries on a daily basis than any of the other racial categories.

# 5 Accessing Online Library Resources

Most library patrons (78 percent) use public library computers during their visits to access library resources such as digital articles and books, subscription databases, and also to look up books in the library catalog, place holds, or request items through interlibrary loans (Appendix Table 2). Many libraries, including all four visited in conjunction with the U.S. IMPACT Study field work, have special computer terminals designated for online public access catalogs (OPAC) and some also provide terminals for accessing subscription databases available through the library websites. Use of library computers for accessing the online catalog and library website resources is a distinct activity from using library computers to access the Internet which is discussed in Sections 6 and 7.

## Overall Use of Online Library Resources

*Nearly **78 percent of library visitors, or 54 percent of Americans aged 14 years or older, have used a computer in a public library to **access library technology resources** like the online catalog, subscription databases for articles, and digital books and other media. In-library use of technology was most likely among:***

- *The working poor (earning 100–200 percent of federal poverty guidelines);*
- *People of mixed race and Whites;*
- *Youth aged 14–18 and adults 25–54 years old;*
- *Women; and*
- *People with post-graduate education.*

*Close to **two out of three (65 percent) of Americans age 14 and older have accessed electronic resources remotely through public library websites, including placing holds, getting homework help or reference services, and requesting materials from other libraries. Remote use was most common among:***

- *Those with incomes greater than 300 percent of the poverty threshold;*
- *People of mixed race and American Indians or Alaska Natives;*
- *Youth age 14-18 and adults age 35-44;*
- *Women; and*
- *Those with some high school or education beyond a high school diploma.*

Subscription services for magazine and journal articles, genealogy research, product reviews, and investment information remain at the core of most library online resources. However, many libraries have expanded these offerings to include digital books, audio recordings, image collections, and guides to finding information on the Internet. These resources are very popular with patrons, as indicated by the high percentage of users who access these resources both in the library and through library websites.

As seen in Table 5, lower income people use library computers for accessing library-provided electronic resources such as those listed above more frequently than higher income people. Looking at those with household income below the poverty line, 21 percent use library computers to access electronic resources every day or most days compared to just 6 percent of those with income above 300 percent of the poverty guidelines. One reason for this difference in frequency of use may be because higher income patrons access these resources remotely through Internet connections at home. One survey respondent from Maryland wrote to explain how she uses the library's online resources from home:

The online library catalog, and the availability of interlibrary loan through the library, are essential to my work as author and historian. I use these resources at least weekly. Also invaluable are the electronic resources my library offers: online access to newspapers, genealogical and historical sites, journals, etc. I can access these from home through the library website and do so several times a week.

Many survey respondents left similar comments about the importance of the electronic resources libraries provide online and how they fit into daily life.

**Table 5: Frequency of library electronic resource use by income category**

	Household Income as Percent of Poverty Guidelines				
	All Respondents	<100%	100%–200%	200%–300%	>300%
Every day or most days	11%	21%	15%	11%	6%
At least once a week	21%	29%	27%	22%	17%
About 1–3 times a month	29%	26%	29%	31%	30%
Several times a year	28%	18%	21%	26%	35%
About once a year	10%	7%	8%	10%	12%

Source: 2009 U.S. IMPACT Study telephone and web survey  
 Asked of in-library electronic resource users

Accessing library resources and patron accounts remotely through a public library website is also a frequent activity: 158 million Americans (65 percent) have paid these types of “virtual visits” to libraries (Appendix Table 3).

The odds of accessing library resources remotely are higher among users with incomes above 300 percent of the poverty threshold, probably reflecting the higher likelihood of these users having alternative access methods. Other characteristics of remote users having higher odds of library specific online services include:

- People of mixed race and American Indians or Alaska Natives had higher odds than Whites by a factor of 1.45 and 1.47, respectively
- Youth age 14–18 had higher odds by a factor of 3.92, and adults between the ages of 35 and 44 had higher odds by a factor of 2.54 than those over 75
- Women had higher odds by a factor of 1.45 than men
- Those with some high school education or education beyond a high school diploma showed higher odds of using the library online resources remotely than people with a high school degree.

Many public libraries are working to expand the accessibility of their online presence by making the resources available through their websites also accessible through handheld mobile devices like cell phones and personal digital assistants (PDA). Though 58 percent of adult Americans have used their mobile communications devices for non-voice activities such as sending or receiving text messages, accessing information on the Internet, playing music, or watching videos (Horrigan, 2008), only 6 percent of those age 14 and over have used mobile devices to access library resources (Appendix Table 4).

**158 MILLION ACCESS  
LIBRARY RESOURCES  
THROUGH THE  
INTERNET**

*"I am currently my preschool's curriculum specialist and must work on finding fun and educational children's books each and every week. The library online resources are great! I can select the books I need and pick them up when they are ready. The library has a wonderful system going and I am thankful!"*

WEB SURVEY COMMENT  
ROCKVILLE, MD

During site visits and in hundreds of survey comments patrons also reported using non-Internet computers in the library for accessing software, especially office applications like word processors and spreadsheets, as well as photo editing and other desktop publishing software. They used these programs to write short stories, poems, and prepare manuscripts; complete homework assignments; create budgets and manage customer lists; and create newsletters and fliers.

Survey respondents also stressed the importance of having library printers available for public use. The most frequent types of documents they reported printing were boarding passes for transportation (air, train, bus), driving directions, coupons, and homework.

# 6

## Public Library Internet Users

*“The library has been an incredible intellectual resource and the computer lab since the late 80s has been a key part of it.”*

*Roberto, Fayetteville, AR*

Public libraries began offering public Internet access soon after it began to seep into American life in the 1980s and followed its growth through the 1990s. Today, nearly every public library system across the country offers free Internet access through computer terminals and, increasingly, through wireless networks that allow patrons with their own portable computers to access the Internet in libraries.

In the past 12 months, 77 million (32 percent) Americans age 14 or older took advantage of Internet access in a public library (Appendix Table 5). Although the proportion of the population who accessed the Internet through a public library varied according to income, race, age, and other factors, it was clear from case study interviews and survey results that library Internet access is a critically important resource to people from all walks of life.

### Overall Use of Public Access Internet Services

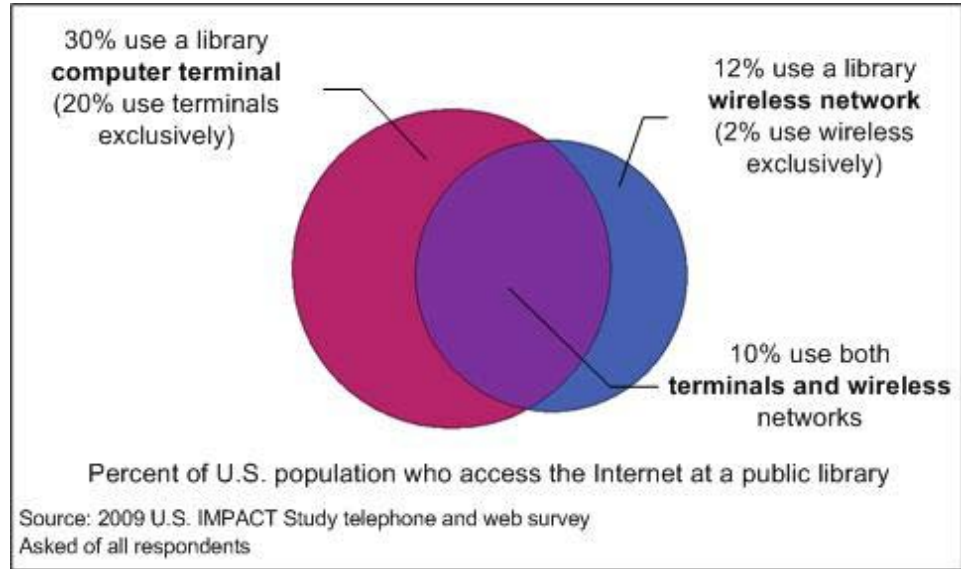
*Close to **32 percent** of the American public ages 14 years or older have **accessed the Internet using a library computer or wireless network in the past 12 months.***

*Public access Internet use is highest among:*

- *Impoverished people and the working poor (earning 100–200 percent of the poverty guidelines);*
- *People of mixed race and Native Hawaiians or Pacific Islanders;*
- *14–18 year olds;*
- *Men; and*
- *People who speak languages other than English at home.*

As seen in Figure 3, most people who access the Internet in a public library do so using a library computer terminal (Appendix Table 6); however, 12 percent of the population report connecting to a library wireless network using their own laptop computer (Appendix Table 7), and 10 percent report using both modes of access. Most wireless users also use library computers at some point, though a small number only use their own computers in the library for accessing the Internet.

**Figure 3: Proportion of the population using the Internet in public libraries by mode of access**



Income is a major driver for uses of public library Internet access. People earning between 100 and 200 percent of the poverty guidelines, or about \$22,000 to \$44,000 for a family of four, had higher odds of using library computers or wireless connections by a factor of 2.68 than people earning more than 300 percent of the poverty guidelines. This is consistent with the lower availability of alternative means for Internet access also reported by lower income earners (Appendix Table 8).

The odds of women visiting public libraries are higher than those of men by a factor of 1.52; however, they are less likely than men to use library computers or wireless networks to access the Internet by a factor of 0.86. Though the magnitude of difference between male and female library users and library Internet users is not great, it does confirm site visit observations.

Across all users, the most frequently reported use of library Internet connections was checking email with 72 percent reporting that they had used library computers for this purpose (Appendix Table 9).

*Over 72 percent of library computer or wireless network users checked email. Public access Internet use for email is highest among:*

- *Those with incomes below the poverty threshold;*
- *People of mixed race, Blacks or African Americans, Native Americans or Alaska Natives, and Native Hawaiians or Pacific Islanders;*
- *14–18 year olds; and*
- *Those with a grade school education or some education beyond a high school degree.*

As in many other activities discussed later in the report, those users with incomes below the poverty threshold have higher odds of using the library computers or wireless networks for sending email, by a factor of 2.40 above those with incomes over 300 percent of the poverty threshold. Other differences between email users include:

- People of mixed race, Blacks or African Americans, Native Americans or Alaska Natives, and Native Hawaiians or Pacific Islanders all had higher odds (by a factor of 1.70, 1.44, 1.99, and 1.77) than Whites.
- Youth aged 14–18 had the highest odds of use for email, by a factor of 5.06 compared to those over 75.
- Those with a grade school education or some post-high school education showed higher odds of using the computers for email than those with a high school degree.

Library technology users interviewed during case study visits each had a unique story about why they visit a public library to access the Internet. However, analysis of interviews and survey data showed three main types of users with fairly stable characteristics and patterns of use:

- **Power users:** People who use the library for technology and Internet access on a daily or near daily basis. Frequent users are much more likely to rely on the library as their sole point of access than less frequent users and perform more instrumental tasks.
- **Supplemental users:** Regular users make the library a normal part of their routine, often stopping in to use library computers or wireless Internet connection several times a month. Weekly regular users are more likely to lack alternative means of accessing the Internet than those who visit the library for this purpose less frequently.

- **Occasional users:** Two types of occasional users were found. The first are users who access library resources during emergencies or transitions when their regular computer and Internet access lets them down. During periods of use, the library may be a frequent stop for Internet access, but after the emergency is resolved use of libraries for this purpose drops off sharply. The second type of occasional user typically has uninterrupted access to the Internet, but may stop by the library when away from home to use a computer for quick tasks like looking up driving directions.

In the following sections, the patterns of use and motivations for each of these user types will be illuminated through discussions of users met during the four case studies.

## 6.1 Power Users

Joseph, a 43-year-old job seeker in Oakland, exemplifies library computing “power users,” patrons that use library computers or wireless networks nearly every day. For these users, the library frequently serves as their single or primary location for Internet access (Figure 4).

With income between 100 and 200 percent of the poverty guidelines, Joseph explained that home Internet access is out of his reach financially. However, he also expressed a preference for Internet access at the Oakland Public Library because he finds it a welcoming and productive place where he can attend to many needs at the same time. He goes on to explain:

That’s what makes the library better than any other place. The amount of space you have. And if you do need to get a book, or you need to do research, additional research, the library’s here and you have the librarians who can help you. But if you go to a coffee shop, you’re limited to your little small area, and your computer, and the amount of time you can stay there because they want you to buy their product. If you don’t want to eat anything, if you’re not hungry... well, you can’t just go there to sit there. You can get away with it for a little while but eventually they’re going to ask you to leave.

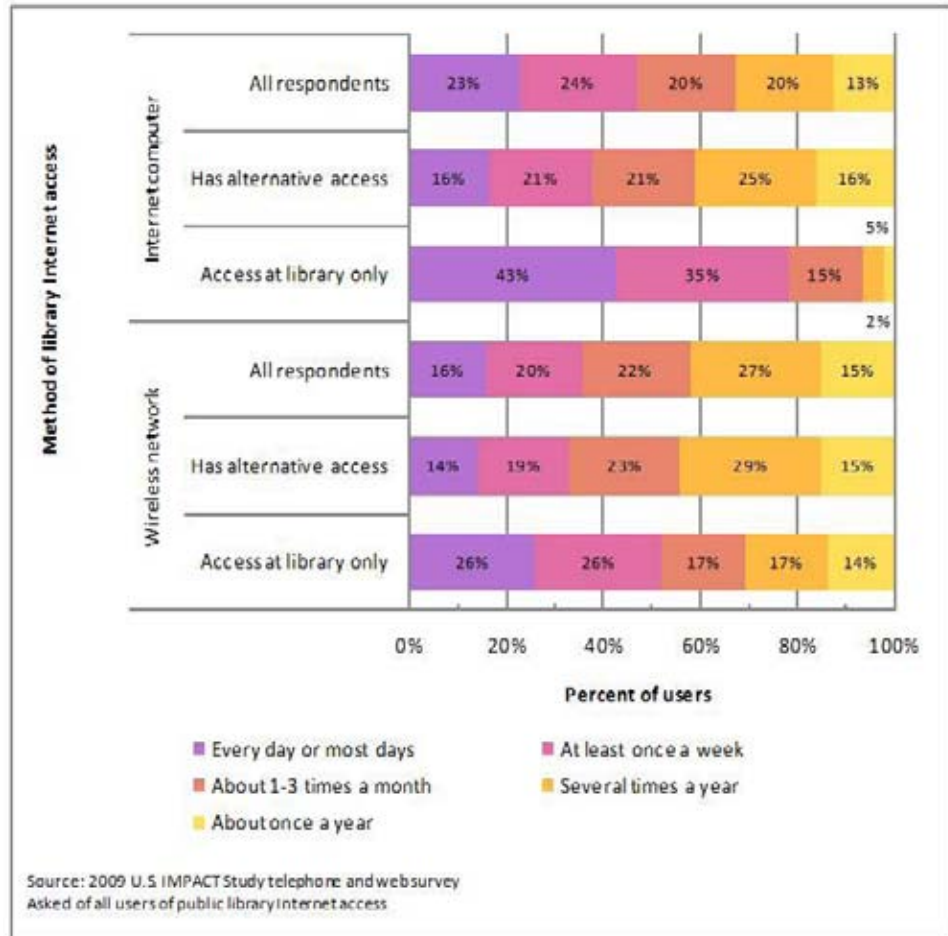
As with Joseph, users with their own laptops can often find wireless Internet access elsewhere which explains why fewer wireless users report that they rely on the public library as their only access. However, though wireless Internet access was available in commercial locations around all four case study sites, many users expressed similar concerns about having to spend money on food or

beverages in order to be allowed Internet access, as well as about time limits on how long they could reasonably stay to do work.

Unemployed at the time we spoke with him, Joseph was looking forward to starting a new job that he found using the library's wireless network: "Just recently I was looking for employment. I came to the library and used my computer with the free Internet to go to Craigslist or other websites. So in the last month, I've had four interviews because I was able to use the Internet. And just yesterday, I got hired!" Public library wireless access also allows Joseph to take online computer classes through a college in San Francisco. Using the public library for college is more convenient for him than traveling across the Bay and allows him to pursue his education in a way he feels is most likely to lead him to success.

As seen in Figure 4, although 16 percent of library wireless network users and 23 percent of Internet computer users use the library on a daily basis for Internet access, of those lacking access elsewhere 26 percent use library wireless networks daily and 43 percent use library computers on a daily basis.

**Figure 4: Frequency of public access computer terminal and wireless network use by availability of alternative access to the Internet**



Roberto, a 60-year-old interviewed in Fayetteville, Arkansas, is one such user. Roberto is disabled and earns about \$6,000 a year; as a result, he cannot afford Internet or cable television access at home. He still likes to keep up with news and current events though, and does so on library computers almost every day, even contributing to independent media stories on occasion. Roberto also uses the library Internet computers to find new books by his favorite authors and get health information. About three times a week, he brings his 3-year-old niece to the library to use the computers in the children’s library:

She plays the games down there and she’s doing all types of point and click games, which are really word games and number games. All she knows is that she loves sitting there playing that. I sit there watching her and go “Yeah!”

Roberto’s niece is likely to become a public access computer user when she reaches her teen years. Nearly 50 percent of youth aged 14–18 years used a

public library computer to access the Internet in the past year, making them more likely to be public access users than any other age group by large margins. Nearly all youth who access the Internet through public libraries (98 percent) do so using a library computer terminal, and 24 percent did so once a week or more frequently. About 31 percent also use their own laptop computers with the library wireless Internet connection.

Like 86 percent of users aged 14–18 years, most of the youth interviewed during our field visits also had access to a computer and the Internet at home. Yet for them, the library’s computers were still of critical importance for completing homework for school. Oceana, a 15-year-old user from Oakland, reflected other members of her focus group and also echoed what we heard from youth in the other field sites:

When I'm at home my brother is always hovering over me trying to get at the computer even when there's another one in the other room. But he prefers to use mine. So, he's hovering over me, asking me if I'm done yet, but I'm not because I'm doing school work. He's going to keep bothering me [until] I eventually have to relinquish the computer to him.

Household competition for computer and Internet access is not just between siblings, but also between youth and parents who may need to use the home computer for work or to manage household finances. Though most youth volunteered that they have access to computers at school, they expressed a strong preference for using library computers because they also face more competition for resources at school than at the library.

## 6.2 Supplemental Users

Although the early goal for providing computing and Internet resources in public libraries was to bridge the digital divide for people who have no other access to computers and the Internet, 78 percent of public access technology users also have access to a computer and Internet network somewhere else (Appendix Table 8). Nonetheless, many of these users who have access elsewhere are passionate about their need for library access as a regular supplement to their normal access points.

Often, supplemental users lack access to high-speed Internet at home. Although they may have dial-up at home, they make use of library computers and faster Internet connections to download large files like computer security updates or photos, or to view the many websites that are nearly impossible to

**19 MILLION VISIT A PUBLIC LIBRARY TO USE THE INTERNET WHILE TRAVELING**

*"I was recently traveling and was pleasantly surprised to find that a library was a public Wi-Fi Hotspot which allowed me to connect to my office and complete an unexpected project. Now that I know, I will probably look first to libraries when in need of a Hotspot."*

WEB SURVEY COMMENT  
MONTGOMERY VILLAGE, MD

load without broadband access. One such patron from Winter Garden, Florida, explains:

I love "Google Earth" and can only access it at the library! It is not installed at my work computer and my laptop at home (with a dial-up connection) doesn't have enough processing power to run it properly. My local library even offers introductory classes on it, so I use it even more when I come into the library. I haven't yet been on "Google Moon" and "Google Ocean" but am looking forward to it!

In such cases, broadband access may not be an option because of lack of commercial coverage or because of household economizing. This patron also touches on two other common reasons for needing supplemental access: inadequate equipment or missing software and the need for help or training.

Another supplemental use happens when away from home. More than 24 percent of library public access computer users use the library's computing services while traveling out of town, whether for business or pleasure (Appendix Table 10). Many travel users reported in survey comments that public library Internet access saves them time and frustration while they are away from home because they know that no matter where they go in the United States, they can find a public library with Internet access.

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## Summary of Findings

Over **24 percent** of users **accessed the Internet while traveling**. Likely characteristics of travel users include:

- Higher income (earning more than 300 percent of the poverty guidelines);
- Latino or Hispanic origin;
- Mixed races, American Indians or Alaska Natives, and Native Hawaiians or Pacific Islanders;
- 55-74 year olds;
- Men; and
- People with grade school or education beyond a high school diploma.

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Users with incomes above 300 percent of the poverty guidelines had the highest odds of using the library Internet connections. Other characteristics of traveling library Internet users include:

- Those of Latino or Hispanic origin had higher odds of use while traveling by a factor of 1.67 compared to those of non-Latino or non-Hispanic origin. People of mixed race, American Indians or Alaska Natives, and

Native Hawaiians or Pacific Islanders had higher odds than Whites by a factor of 1.48, 1.30, and 2.29, respectively.

- 55–74 year old users had the highest odds of use during travel of all ages.
- Women had lower odds of using library computers or wireless networks to access the Internet while traveling than men by a factor of 0.88.
- Those with a grade school education or some education beyond a high school degree showed higher odds than those with a high school diploma. Those with post-graduate education had the highest odds of use during travel compared to high school graduates.

A survey respondent from Harris County, Texas, reported typical travel-related use: “When we travel, I use the computers in various away-from-home libraries for email, looking up route or attractions information, getting hotels, looking up weather forecasts, and other travel related info.” Other travel-related activities reported in survey comments included staying in touch with work, family, or friends through email or social networking sites; finding out about local events like concerts and fairs; paying bills or taking care of banking; and confirming travel reservations and printing out itineraries and boarding passes. Many survey respondents also commented that they use library computers while they are out running errands locally and need quick access for driving directions and other business addresses

Other supplemental users explained that they use library computers or wireless networks for a change in scenery or to just get out of the house. This was especially true for people who telecommute or have a home business. As one such user explains: “I normally work from home but use the library and its Internet connection as an alternative worksite if my house is not a good place to work for some reason (e.g., children home sick, Internet connection not working, water turned off).”

Some library users also use public access computers regularly during library visits for searching book reviews and read-alike lists from library resources, as well as other resources available through the Internet. One survey respondent’s comment echoes many others: “I search my friends’ [book review] lists while I’m at the library and compare it to the library’s computer catalog to find things to read. It’s been very helpful to be able to access the Internet at the library for this purpose.”

## 6.3 Occasional Users

Temporary gaps in access to computers and the Internet can result in inconveniences or even more serious consequences, especially for those who have come to rely on the Internet for conducting personal or work-related activities. One survey respondent from Conroe, Texas, shared how she and her community use the library during an emergency:

When hurricanes knock our power out, the library near me always seems to have lights and air conditioning (Texas weather). So I go and line up with the rest of the people to use email to let everyone know that we are safe and contact companies or get phone numbers off websites for things that need to be done. It gave me peace of mind that if I had not been able to get the fuel to run my generator, I probably could find a library open. Thanks for being there.

Gaps in access frequently occur because of equipment failure. Hundreds of survey respondents wrote to tell about using a library computer when their personal computer was broken. A respondent from Pima, Arizona, shared an especially compelling story about the importance of having Internet access at the public library as backup for her home computer:

My computer died suddenly. I don't have the money to fix it at the present moment. I use the Internet to keep up with support groups, financial dealings, and work-/school-related circumstances. So I am here at the library almost every day. I would not be able to prepare for the classes I will teach in the fall (Community College Level), further research my recently diagnosed mental illness (Major Depressive Disorder) and its treatments, or keep up with people from my support groups (such as DBSA, Depression, Bi-Polar Support Alliance). So my life would be a lot harder without the library's resources of computers and Internet access.

Another web survey respondent from Lincoln, Nebraska, told about the emergency that brought her and her family in to the library:

Our DSL is down at home and my children used their laptops/library computers for school work/study. Some of their work is only done using the Internet, so a connection is vital to their study (i.e., Cell Biology, Brandenburg Online study, or InstaCert.com study guides).

Transitions, as when moving to a new city, can also create gaps in access, as this web survey respondent from Madison, Wisconsin, explains:

*"I moved within the past year, and using the public library's Internet stations was very helpful during the time when I didn't have home Internet access set up yet. I paid bills online, checked my bank account, check email, set up my utilities, and fill out change of address forms."*

WEB SURVEY COMMENT  
ANNAPOLIS, MD

I was without a connection when I moved here and I teach online through a community college system. I was able to continue to teach without having to cancel course sessions while it took the phone company two weeks to establish my home Internet connection. I am grateful for my library's connection!

For people who regularly use computers and the Internet for managing daily life, the consequences of these types of gaps in access can be quite serious. They may not be able to access bank accounts, turn in timesheets for work, or complete homework assignments. This underappreciated function of the public library computing infrastructure is of critical importance for keeping life in the United States on track, no matter what the emergency.

## 6.4 Getting Technology Help and Training

Library staff and volunteers play a critical role in helping patrons learn how to use public access technology resources and to resolve problems that arise for users, no matter what their technology skill level. Much of this is done through one-on-one help offered by the trained staff in the library, though libraries have also made large investments toward providing formal technology instruction, including designing curriculums, hiring expert instructors, building and outfitting computer classrooms, and promoting these services.

### Individual Help

The study asked users whether they had received help from a library staff member or volunteer for using a computer or a wireless network: over 67 percent reported that they had obtained such assistance in the last year (Appendix Table 11).

*The study shows that **67 percent of users received help from a library staff or volunteer in using a computer or the wireless network.** In addition to the general characteristics of users discussed earlier, users asking for help are more likely to be:*

- *Earning below 300 percent of the poverty guidelines;*
- *Mixed races, Blacks or African Americans, American Indians or Alaska Natives, and Native Hawaiians or Pacific Islanders;*
- *Older (aged 75 years and older);*
- *Women; and*
- *Those who speak a language other than English at home.*

Characteristics of recipients of help from librarians and library volunteers differed across some dimensions as compared to all public access technology users:

**52 MILLION GOT HELP USING COMPUTERS FROM A LIBRARIAN OR LIBRARY VOLUNTEER**

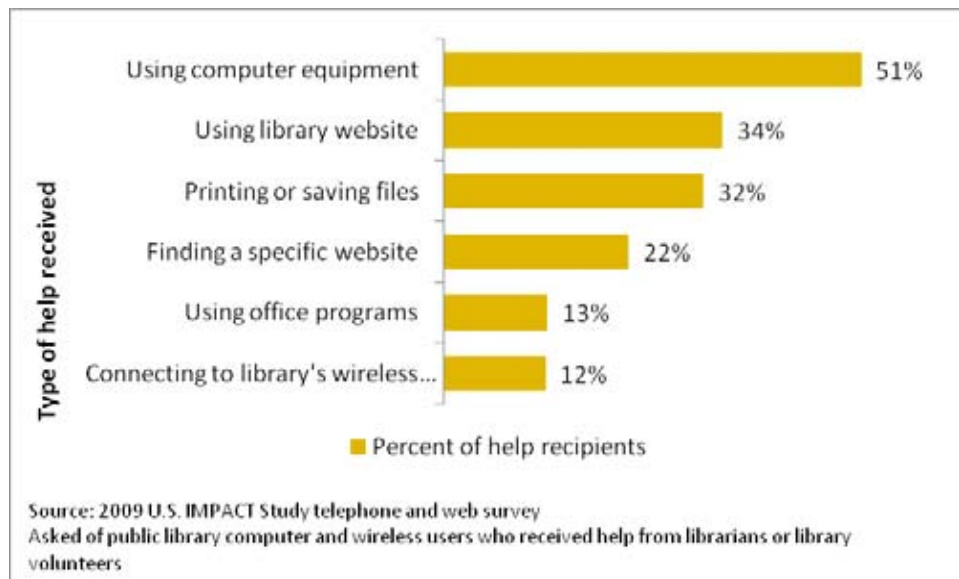
*“If you run into a problem, you can go to the help desk and they would help you, they’d walk you through step by step which is another good thing because you got hands on here. At home, if you run into a problem, who are you going to turn to?”*

JAMES  
FAYETTEVILLE, AR

- The highest odds of seeking help from librarians were from those users with income below the poverty guidelines, by a factor of 1.51 compared to those with incomes over 300 percent of the poverty guidelines.
- People of mixed race, Blacks or African Americans, American Indians or Alaska Natives, and Native Hawaiians or Pacific Islanders all had higher odds of receiving help from library staff than Whites, by a factor of 1.13, 1.86, 1.64, and 3.53, respectively.
- People aged 75 years and older had the highest odds of asking for assistance with a computer or the wireless network, with those aged 65–74 years close behind (odds ratio of 0.97 compared to those older than 75), and steadily decreasing odds as age decreased, to a ratio of 0.43 for those between the ages of 14 and 18 years compared to those older than 75).
- Women also show higher odds of asking for help, by a factor of 1.15 compared to men.
- Those speaking languages other than English in the home also had higher odds of use by a factor of 1.94 over those who speak English in the home.

As seen in Figure 5, the most frequent type of help received was for using the library’s computers (51 percent), followed by getting help finding information on the library’s website (34 percent) and getting help with printing or saving files (32 percent).

**Figure 5: Type of help received from library staff or volunteers**



**16 MILLION  
PARTICIPATE IN  
COMPUTER CLASSES  
AT A PUBLIC LIBRARY**

*“They are really friendly and helpful, like running a computer class. We know nothing about the computer, but they had patience so we ask crazy questions all day and they are happy to help us.”*

LEATHAMAE  
BALTIMORE, MD

One-on-one help offers library patrons a service hard to find elsewhere, as Jane from Fayetteville, Arkansas, explains:

I ask the reference librarian if something goes wrong or [the computer] freezes up, which is one of the main reasons why I don't have a computer and use one at home. I'm just scared of what happens when something goes wrong. Here I can just walk away and I don't have to call someone in India.

As this patron points out, the help of librarians often provides immediate relief for problems that might have delayed or prevented successful technology use. As reported by case study participants and survey respondents, oftentimes the help they need is a result of both lack of technology proficiency and a need to find information or accomplish a particular task. Librarians are on hand to provide both types of assistance, teaching patrons how to use computers and also modeling good practices for finding good sources of information or answering reference questions for many users as the helping hand that allows them to pursue instrumental tasks despite lower levels of technological skills and information literacy.

## Formal Training

Nearly 14 percent of public access technology users reported having attended a class at a public library to help them learn about using computers, software applications, or resources on the Internet (Appendix Table 12).

*The study shows that **14 percent of users received computer-related training at a public library**. In contrast to the general characteristics of users discussed earlier, users asking for help are more likely to be:*

- *Of Latino or Hispanic origin;*
- *Of races other than White;*
- *Of educational attainment below a high school degree or with a two year degree or some college;*
- *Older (aged 75 years and older);*
- *Those who speak a language other than English at home.*

Holding other characteristics constant, income levels are not a significant factor in the likelihood of public access technology users attending computer-related training in public libraries. However, the following user characteristics do have some effect:

- Those of Latino or Hispanic heritage had higher odds of taking computer classes at the library than those of non-Latino or non-Hispanic origin, by a factor of 2.31.
- People of mixed race, Blacks or African Americans, Asians, American Indians or Alaska Natives, and Native Hawaiians or Pacific Islanders all showed higher odds ratios of engaging in this activity than Whites (by factors of 1.45, 2.41, 1.23, 2.00, and 3.39, respectively).
- Those with education levels below a high school degree (grade school by a factor of 1.98 and some high school by a factor of 1.31), and those with some college (by a factor of 1.32) or a two year degree (by a factor of 1.24) had higher odds than high school graduates of taking a library computer class.
- People aged 75 years and older had the highest odds of taking computer classes at the library, with steadily decreasing odds as age decreased, to a ratio of 0.15 for those between the ages of 14 and 18 years compared to those older than 75 years.
- Those speaking languages other than English in the home also had higher odds of receiving formal training at a public library by a factor of 1.63 over those who speak English in the home.

The training offered by public libraries often complements other public service agencies by providing basic skills training that those agencies are unable to offer themselves. For example, a librarian in Baltimore’s Enoch Pratt Free Library commented on how the Veterans Administration refers its clients to the library for assistance with job searches and computer training.

A branch manager in Baltimore, Maryland, commented on the computer classes offered at the library:

They’re used by people of all ages, 18 to 80...who come in and say, “I don’t know anything about computers, can you help me?” Which is great that we have the lab here, because then we can recommend, teach classes, anything from just basic skill builders for people who have never clicked a mouse, to advanced presentation software and everything in between.... They’re always full, and they do the reservations pretty far in advance for it.

Those responding to the surveys provided insight into some of the reasons people have for taking computer classes at the library, including this comment from a parent: “My two oldest children have taken computer classes at the

library to gain knowledge about certain computer programs. I feel I am not best suited to teach these things and that a librarian would be a better resource person.”

Another respondent indicated the value of the training in order to become more proficient in the use of computers: “I needed to learn about computer programs. I've never had any computer training. This is a great resource to learn about computers.”

In Baltimore, Maryland, the Enoch Pratt Free Library director mentioned that sometimes the staff in computer labs find notes left under the computers at the end of the day saying, “Thank you, without the use of this I wouldn't have gotten an A on my paper or I wouldn't have found this job.”

Whether through the individual help that users of library computers and Internet connections receive from the library staff or the formal training offered by many libraries, users clearly find the trained staff and capable instructors offered through the public library system to be a valuable asset and a reason why public access technology in libraries is preferable to other venues that might not have staff with the same service and teaching skills that many librarians gain as part of their Master's level education or other training.. Many people taking advantage of technology training and one-on-one help in libraries indicate that they find the library and the people working there to be an important aid in helping them learn how to use computers and online resources to meet their needs.

## 6.5 Using Library Computers to Help Others

One of the common characteristics that users of public access computing in public libraries share is that they help others. Nearly two-thirds (63 percent) of users across the surveys reported that they had used a library computer or Internet connection to help friends, family members, coworkers, and even strangers (Appendix Table 13). This behavior was also reported extensively by users and commented on by library and community agency staff during our case study visits, confirming that the benefits of public access computing extend beyond the individual users to the social networks and communities of these users.

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*The study shows that nearly two-thirds, or **63 percent of users (48.6 million people)** used library computers on behalf of another person to either seek information or carry out an instrumental activity. The use of library technology for activities related to helping others is highest among:*

- *People without access to the Internet except at a public library;*
- *Lower income and impoverished people;*
- *People of mixed race, Blacks or African Americans, American Indians or Alaska Natives, Native Hawaiians or Pacific Islanders;*
- *People between the ages of 14 and 24 and 45 and 54;*
- *Women; and*
- *People who speak languages other than English in their home*

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The types of help given to others encompass all the activities users performed. There was no shortage of examples of helping others provided by case study respondents. One story about helping others came from a user in Fayetteville, Arkansas. At 28 years old, Calvin is an active information seeker on other people's behalf. He said people sometimes call him up and ask him to seek information and do things for them at the library, including buying goods such as car parts online.

Other examples include a teenage participant in a focus group in Marshalltown, Iowa, who explained how he uses the library computers to look up the prices of rubber gloves and other medical supplies for his mother who is a home health nurse. A teenage girl described looking up motorized chairs for her grandmother to get for her grandfather. April, a 52-year-old bus driver, explained that she did historical research about a friend's house. ZsaZsa, a 48-year-old woman who works full-time but is looking for a new job in Oakland, California, described how she searches for college and employment opportunities for her family and friends.

Although the U.S. IMPACT Study found that most users engaged in activities related to helping other people, certain types of users were more likely to engage in this behavior more than others (Appendix Table 13):

- Lower income users (those making less than 300 percent of the poverty threshold) have higher odds of using the library's online services for helping others than those making more than 300 percent of the poverty threshold (by a factor of 1.58 for those below the poverty threshold, decreasing to a factor of 1.28 for those making 200–300 percent of the poverty threshold).

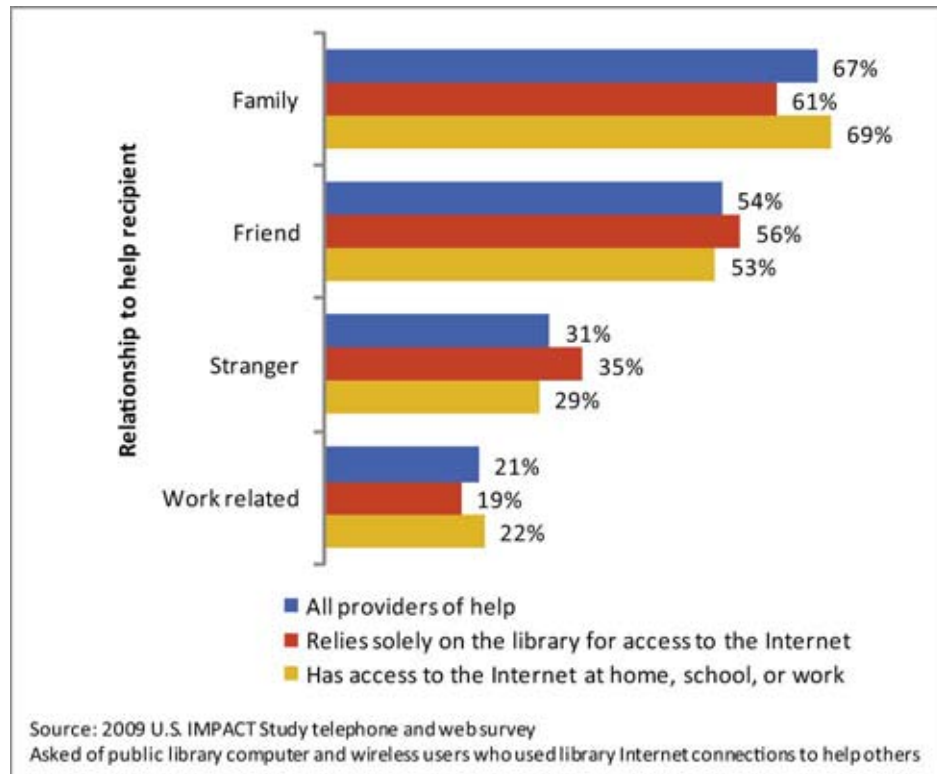
- The odds of people who are of mixed race, Blacks or African Americans, American Indians or Alaska Natives, or Native Hawaiians or Pacific Islanders were also higher (by a factor of 1.38, 1.52, 1.49, and 1.75, respectively) than Whites for using the library computers for helping other people. Asians had lower odds of engaging in this activity, by a factor of 0.79 compared to Whites.
- Respondents who spoke a language other than English in their home showed higher odds of using computers for other people by a factor of 1.30 over those who spoke English at home.

The study also found that the youngest library users had higher odds of using the computers for these purposes (14- to 18-year-olds by a factor of 1.95, and 19- to 24-year-olds by a factor of 2.21 greater than those older than 75 years). Users in the 45–54 age bracket also showed higher odds (by a factor of 2.18) of this behavior than those over 75.

Part of the high involvement of younger users reflects their higher frequency of library computer use. It may also reflect a strong impression from the case studies that younger users are more engaged with technology generally and are also more receptive to learning through the process of helping others. This finding also points positively toward the use of library computers for generating social capital. Based on the reports of help givers during case study interviews, the decline in using library computers for this purpose beginning at age 55 may reflect a shift from providing help to becoming recipients of the informational and instrumental help provided by other library computer users.

Unlike many other areas investigated in this study, women show higher odds (by a factor of 1.17) of using library computers to help others compared to men. The most frequent type of recipient of help provided by library computer users was family (67 percent), followed by friends (54 percent), and strangers (31 percent)—which study respondents described as including fellow users met at the library (Figure 6). In terms of differences in the likelihood of helping certain kinds of people between people who do not have and who do have alternative Internet access, the only significant differences were with family and strangers. For helping family members, people with alternative access were more likely to help family than those without alternative access (69 percent compared to 61 percent). For helping strangers, people without alternative access to the Internet were more likely to help strangers (35 percent compared to 29 percent).

**Figure 6: Relationship of helper to help recipient**



Although further research is needed to understand the implications and root motivations for the differences observed in helping behavior between people who rely on public libraries for all computer and Internet needs and others, a possible explanation for why users without alternative access are more inclined to help strangers is that they spend more time around strangers in libraries, which encourages the development of a different kind of helping culture.

Another reason why people with less access to technology are more likely to help others is because they have greater opportunity to do so. More helping individuals use library computers daily (27 percent) or at least once a week (28 percent), as compared to non-helpers (14 percent and 16 percent, respectively). Wireless users who helped others likewise used libraries for access to the Internet more frequently than those whose use is only for themselves, though the difference in frequency of use between helpers and others was not as great as those who use library computer terminals to access the Internet. During field visits, wireless network users were observed using their laptops in many locations throughout the libraries, whereas those using library computers are usually clustered in one or two designated areas; the difference in physical proximity to others during use may explain some of the lower incidence of wireless users helping other as many computer terminal users interviewed described helping strangers in adjacent areas.

**Table 6: Frequency of public access technology use by network type and helping status**

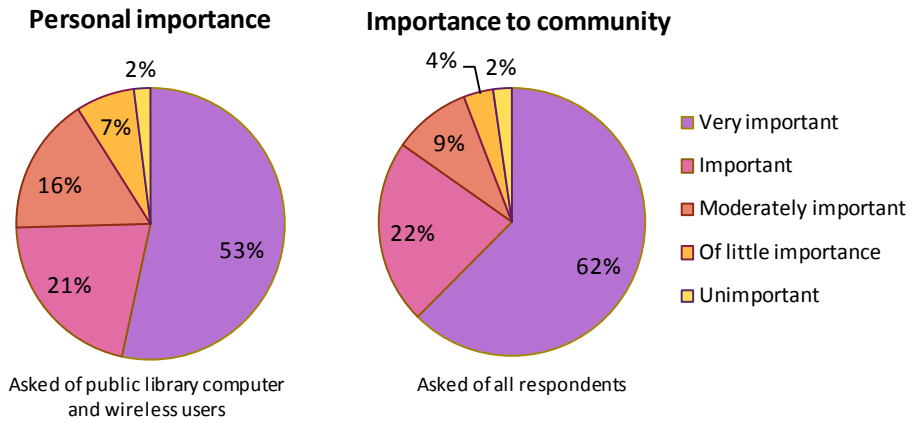
Frequency of use	Computer Users		Wireless Network Users	
	Helped others	Used for self only	Helped others	Used for self only
Every day or most days	27%	14%	17%	14%
At least once a week	28%	16%	22%	16%
About 1–3 times a month	20%	20%	22%	23%
Several times a year	17%	27%	27%	28%
About once a year	8%	23%	13%	20%

Although the phenomenon of people seeking information on behalf of others has been reported in other studies, the U.S. IMPACT Study is the first national examination yielding findings to indicate its extent in public access technology users. This research reveals additional depth to the ways that individuals assist others, in ways that make meaningful differences to people’s lives. By identifying users who have capacity for using library computers on behalf of others, and facilitating their behavior through training and access, greater impacts may be attained across communities.

## 6.6 Importance of Technology Access in Public Libraries

The U.S. IMPACT Study asked respondents to the telephone and web survey questions regarding “how important are the library’s computers and Internet connections to you personally?”; and “how important is to you that others in your community have access to the library computers and Internet connections?” Responses to both questions were assessed on a five-point Likert scale ranging from very important to unimportant. To both questions, the majority of respondents answered highly favorably that computer and Internet access was important or very important: 74 percent for personal importance and 84 percent for community importance (Figure 19). The community importance question was also asked of non-user respondents, which indicates the broad-based support for library computer and Internet access across the full population.

**Figure 7: Perceptions of personal and community importance of public library computers and Internet access**



Source: 2009 U.S. IMPACT Study telephone and web survey

Respondents to the web and telephone surveys repeatedly emphasized their gratitude to their local library staff for outstanding service and the ways their lives were enhanced, both personally and professionally. People stressed the financial, educational, and social benefits (in particular) of having free access to computers and the Internet at their local public library. Just a few of the indicative thousands of remarks included:

The public library and all of its services and programs are vital to my community. Every staff member that I have had personal dealings with is personable, knowledgeable, and fantastically helpful!

This library gives me a valuable free tool to help me maintain my life and stay in touch with the world outside of my state.

I use the computer to check email, do research, and recently, for looking for a new job. It is a quiet and productive atmosphere and allows me to get a lot accomplished in a short period of time. I sincerely appreciate that the library system allows this usage and am very thankful!

I love the library—the library web page is my home page.

I volunteer my time to maintain and design several web sites, so I do site management online; I answer emails for a nonprofit agency; the library and the Internet are invaluable for research opportunities; I adore my local library and its staff! The library is the most fantastic place!

Participants in the case studies also elaborated on the value of public access computing to individuals, families and communities. Chloe, a 50-year-old unemployed user who has been living in homeless shelters in Baltimore, Maryland remarked, “A lot of people can’t afford computers at home, like me, and this is so great that they do this and assist you with all the help you need.” Asked what difference the computers make to his life, 44-year-old recently unemployed Ewan replied, “Just about everything, I would’ve never had access to email. I would’ve never been able to do a job search. The library is essential.” Zahara, an unemployed young mother of two who was seeking a job and parenting information online the day of her interview, explained “It helps me a lot. Since the recession I can’t really go anywhere else because I have her [the child], so it’s really good and convenient to be able to go the library.”

In Fayetteville, Arkansas, 60-year-old retiree Carl valued using the computers for free and the security provided. He elaborated: “I looked into it quite extensively. I wanted to trade online and the security issues are fairly sophisticated to keep yourself from hackers. There’re professionals here that do nothing but keep track of that. I’ve never had any trouble so I think I made the right decision.” Youth who were interviewed in the focus groups commented on the value of the variety of their uses: in addition to using the computers for homework and research, they also considered the social interaction they experienced with their friends (in the library and online) and the opportunity to pick up fiction materials as strong pluses. Their parents, they sometimes commented, viewed the library setting as important for safety factors.

Staff of the case study libraries and local community agencies and government also provided rich insights into the public value of library computer and Internet access. These perspectives will be discussed in-depth in the second report of the U.S. IMPACT Study, so the following remarks reflect consensus about the broad-based nature of public library computer users and how their interaction in the library setting creates an ambience that can promote sharing and opportunity.

In Baltimore, Maryland, Dr. Carla Hayden, Director of the Enoch Pratt Free Public Library, explained:

You can stand next to a person that's homeless and then on the other side there could be a teacher. Standing in a row together, you have all these different people. The common part is using technology as a tool. I think that's what makes it a different experience. It's a commons of people coming together. Sometimes you will see people reaching over or helping somebody, things like that, casually.

The director of the Oakland Public Library, Carmen Martinez, discussed the importance of their computer services to users across the system:

In Oakland there is an enormous division between the haves and the have-nots and we know that many of our citizens do not have and may never have a computer with Internet access in their homes. In previous surveys, we discovered that about one quarter of the respondents have indicated that the library provides their only access to computers and the Internet. That rate can grow for immigrant residents, the disabled, and for those with income under \$40,000 annually. You could fill a whole library with 300 public access computers and it still wouldn't be enough.

The impact of a local branch was described by a staff person of a nonprofit health agency located in a social service mall in Oakland, California; she said, "A lot of kids come here and hang out at the library. The whole mall is a social services facility, and I've never seen kids hang out the way they do. They come straight to the library; they hang out and get on the Internet. When I first started, I thought maybe they had a school in here but they didn't, it was a library."

In the following sections, the importance of free access to computers and the Internet to individuals, families, and communities is discussed in-depth with regard to specific use activities. Although people use their library computer resources in different ways and to different effects, the common denominator across the vast majority of users is that the service is a linchpin in the social fabric of American communities and the backbone in the everyday lives of many people.

# 7 Uses of Public Library Internet Connections

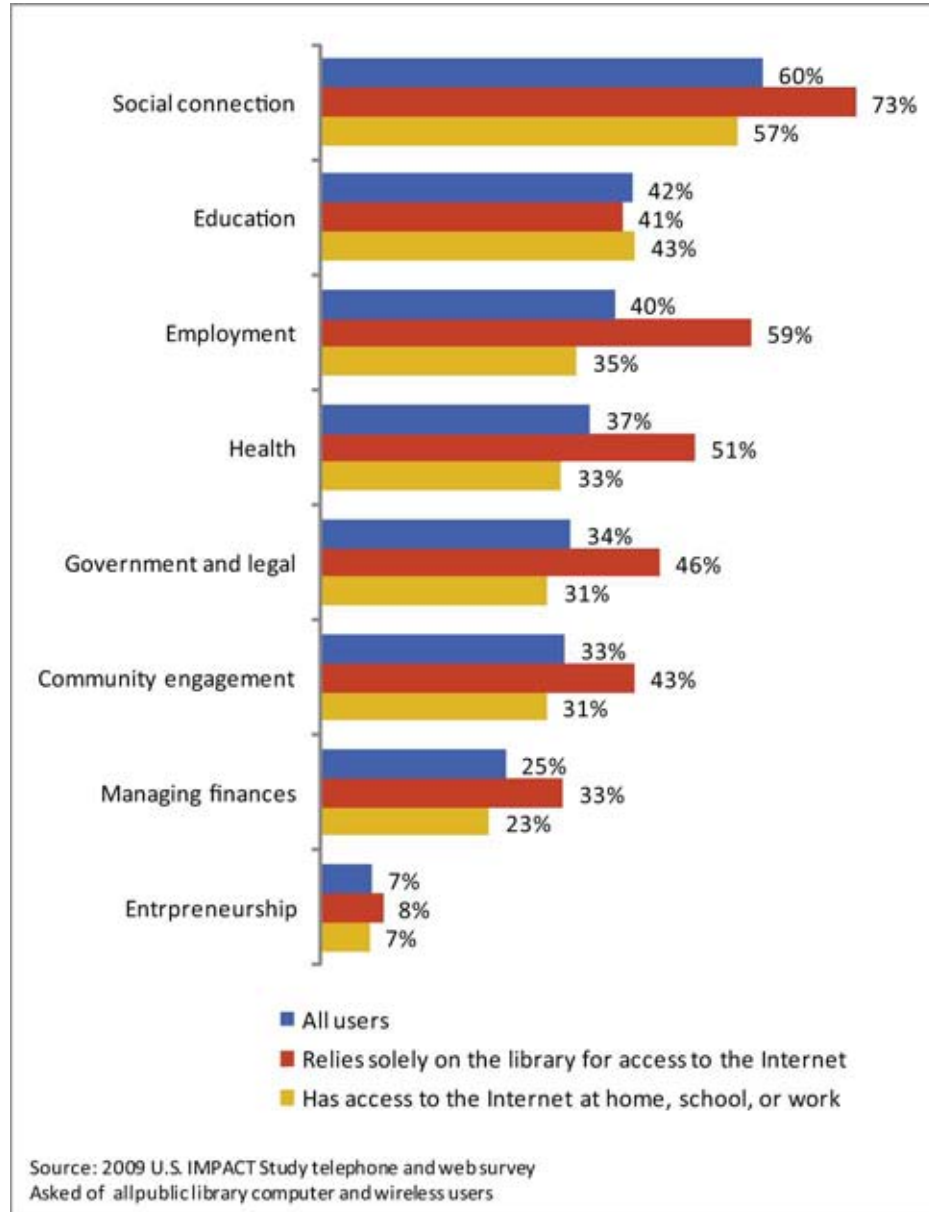
Computers and Internet access in public libraries have become an expected service to patrons and fulfills many purposes. Interview participants and survey respondents were asked about their use of library computers and wireless networks to pursue activities in seven use areas, which were defined as follows:

- **Education:** Interacting with services related to education, including K–12, colleges or universities, continuing education, and pursuit of learning for personal enrichment.
- **Employment and entrepreneurship:** Seeking work and gaining job-related skills or other activities related to maintaining employment, or to engaging in business or self-employment activities.
- **Health and wellness:** Seeking information or accessing services related to individual or family health care.
- **Government and legal services:** Accessing online government services and retrieving information and assistance for legal and regulatory questions.
- **Community engagement:** Identifying and addressing issues of public concern, including efforts to work with others in a community to solve problems or interact with the institutions of representative democracy.
- **Managing finances:** Buying and selling goods and/or services using the Internet; managing household financial matters.
- **Social connection:** Pursuing personal or socially meaningful ends including connecting with family and friends, finding support for an issue or problem, and enjoying other social activities such as watching videos, pursuing hobbies, or maintaining blogs and personal websites.

Use of library technology across the seven activity areas varied considerably, ranging from a maximum of 60% of users engaged in social activities to just 7% engaging in entrepreneurial activities (Figure 8). Users who rely solely on the library for their access to computers and the Internet show consistently higher use in all domains compared with those users who have alternative access elsewhere, with the exception of education and entrepreneurship, where use by both groups of users is nearly equal. These differences will be discussed further

in each of the sections related to characteristics of users and use within the different areas.

**Figure 8: Ranking of use areas by availability of alternative access users**



In the course of this study, interview subjects and survey respondents were asked about their use of library computers and Internet connections to pursue these and other specific activities in their daily lives in order to better understand the effect this public resource has on the well-being of individuals, families, and communities. The survey questions provided valuable information about the extent of certain types of computer use associated with high-value outcomes. The questions also tested the value of these activities as indicators

for measuring and evaluating the impact of library computer services and resources. The findings from the survey are validated and illuminated by interview respondents who provide more nuanced examples of the specific uses, as well as a better sense of how users benefit from these uses.

In addition to asking users about their behavior during case study visits, library staff, board members, volunteers, and community service providers provided their impressions of what library computer users are doing and the benefits that may have accrued to the community at-large as a result of that use. In some instances, these ways are very purposeful, for example, as the result of organized actions around supporting literacy or homeless people; in other examples, they are more nuanced and emerge due to the strong sense of community abetted by the library's leadership role.

The following sections will examine specific activities associated with use in the areas described previously, with discussion of the user characteristics most prominently associated with each activity.

## 7.1 Education

*A central mandate of public libraries has been to support the life-long learning of all members of their communities, from infants at story-time, to preschoolers learning early-literacy, children at elementary levels, older children through high school, and adults through vocational, college, and change in career.*

*The use of library computers to help gain knowledge and interact with services related to early childhood education, K–12, colleges or universities, graduate schools, adult education, and continuing education was the second highest reported use for library computer users, both youth and adult, with 42 percent of the respondents indicating that they had engaged in educational activities.*

*From providing a place to do homework to applying to college or looking for financial aid, library online services are a key part of the educational system in our country.*

---

Libraries have become an important part of the educational system in the United States, particularly through their computer and Internet services; in addition to allowing users access to the educational system online, they provide individual work stations, specialized classes, one-on-one training, and coordinated efforts with other groups in support of educational activities. In this section, we discuss the role of library computer services with regard to

education and life-long learning from the perspectives of the users, library staff, and community providers across the full educational spectrum.

The study asked about activities in the following areas:

- **College enrollment and financial aid**, including learning about programs, applying to programs, and getting financial support; and
- **Managing schoolwork**, such as completing online classes and assignments, and using library computers for homework.

Following an overview of high-use educational activities and user characteristics, this section presents detailed findings in these two activity areas along with comments and insights from interview participants.

## Most Prevalent Users for Education

Access to library technology can make a big difference in educational outcomes, especially for young people. The principal of an inner city private preparatory academy in Oakland, California, attributed his school's outstanding success in part to the local library, saying:

One hundred percent of our graduates are accepted to college...We work with largely disadvantaged and at-risk youth, and they don't have computers at home, so they come here to the library. They [the students] get support here. The librarians help them attain the online and print materials they need.

Over 42 percent of public library computer users engaged in at least one of the educational activities asked about in the study in the past year (Appendix Table 14). Of educational users, 47 percent used library computers to help a relative, friend, or someone else with their educational needs (Appendix Table 15).

**36 MILLION USE  
LIBRARY COMPUTERS  
FOR EDUCATION OR  
LEARNING**

*“Before I got my own computer, I had to go to the library to look up information online to help with homework and research projects. The Internet service at my library is very helpful. I don't know how I would have gotten my homework done without it!”*

WEB SURVEY COMMENT  
SOUTH BEND, IN

## Overall Educational Use

*Over 42 percent of library technology users engaged in activities related to education.*

*Over 47 percent of these users indicated that they had undertaken educational activities on behalf of others.*

*Educational use of library computer services is highest among library computer users with the following characteristics:*

- *Lower income and impoverished people;*
- *People of mixed race, Blacks or African Americans, American Indians or Alaska Natives, and Native Hawaiians or Pacific Islanders;*
- *14–24 year olds;*
- *Women; and*
- *People who speak a language other than English in their homes.*

Users with incomes below the poverty guidelines had higher odds of using the library computers for educational purposes by a factor of 1.55 over those whose income exceeded 300 percent of the poverty guidelines. In addition to differences in the likelihood of use in this area attributable to income levels, the following user characteristics also had some influence in educational use:

- People of mixed race, Blacks or African Americans, American Indians or Alaska Natives, and Native Hawaiians or Pacific Islanders had higher odds (by a factor of 1.60, 1.84, 1.27, and 3.22, respectively) than Whites for this type of use. Asians had lower odds of engaging in educational activities than Whites by a factor of 0.82.
- Youth had the highest odds of being users for educational activities, by a factor of 8.17 for 14–18 year olds and 2.51 for 19–24 year olds over those with ages greater than 75 years.

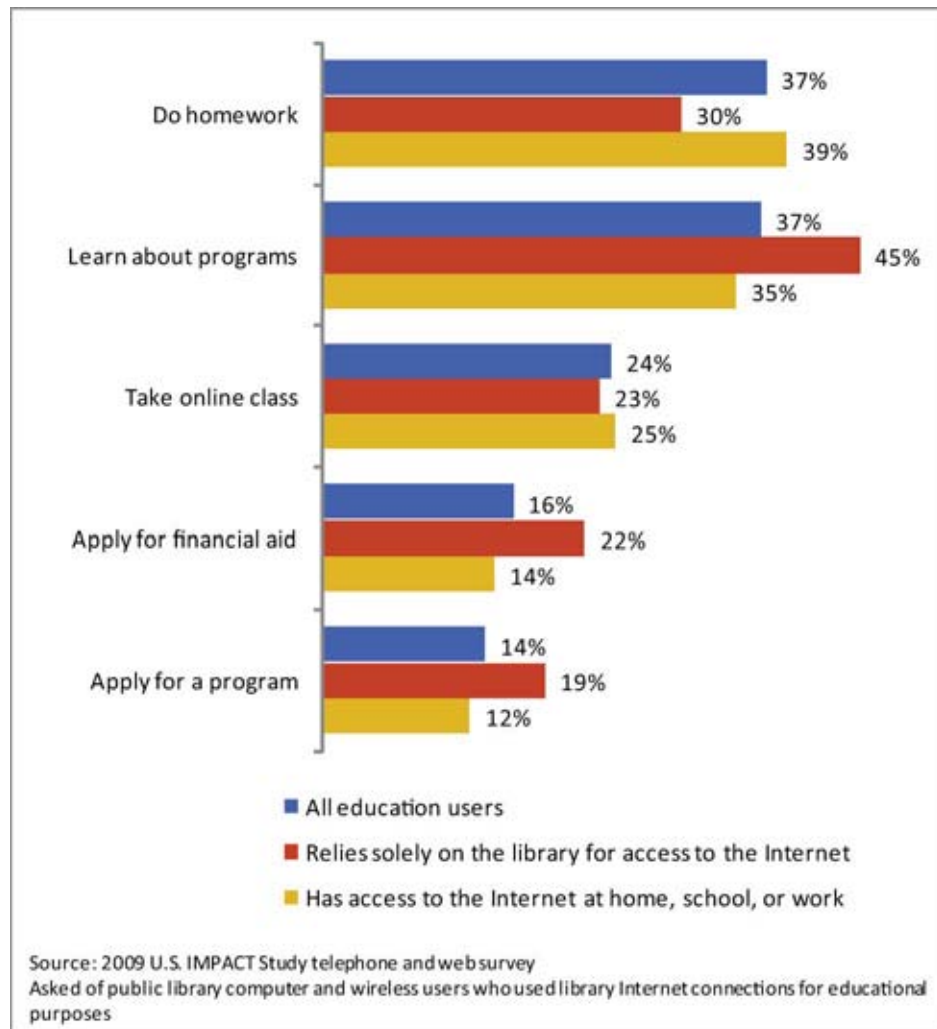
Given the importance of education in the younger years, this points out how critical libraries can be for youth who are trying to advance their educational goals.

Unlike many other uses explored in this study, women had higher odds by a factor of 1.38 over men of being users for educational purposes, which is consistent with reports of higher percentages of women enrolled in college than men (U.S. Census 2008). People who spoke a language other than English at home, an indication of immigrant households, had higher odds by a factor of 1.92 over those speaking only English at home of using the library for educational activities.

## Activities Associated with Educational Use

As seen in Figure 9, homework and learning about educational programs were the most frequently reported educational use of activities in the use area survey respondents were questioned about. The difference in use between those who have alternative access outside the library and those who rely upon the library for their only access is also shown in Figure 9, with two areas showing heavier use by those with alternative means for accessing the Internet: doing homework and taking online classes.

**Figure 9: Educational activities by availability of alternative access**



Interviews with users provided some insights into why people might be using the library even if they have other access for these purposes. One reason given was the competition for computer time at school labs between students and at home between siblings and, oftentimes, parents. The convenience of the library's location in relation to schools was also a factor mentioned during focus

groups with youth. Osher, a young student from Fayetteville, Arkansas, whose home Internet connection is unreliable, explained,

I live sort of far away; it takes me like a half hour to get home. So lots of times I'll come here and use the computers to type things for school projects.... Sometimes it's much easier for me to come here if I have something in the evening than go all the way back home.

Another reason for higher use by people with alternative technology access was the availability of peripheral services provided by the library. Saba, who is another young user (age 22) in Fayetteville, Arkansas, gave an example. A power user who relies on access to library computers to search for information about her several medical conditions as well as job searching and reconnecting her family, Saba is also a college student and the library's lab is where she completes all her work:

I type and print [my assignments] here; I have to write them by hand, and then I have to type them. I use the computer lab at school sometimes, but not too often because it's always so packed because of all the other students in there. I would rather come here because it's not as crowded.

A third reason offered for using the library computers for educational purposes was proctored exams. As explained by a librarian in Oakland, California,

I helped somebody last week; he used the computer to take an online proctored exam, which, again, you can't do from home because you have to have somebody else proctoring you, even if you're on the computer. So I think there's a place for libraries to do that, because you have the staff.

Exam proctoring is a necessary component of many online programs whose students are often located far from the college. Public libraries are one of the few locations online learners can find both the computers and qualified proctors they need to complete exams and other coursework.

### *College Enrollment and Financial Aid*

The process of applying for college and other educational opportunities and obtaining financial aid has moved online along with many other educational activities in recent years. Without access to the Internet, entry to the higher educational system can be a tedious and difficult, sometimes impossible, process. Libraries provide an important role in providing educational opportunities for many people in this area.

## Learning about Programs

A first step in meeting educational needs for many users is learning about a program of study—almost 37 percent of library computer users who engaged in educational activities indicated that they used library computer resources to look for information on educational programs ranging from GEDs to graduate degrees (Appendix Table 16).

*Almost **37 percent of users** who engaged in educational activities used their library's online services to **learn about educational programs**.*

*Among all users of library computer resources, this activity is highest among*

- *People with incomes below the poverty guidelines;*
- *Those of mixed race, Blacks or African Americans, American Indians or Alaska Natives, and Native Hawaiians or Pacific Islanders;*
- *People between the ages of 14 and 34 years;*
- *Those with education levels more than a high school diploma; and*
- *People who speak a language other than English at home.*

Among all users, those with incomes below the poverty guidelines had higher odds of using library computers to look for information on educational programs by a factor of 1.76 over those with incomes 300 percent or greater than the poverty guidelines. Users with income between 100 and 300 percent of the poverty guidelines likewise had greater odds of looking for educational programs than those with income above the guidelines, but the odds ratios of those between 100 and 300 percent of the poverty guidelines were still lower than for those in poverty. Other factors with significant differences in likelihood of library use for this purpose are:

- People of mixed race, Blacks or African Americans, American Indians or Alaska Natives, and Native Hawaiians or Pacific Islanders likewise had higher odds of use for this purpose (by a factor of 1.97, 2.16, 2.04, and 3.57, respectively) than Whites for this type of use. The odds of Asians using library computers for learning about educational programs was lower than Whites by 12 percent.
- Looking at age, 14–18 year olds, 19–24 year olds, and 25–34 year olds showing highest odds of use for learning about degree programs compared to users over the age of 75 (by a factor of 3.17, 5.11, and 3.15, respectively).
- Those with an education beyond high school showed higher odds of using the library for this purpose than those with just a high school

diploma, with those having a two-year degree showing the highest odds of use for learning about educational programs (by a factor of 1.64).

- Those who speak a language other than English at home showed higher odds by a factor of 2.15 of using the library online resources for this purpose over those whose home language was English.

Finding a degree program that fits the needs of individual learners involves many considerations: location, admissions requirements, program content, and cost, just to name a few. The complexity of searching for a school was explained by a user from the Baltimore, Maryland, library considering enrolling in a doctoral program. Josephine, a 40-year-old, college-educated writer who has a computer at home but no Internet access, recalled her lengthy search that spanned many public access computer sessions:

There was just different information I needed. I had to go and see what schools were available, what course offerings they had. And for other schools I was researching on my own, I'd look up financial aid information, open house information. And then, of course, there are schools that are online schools; there's just a whole list of them.

Nelson, a 20-year-old unemployed user from the Marshalltown, Iowa, library, provides another example of looking for an educational program to fit his needs. He explained: "I just got out of high school last year, so I'm looking to go to college—somewhere that can do online classes, because I don't want to leave town. I love the Internet and doing stuff."

Searching for college often starts in high school when many young library patrons take advantage of the library computer services to look for college information. Oceana, a 15-year-old participant in an Oakland, California, focus group, competes—usually unsuccessfully—with her brother to use their home computer that currently does not have Internet access. An active user of library recommended sites for researching her homework and of social networking sites, Oceana is very keen on going to college. She described getting started with her college search:

I use [the computer] to look at college information, even though I'm still in high school. I'm trying to figure out what I want to major in at college, so I look it up and see what interests me. I look for interesting stuff... I was thinking Yale but financially I might not be able to afford that.

That Oceana used the public library to initiate her college search reflects the vital role played by libraries in helping youth identify colleges to which they are interested in applying, especially in the context of declining availability of

guidance counselors in high schools. This shift in responsibility for providing information about attending college was discussed by a librarian in Oakland, California:

Our kids are already behind the rest of the nation, and our kids are already not going to college or don't know how to take the steps to go to college because the other thing our schools are losing are the guidance counselors. So they come here for that information, and our teen librarians are providing resource lists for our teens of that kind of information that they're no longer getting at the schools or through guidance counselors.

In all these examples, and many more heard from library technology users and librarians, the library's online resources and supporting staff provide an important resource for those looking for opportunities to continue their learning beyond high school through formal educational programs. Without this access, many would be hard pressed to find the information they need to pursue their educational goals and better their lives.

## Applying to Programs

The study found that roughly 14 percent of public access technology educational users applied to a college degree or vocational certificate program (Appendix Table 17). Of adult applicants, 64 percent were accepted into a program (Appendix Table 18).

**Nearly 14 percent of educational users applied to college or certificate programs.**

*Among all users, this activity is highest among those with the following characteristics:*

- *People with incomes below the poverty guidelines;*
- *Those of Latino or Hispanic origin;*
- *Those of mixed race, Blacks or African Americans, American Indians or Alaska Natives, and Native Hawaiians or Pacific Islanders;*
- *People between the ages of 19 and 34 years; and*
- *People who speak a language other than English at home.*

**→Outcome:**

- **Over 64 percent of adult applicants (ages 19 years and older) were admitted to a college or certificate program after applying using library computers.**

Users with household incomes below the poverty guidelines had the highest odds of using library computers to apply to college or certificate programs by a factor of 2.05 greater than those with incomes 300 percent or greater than the poverty guidelines. Income levels between 100 and 300 percent of the poverty

guidelines also had greater odds of looking for educational programs compared with users earning above 300 percent of the guidelines, though the difference was less than for those in poverty. Similar to other activities, certain types of users were more likely to use library computers for this purpose:

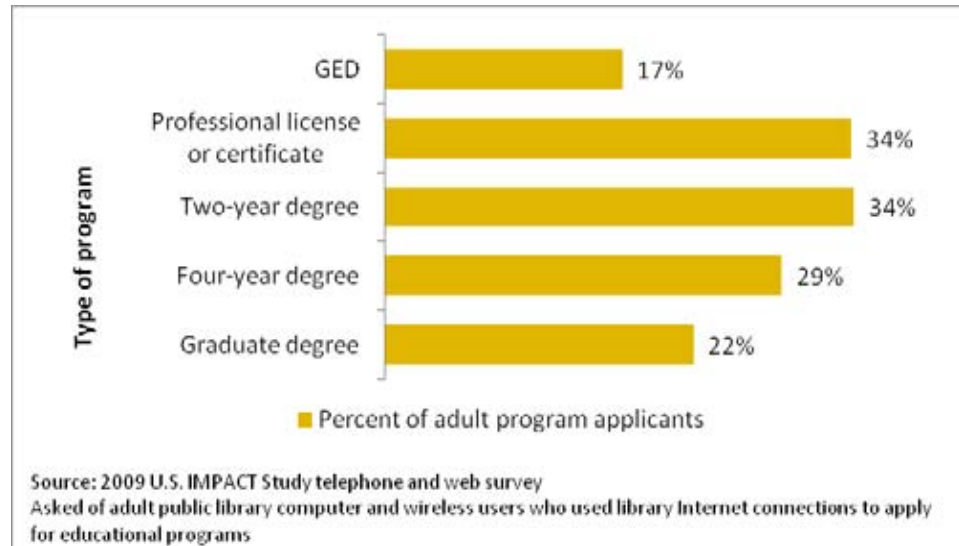
- People of Latino or Hispanic origin had higher odds by a factor of 1.76 than those of non-Latino or non-Hispanic origin. Users of mixed race, Blacks or African Americans, American Indians or Alaska Natives, and Native Hawaiians or Pacific Islanders had higher odds (by a factor of 1.91, 3.56, 2.81, and 2.76, respectively) than Whites for this type of use. The odds of Asians applying for programs using library computers were nearly the same as those for Whites.
- By age group, 19–24 year old and 25–34 year old users show higher odds of applying to programs than other age categories when compared to those over the age of 75 (by a factor of 6.37 and 5.31, respectively).
- Those who speak a language other than English at home showed higher odds by a factor of 2.09 of using the library online resources for this purpose than those whose home language was English.

A staff person with the Head Start agency in Oakland, California, explains how the Oakland Public Library provides assistance to their clients in applying for college through its computer and Internet services:

A part of what we do is family partnership, and the parents do let us know what their goals are, and part of the job of the family advocate is to help them move toward their goals... We send them down there [Oakland Public Library] to go online, and teach them to go online and send their applications through and get the information they need.

As seen in Figure 10, vocational programs were the most frequent type of program applied to by adult learners. Chloe, a 50-year-old high school graduate from Baltimore, was one such user. Currently homeless, Chloe had been frustrated in her ability to find work because she lacked an email address—she explained, “See, the jobs I used to get, you didn’t need an email account for.” During her first visit to the library computer center, a librarian helped her set up an email account which she immediately began to use to send out job applications. Chloe eventually decided to pursue formal vocational education and used the library’s computers to find a nursing program: “I looked it up last November for nursing on the Internet here, they told me everything, gave me the phone number; I called down there and started the school in November.”

**Figure 10: Types of educational programs applied to by adults**



Because many programs now require or encourage online applications, this is a critical activity related to education, particularly for those with limited or no access to online services elsewhere.

### Getting Financial Aid

The complexity of finding a program increases when facing the need for financial aid, scholarships, child care, and other economic needs. The study found that, of educational users, 16 percent also used library computers to apply for financial aid (Appendix Table 19), with 51 percent of adult (ages 19 years and older) financial aid applicants actually receiving it (Appendix Table 20).

*Over 16 percent of education users applied for financial aid using their library's online resources.*

*Of users overall, those most likely to engage in this activity were:*

- *People with incomes below the poverty guidelines;*
- *Those of Latino or Hispanic origin;*
- *Those of mixed race, Blacks or African Americans, American Indians or Alaska Natives, and Native Hawaiians or Pacific Islanders;*
- *People between the ages of 19 and 24 years; and*
- *People who speak a language other than English at home.*

**→Outcome:**

- *Over 51 percent of adult users (age 19 and older) who sought financial aid through the library computers, actually **received funding.***

**5 MILLION USE A  
LIBRARY COMPUTER  
TO APPLY FOR  
FINANCIAL AID**

**2.5 MILLION RECEIVE  
AID TO HELP PAY FOR  
COLLEGE**

Users with household incomes below the poverty guidelines had much higher odds of using library computers to apply for financial aid, by a factor of 4.09 greater than those with incomes 300 percent or higher than the poverty guidelines. Users with income of 100 to 200 percent and 200 to 300 percent of the guidelines also had higher odds of using library computers for this purpose than users earning above 300 percent (by a factor of 2.62 and 1.47, respectively). Other user characteristics consistent with higher use of library computers for financial aid needs include:

- People of Latino or Hispanic origin had higher odds by a factor of 1.76 than those of non-Latino or non-Hispanic origin. Those of mixed race, Blacks or African Americans, American Indians or Alaska Natives, and Native Hawaiians or Pacific Islanders had higher odds (by a factor of 2.00, 2.69, 1.93, and 1.88, respectively) than Whites for this type of use. The odds of Asian users applying for financial aid using library computers were essentially equal to that of Whites.
- The odds of 19–24 year olds applying for financial aid were much higher than all other age groups. This reflects the likelihood of younger people applying for colleges and other post high school educational opportunities.
- People who speak a language other than English at home showed higher odds by a factor of 2.11 of using the library online resources for this purpose than those whose home language was English.

Applying for financial aid can be a daunting experience for prospective students and, oftentimes, for parents as well. In Marshalltown, Iowa, a librarian described the use of library computers to apply for grants and student loans:

It's the financial aid form. F-A-F-S-A. A federal student aid package. You have to fill it out online. Back in my day you did it with paper and pencil, but now they have to be filled out online. We've had parents come who don't know how to use the computer but they say "Help me, help me, I have to do this!" Many times the high school graduating senior and the parent are sitting there working on that together.

In addition to federal aid, many private scholarships and loan programs also require or encourage online applications, making access to the Internet a necessary requirement for those seeking financial help with their educations. Again, libraries provide a lifeline for those with limited or no access elsewhere, but also provide professional assistance to parents who might be less comfortable with computers and the Internet than their children.

12 MILLION  
COMPLETE  
COURSEWORK  
FOR A CLASS

*"I come to the library to do work that requires concentration, work that I cannot do at home with three children running around. I go to the library to do work for my classes and also for work that I was unable to complete at the office. I completed much of my dissertation at the public library!"*

WEB SURVEY COMMENT  
WESTMINSTER, MD

## Managing Schoolwork

Once people are admitted into programs, use of library computer resources to support educational goals continues, both through the direct use of the library's computers and wireless Internet connections to take classes and complete assignments, as well as using other library resources to help with the completion of homework and track progress in school. Many parents use the library as a way to help their children with these tasks as well as taking advantage of the computers for their own educational needs.

## Online Classes and Assignments

Library computers were used for completion of online classes or assignments by over 24 percent of users who use library computers for educational purposes (Appendix Table 21).

**Over 24 percent of educational users did an online assignment or took an online class using the library's computer resources.**

*Library technology users most likely to engage in this activity were:*

- People with incomes below the poverty guidelines;
- Those of Latino or Hispanic origin;
- Those of mixed race, Blacks or African Americans, Asians, American Indians or Alaska Natives, and Native Hawaiians or Pacific Islanders; and
- People between the ages of 14 and 24 years; and
- Users with educations at the level of grade school or some high school.

Of all users, those with household incomes below the poverty guidelines had higher odds of using the library for this purpose, by a factor of 1.76 greater than those with incomes 300 percent or higher than the poverty guidelines. Users with income between 100 and 300 percent of the poverty guidelines also had greater odds of using library computers for doing online classes or completing online assignments than those with income above 300 percent of the guidelines, but the odds ratios were lower than for impoverished users. Other user characteristics that are consistent with higher use in this area are:

- Latinos or Hispanics had higher odds by a factor of 1.79 of engaging in online learning activities than those of non-Latino or non-Hispanic origin. People of mixed race, Blacks or African Americans, Asians, American Indians or Alaska Natives, and Native Hawaiians or Pacific Islanders also had higher odds (by a factor of 2.25, 1.46, 1.86, 1.91, and 2.79, respectively) than Whites.

- The odds of 14–18 year olds and 19–24 year olds using library computers for online assignments or classes are greater than all other age groups.
- Users reporting educational attainment at the grade school level or who had some high school had higher odds of using the library for this purpose than those with a high school diploma by a factor of 2.05 and 2.12, respectively. Some of these users are currently enrolled in junior high or high school.

Many adult users appreciate the benefits of library technology for allowing them to participate in online educational programs. Joseph, the 43-year-old power user from Oakland, California, introduced in Section 6.1, saves time commuting to school by using library computers: “I take an online computer course from San Francisco. I don’t have to go over to San Francisco, I can do it right here in Oakland.” Abe, a 53-year-old supplemental user also from Oakland explained: “I go to a school where half of the courses are online, so then I’m doing either the online courses themselves or documents to support that.”

Though Abe has Internet access at home, he usually uses a public library wireless Internet connection once or twice a week on his own laptop to do his homework because he finds the library less distracting than working from home and also because he can find books and magazines to support his classes. He goes on to explain:

It definitely helps me with the studying. It helps me with the communication with some other people, because I’m less distracted that I would be at another location. So it’s not so much that I’m doing something like solving cancer or something like that by being here, but I’ve been more productive in certain things that I’ve done than if I had did it from another location... if I’m reading a course and they say, see if you can find a copy of a Warren Buffet book or something like that and I can be at the library and find a copy of a Warren Buffet book that wouldn’t have been available on the Internet and obviously wouldn’t be available if I was sitting at home.

A staff member from an Oakland business near the library described the use of the library computing resources for her own online learning:

With me going to school on the Internet, it’s important to have [the computers] here near where I work. I’m doing online education for medical office assistant. The other staff use the computers here too.

Online degree programs, classes, and workshops have become a major delivery mode for education at all levels. Like the learners discussed in this section, library computers are an important resource to enable people without access to computers and the Internet to take advantage of the increasing numbers of educational opportunities offered online. Many libraries also provide exam proctors and other online resources that are important for all online learners, regardless of the availability of computers and the Internet elsewhere.

## Using Library Computers for Homework

The study found that, of educational users, 37 percent of the users use library computers to do homework for classes (Appendix Table 22).

*The study found that **37 percent of educational users did homework** for a class using library computers and Internet connections.*

*Overall, those users most likely to engage in this activity were:*

- *Those with incomes below the poverty guidelines;*
- *Those of mixed race, Blacks or African Americans, American Indians or Alaska Natives, and Native Hawaiians or Pacific Islanders;*
- *Youth aged 14–18 years;*
- *Women;*
- *Those with a grade school education, some college, or a two year degree; and*
- *Those who speak a language other than English at home.*

As in other activities related to education, users with household incomes below the poverty guidelines had higher odds of using library computers to do homework, by a factor of 1.78 greater than those with incomes 300 percent or higher than the poverty guidelines. Users with income between 100 and 300 percent of the guidelines also had higher odds of using library computers for this purpose than those earning higher incomes, though the odds ratios are lower than for users with poverty level income. Other differences in characteristics of users for this activity include:

- Those of mixed race, Blacks or African Americans, American Indians or Alaska Natives, and Native Hawaiians or Pacific Islanders had higher odds (by a factor of 1.77, 1.73, 1.57, and 2.11, respectively) than Whites for this type of use.
- Compared with users over the age of 75, all users except those 65-74 years old had higher odds of using library computers for doing homework. The odds of using library computers for homework are highest for 14–18 year olds, followed by those for 19–24 year olds; the odds for this type of use continue to decline with increasing age.

- Doing homework is also the primary educational activity that shows women having a higher odds ratio of use than men (by a factor of 1.25); this is likely a reflection of the higher percent of women enrolled in college compared to men.
- Compared to users with a high school diploma or GED, users with grade school, some college or a two-year degree had the highest odds of using library computers for homework by a factor of 2.16, 2.19, and 2.21, respectively.
- Those who speak a language other than English at home showed higher odds by a factor of 1.66 of using the library online resources for this purpose than those whose home language is English, potentially reflecting greater use of library computers for homework in immigrant households.

Many parents interviewed during library site visits discussed the importance of being able to help their children with their homework. For example, Hilda, a 37-year-old woman with fourth grade education and limited English from Oakland, California, elaborated how library computers helped her get more involved in her children's education:

There are a lot of things I can do now... Like going on the computer and helping my children. Sometimes my son has homework to do on the computer, and I enter with him, and I'm with him there, and I have benefited a lot from that really.

One of the staff at an education training center in Marshalltown who works primarily with the immigrant population agreed with this observation:

A lot of our students know [about the library's computers] because they have kids and they come here and they use the computers. Actually I was talking to someone today and they said, 'Yeah, my daughter does a lot of research at the library for various programs and projects at school and stuff like that.

Library computers are also used by students and parents to communicate with teachers and schools. A Marshalltown, Iowa, librarian described how students use the library's Internet access to check their accounts on the school site:

Student records are online and students all have their own accounts and parents have access. We have many students who come and check those. They check their grades, assignments that are due, and assignments that haven't been turned in.

**9 MILLION LEARN  
NEW SKILLS USING  
LIBRARY COMPUTERS**

*"I've used the services to learn how to do household tasks related to plumbing, decorating, various maintenance tasks, gardening, etc."*

WEB SURVEY COMMENT  
BALTIMORE, MD

**12 MILLION  
PURSUE HOBBIES**

Completing homework, managing assignments, and providing the tools necessary for successful activities in this area are all critical for success in education. For all these reasons, users find the library an important resource for their education, from grade school through college and beyond.

## Conclusion

Across all types of educational activities, users derive enormous value from public library computers and Internet connections. The prevalence of young people engaging in these activities, both formal and informal, points out the importance of providing this publicly accessible and well-supported avenue for educational growth in our society. For youth, libraries are clearly used as a way to improve themselves and find the resources they need to pursue their education, whether it's doing homework for school or seeking opportunities for further learning.

More so than with other types of use, users with access to computers and the Internet at home, school, or work are still heavy users of library computers for educational purposes. This is particularly the case with doing homework where household competition for computer access may interfere with timely accomplishment of assignments. Users also expressed the efficiency of using library computers for education when additional materials or help from librarians is needed.

As in many other areas, the higher odds of lower income people and those who speak a language other than English at home point out the important role that libraries play in the community for those lacking adequate support systems. By providing the means needed to obtain the learning and skills for improving themselves, libraries are opening up opportunities these people might not otherwise have had.

## 7.2 Employment and Entrepreneurship

*Activities related to employment were the third highest reported use for library computer users, with 40 percent of the respondents indicating use in this area. In addition, 7 percent of the users used the library for activities related to starting or managing a business of their own.*

*Results from the study show that libraries are serving as an important supplement to local and federal agencies focused on employment activities, by providing access to needed services in a setting that can offer support and access to all members of the community. In the current economy, these services*

*are making a difference in the lives of individuals and their families across the nation.*

*In addition to finding actual jobs, people reported using the library's online resources for preparatory steps such as creating resumes, researching job information, submitting applications online, and receiving training for job-related skills. Those who are employed use the library to conduct work, and entrepreneurs and small business owners use the library's computer resources for writing business plans, finding investors, marketing, and business administration.*

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Today, 1 in 10 Americans are unemployed, marking the highest unemployment level since the early 1980s (Burtless 2010). Without work, people do not have the financial means to pay for their families' basic needs—food, housing, health, education—nor meet their higher level needs for social interaction and maintaining self-esteem. When unemployment rates are high, communities and the entire country falter in their ability to provide essential services through a healthy revenue base and to support future investment.

This section presents the findings about the ways people use library computers and Internet access for employment and entrepreneurship activities, beginning with an overview of the most frequent types of activities and the characteristics of users most likely to use library technology for these purposes. The remainder of the section provides insights into how libraries support specific employment and entrepreneurship activities in the following areas:

- **Preparing a resume**, from learning how to create a resume to keeping it updated and written for specific jobs;
- **Searching for job opportunities**, using both internal library-developed and external online resources;
- **Doing work to support job-related activities**, including using software and other tools and library resources to carry out tasks as a requirement of one's job or profession;
- **Getting job-related training**, including learning software and applications, tools, and skills; and
- **Starting or running a business**, including how to write a business plan, find customers, and carry out activities in support of the enterprise.

Findings from the U.S. IMPACT Study surveys in each of these areas, together with those from case study interviews with patrons, librarians, and peer agency

staff are discussed to provide greater understanding of how library computers and Internet access help individuals, families, and communities with employment and entrepreneurship needs.

## **Most Prevalent Users for Employment and Entrepreneurship Needs**

Overall, 40 percent of survey respondents used their library's public access computer and Internet services for employment activities such as looking for work, writing a resume, or getting job training (Appendix Table 23). Roughly 37 percent of these users undertook employment-related activities on behalf of someone else (Appendix Table 24). Some of the important aspects of using the library for job searching were described by Joseph, discussed previously in Section 6.1. He uses the library for a few hours a day because he doesn't have access to the Internet at home. He reported, "In the last month, I've had four interviews because I was able to use the Internet. And just yesterday, I got hired." He goes on:

Just having a library here is amazing as far as having access to whatever you need, all the resources you need. If you're out there filling out applications and walking around, you get so tired and you give up. You're like, I don't want to go out today. But in the library, you can do what would take you a week to do in one day. Or maybe just a couple of hours, what would take many more hours.

Echoing users and service providers interviewed in other interviews, Joseph also discussed how a benefit of using library computers for job searching is that at the library one's unemployment status is private, whereas if one is at an employment agency, it is obvious that he or she is unemployed; that carries a stigma. Moreover, libraries offer regular business hours which can help job seekers maintain regular hours and business practices in order to feel like they are still part of the workforce.

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## Overall Employment Use

*In the study, **40 percent** of respondents used library computers and Internet access for **employment or career purposes**.*

*Use on behalf of others is also high: **37 percent** of the employment users reported that they use library computers and Internet connections to **find employment information and carry-out employment-related tasks for a relative, friend, colleague, or someone else**.*

*The use of library technology for **employment needs** is highest among:*

- *Lower income and impoverished people;*
- *Those of mixed race, Blacks or African Americans, and American Indians or Alaska Natives;*
- *Those between the ages of 19 and 64;*
- *Men; and*
- *People who speak languages other than English at home.*

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Characteristics of users associated with greater odds of using public access technology for employment purposes include:

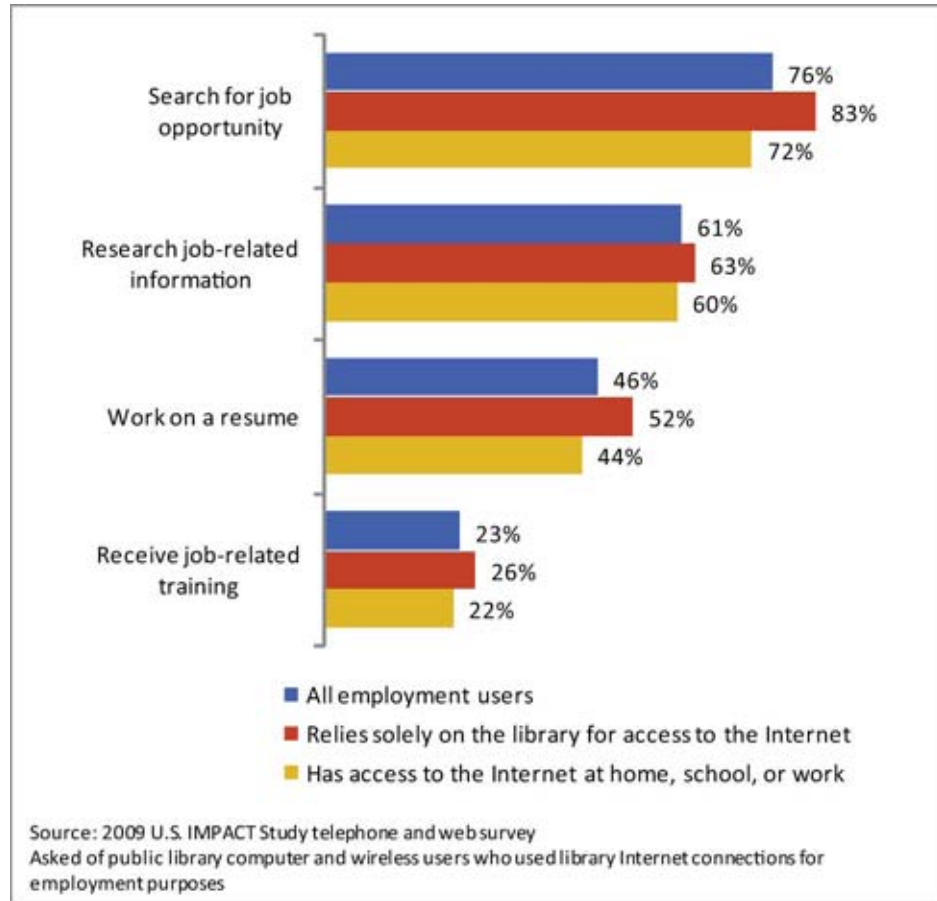
- Lower income users (people earning less than 300 percent of the federal poverty guidelines) have higher odds of using library computer and Internet access than those earning more than 300 percent of the threshold, with the highest odds ratio occurring in those with household incomes below the poverty guidelines (by a factor of 2.04).
- The odds of people who are of mixed race, Blacks or African Americans, American Indians or Alaska Natives, and Native Hawaiians or Pacific Islanders are higher (by a factor of 1.30, 2.46, 2.20, and 1.13, respectively) than Whites of using the library computers for these activities. The odds of Asians using library Internet connections for employment purposes was lower than for White by a factor of 0.84.
- Unlike other areas studied, the odds of library computer use was evenly reflected across all working-age age groups with highest odds of use between the ages of 19 and 64 for employment activities (compared to those over 75 years of age)—a finding to be expected given that teenagers and retirees are less likely to be job seeking or employed.
- Women show lower odds (by a factor of 0.84) of engaging in employment activities than men in this area.

- The odds of respondents who indicated that a language other than English was spoken in their homes was greater by a factor of 1.45 for using library technology for employment purposes than people who spoke only English at home.

## **Activities Associated with Employment Use**

The top two activities reported by employment users are searching for jobs or career opportunities (Figure 11). As with many other activity areas studied, those users who rely solely on the library for their Internet access show higher use across all employment activities than users who have alternative access at home, school, or work. This is particularly evident in the activities related to searching for a job and preparing resumes: 83 percent of those who only have access at the library use library computers, compared to 72 percent of users who have alternative access; for resumes, 52 percent of sole access users engage in this activity, compared with 44 percent of employment users with alternative access to the Internet.

**Figure 11: Employment activities by availability of alternative access**



The following sections we discuss in further detail findings regarding these employment activities, including associated outcomes associated. Discussion of case study findings will also help illuminate the importance of public access technology for employment related use.

### *Job Seeking*

Many people in the current economy are using public library computers and Internet connections to seek employment or engage in other uses related to seeking employment, including learning about starting a business. Helping patrons understand and connect the micro-steps involved in job searching, giving them confidence, and being present—being open and available for service every day—makes a tremendous difference not only in helping the users to attain their end goals but in providing them with transferable skills for later use. Before an individual can apply for a job, he or she often needs several other skill sets, most notably how to create and structure a resume, how to create an email account and then send correspondence, and how to construct and manage a job search.

These micro-steps were discussed at length by library staff and community providers and are also shown in examples from library computer users giving assistance to other people, including complete strangers. A reference librarian at the Enoch Pratt Free Library in Baltimore, Maryland, describes this process:

A man came in today; he's going to come in tomorrow. He didn't know how to put in the web address. I asked, "Do you have a resume?" He has a resume, but it's not on a disc, it's not on a flash or anything. He doesn't have an email account either. I think that without the computers, without the library, people would really be lost. They would not be able to get jobs, because that's what is required of them: to know how to fill out an application online, to be able to attach that resume. I think we offer a lot.

At the Enoch Pratt Free Library job center, a reference librarian discussed the needs of job seekers:

I get a lot of questions about where's a good place to look for a job. We have some search engines and local resources that we say, "Hey, this is really good." We also have resumes, cover letters, filing for unemployment, and signing up for an email account because a lot of them start applying for a job but don't have an email address.

The role of libraries as reinforcement to other agencies in supporting job searches in the community was remarked on by an Enoch Pratt librarian, who commented on how the Veterans Administration refers its clients to the library for assistance with job searches and computer training. This trend of alleviating workload of community agencies or supplementing their efforts, and serving as a de facto service organization, was found across all the case studies.

The difference in ease of use between computer access in libraries and that provided in other venues, specifically with regard to employment, was attributed by library staff across the case studies to the search expertise offered to patrons and to the social, information rich environment of the library computer setting itself. As a Baltimore youth librarian reflected:

Baltimore has a lower rate of folks who have computers in their home. Eighty percent of minimum wage jobs have to be applied for online. You walk into a library, there are state of the art computers, and somebody to answer your questions, somebody who you feel is not going to be in judgment of you because you don't know certain things. If you're applying for a job, you don't want to look like you don't know what you're doing, even if that's not what your job is going to be.

**14 MILLION**  
USE THE LIBRARY'S  
COMPUTERS TO  
WORK ON A RESUME

This value of libraries connecting potential employers with users through computers was also emphasized in an interview with a representative from the mayor's office in Fayetteville, Arkansas, who explained: "Library computers are very important in lives of citizens. It's a huge tool. Our major employers require 100 percent of their job applications be done online. We also tell people to access city job openings there."

## Working on a Resume

Among users of public library computers for employment purposes, 46 percent took advantage of the library computing resources to work on a resume (Appendix Table 25).

*The study shows that **46 percent of users who used library computers for employment purposes worked on resumes** using the library's computers.*

*Of all library computer users, those most likely to use the library for this purpose are:*

- *People with household incomes below 200 percent of the poverty guidelines;*
- *People of Latino or Hispanic origin;*
- *Those of mixed race, Blacks or African Americans, and American Indians or Alaska Natives;*
- *People between the ages of 25 and 34;*
- *Men;*
- *People with some education higher than a high school diploma; and*
- *Those who speak a language other than English at home.*

Users with incomes less than 100 percent of the poverty guidelines have the highest odds ratio of using library computers for this purpose (by a factor of 2.08), followed closely by those with incomes between 100 and 200 percent of the poverty guidelines (by a factor of 1.84) compared to those with incomes 300 percent or greater than the poverty guidelines. This suggests that people with lower incomes rely more heavily on library computing for creating resumes. Other factors that tend to increase the likelihood of library use for this purpose include:

- Users of Latino or Hispanic heritage had higher odds of using the library for creating resumes (by a factor of 1.80) over those of non-Latino or Hispanic heritage. People of mixed race, Blacks or African Americans, American Indians or Alaska Natives, or Native Hawaiians or Pacific Islanders also have higher odds (by a factor of 1.40, 2.54, 1.37 and 1.25, respectively) than Whites of using the library computers for preparing a resume. Asians had a lower odds ratio than Whites of engaging in this activity, by a factor of 0.80.

- The highest odds ratios of engaging in this activity were shown by those of age 25–34 (14.84), 35–44 (13.44), and 45–54 (14.54) compared to those over age 75, as would be expected because these are the prime working years.
- The odds of women creating resumes were lower than men by a factor of 0.68.
- Regarding education, users with post high school education showed higher odds of using library computers for resume preparation than those with a high school degree.
- The odds of those who speak a language other than English at home were higher by a factor of 1.66 than those who speak only English in their homes.

Many examples of how libraries help people with their resumes were described by the case study interviewees. Neal, a 24-year-old man in Fayetteville who had trained to be a plumber, valued the assistance from resume building sites, saying “The library has several suggestions on different sites and programs to use offline.” In Oakland, 24-year-old Julian, who has a computer at home and Internet access on his phone but uses the library computers daily because of the value of the library lab setting, had been editing his resume on successive visits, trying to improve it based on feedback he had gotten from different reviewers.

Uma, a 46-year-old Fayetteville woman who relies solely on the library for her daily computer access, which begins with checking her email, elaborated on how “I’ve looked up information on how to improve the resume I have, how to write a very good cover letter, and how to just make yourself more presentable to a prospective employer.”

Savannah, a 37-year-old with a fourth grade education who speaks little English, was learning about computers and actually attending classes with her 5-month-old daughter in tow. She explained how her computer teacher helped her write a resume and send it to employers.

Examples of case study participants who were working on their resumes and sending them out online included Silas, a low-income, 61-year-old, wireless network user in Baltimore who shares an apartment with roommates. He said “I dig out pertinent information and start a file so I can go back and check it and put it together to make a spreadsheet.” The value of being able to track where you sent your resume and improve on it iteratively was expressed by several interviewees, including Rowan in Baltimore, a 28-year-old unemployed, wireless network user. She said, “When you turn in paper resumes and applications,

**24 MILLION SEARCH  
FOR A JOB OPENING  
USING LIBRARY  
INTERNET ACCESS**

**16 MILLION SUBMIT  
APPLICATIONS ONLINE**

**8 MILLION GET  
INTERVIEWED**

**4 MILLION GET HIRED**

unless you write stuff down, you kind of forget who you sent your stuff to. But with the email, it's in the history, you've got a list of everyone that you've sent everything to." When she became unemployed, Rowan gave up her home Internet connection and relies on the library for job searching, keeping in contact with her alumni associations, practicing her keyboarding skills, and seeking information for health and other everyday needs.

The manager of Oakland Public Library's Eastmont branch explained how they are setting up job centers in response to local need. She also described a user who had done her resume and her paperwork, adding, "While the lady was on email, she got a response right then and there for an interview for a job that day at 3 o'clock."

In the case studies, youth were also spotlighted as a demographic group who are in strong need of help with learning how to write a resume and conduct a job search. An Oakland reference librarian explained, "They're often looking either for jobs or job programs like Youth Employment Partnership or JobCorps and they don't have the slightest idea how to even start a resume or get those kinds of skills together."

### Looking for Work

The study found that 76 percent of the users who used their library's online resources for employment purposes had searched for a job opportunity in the past year using those services (Appendix Table 26). Of those, nearly 68 percent went on to actually apply for a job or submit a resume (Appendix Table 27), and 33 percent actually got interviews (Appendix Table 28). About 16 percent of those who search for a job were hired for the jobs they applied for (Appendix Table 29). This represents a significant contribution to the workforce, enabled through the public library's online services and knowledgeable and supportive staff.

*The study shows that **76 percent of users who used library online services for employment purposes (24 million) search for job opportunities.***

*Of all library computer users, those most likely to use the library for this purpose are:*

- *People with household incomes less than twice the poverty guidelines;*
- *Latinos or Hispanics;*
- *People of mixed race, Blacks or African Americans, American Indians or Alaska Natives;*
- *People between the ages of 19 and 64;*
- *Men; and*
- *People who speak a language other than English at home*

**→Outcomes:** *Of users who searched for job opportunities:*

- *68 percent submitted a job application online*
- *33 percent were interviewed for a job*
- *16 percent were hired*

Those people with household incomes less than 200 percent of the poverty guidelines had higher odds (by a factor of more than 2) of using the library for job seeking activity than those with incomes 300 percent or greater than the poverty guidelines. Likewise, other user characteristics were associated with greater odds of using library computers for this purpose:

- People of Latino or Hispanic origin had higher odds (by a factor of 1.55) than non-Latino or non-Hispanic people, and users of mixed race, Blacks or African Americans, and American Indians or Alaska Natives had higher odds (by a factor of 1.17, 2.12, and 1.32, respectively) than Whites for this type of use.
- Users of ages 19–64 years showed much higher odds (by factors ranging between 8 and 12) of using the library for seeking jobs than those older than 75 years, as might be expected as 19–64 years of age are the primary working years.
- The odds of women using the library for this purpose were lower than men by a factor of 0.68.
- As in other areas, the odds of those who speak a language other than English at home were higher (by a factor of 1.29) than those who speak English in their homes for this activity.

People without alternative Internet access were more likely to engage in job seeking at the public library than those who had other access to computers and

the Internet. This theme was discussed by member of the Oakland Public Library's Board of Directors:

The difference between someone who is looking for a job who has a computer at home and Internet access and someone who doesn't is huge. The person who has computer and Internet access is able to go on Craigslist and look at job postings that have just come up in the last hour or half hour, and given the speed at which the labor market moves these days, that's huge...a lot of the information about jobs and employment opportunities exist on the Internet and nowhere else.

Yet even people who have home access rely on their local library and public access technology. This observation was offered by a trustee from the Fayetteville Public Library:

Some people for whatever reason—downsizing—suddenly need to completely retool, start over, and find a new job. They probably had a computer at the job that they no longer have. They probably have some kind of setup at home, but this environment here, there's something about it. I think there's a comfort factor here and also expertise—"If I get stuck there is a librarian who can help me figure it out." I think that's one reason they utilize it instead of staying at home.

This added value from expertise provided by library staff also emerged as an important aspect of doing job searches during an interview with a reference librarian in Baltimore, Maryland, who explained, "I was talking about hidden job opportunities with a woman. She asked, 'What's the hidden job market?' And I had meant networking and looking online. It's not just the newspapers."

In addition to one-on-one assistance, libraries across the country offer classes on using technology, targeted specifically at job searching, such as the following course offered in Fayetteville, Arkansas:

We are having "One Click Away: Finding a Job"—a workshop. One of the other reference librarians is spearheading this time in the computer lab for people to come in. So many job applications now have gone strictly online and people are like "What the heck? What do I do with this?" So she's going to do a quick presentation on some basics, then I will have some one-on-ones: "Here's what this means" because each site is different.... Each job site is different so "Click here, print here, fill this in." Just kind of hold their hands and walk them through that.

Examples of people who were looking for work included Noah, a 39-year-old unemployed, homeless user in Baltimore, who was living in a shelter and taking

basic computer classes at an inner city branch library. He said, “I’m from the county, and I had lost my job. Coming to the library, I had seen people getting on [the Internet]. I had got some help on how to get on and everything and ever since then I been getting on and looking for different jobs.”

The value of the library for supporting job searches in the community was also pointed out by an older patron from Baltimore who uses library computers to search for jobs for himself and others. He explained, “If I run across something, if I’m cruising through a job that someone else might have qualifications for, I’ll make a note of it, give it to somebody and say, ‘You might want to check this out.’” Providing help to strangers in this way is facilitated by the social environment of the library.

### *Filling Out Applications or Submitting Resumes*

Almost 68 percent of the users who searched for a job actually filled out an application or submitted a resume using the library’s computers (Appendix Table 27). Interviews with users and others in the community showed that this was not always an easy process, and that the library staff was instrumental in making their efforts successful.

A barrier described repeatedly in interviews is that low-paying jobs (often filled by people who speak languages other than English, are from other countries, and who have little information literacy training) that do not require any interaction with technology do have an online job application process that necessitates an email account and access to a computer and the Internet. An example was recounted during a focus group with library supervisors in Oakland, California:

A woman whose friend worked as a hotel maid said, “My friend said I could apply, but they only take applications online.” For non-English speakers, it’s really hard for them. We were able to get her to come in and it took her a lot to get through the process because you had to set up an email account first. She applied and she was really happy that we helped her. The old days are gone where you could call up a number or leave an application. It’s really a shock for them.

In Baltimore, Maryland, the library was pivotal in the successful relocation of a business to the area that has meant a tremendous difference to local residents. A librarian in Baltimore described the situation:

The grocery store that opened near the Waverly branch—the mayor, who’s now the governor—worked for years to try to get any grocery store to come in to the city. They just wouldn’t come here because of crime, terrible schools. Corporate people didn’t want to move their

family here and it was hard to hire because of an unskilled workforce. When we actually attracted that store, we're not sure it would have been staffed if it weren't for the library really helping with the job applications. It would have been a lot harder.

Another librarian in Baltimore emphasized how lower level, nonprofessional jobs require online applications, "These are for all of the larger stores—they're not high level jobs where you would need a resume, but they do have to fill out the online applications."

In Marshalltown, Iowa, a community service provider explained the value of the library helping his clients apply for work: "There's been a lot of employment matches. We send some of our young moms, 18-, 19-, 20-year-olds who may have a couple of kids. They go online and they've found jobs online and can fill out applications online. Some of those moms are still students, they do their work online here too, take online courses."

In Marshalltown we heard further successes, such as this from Cornelius: "It's so quick and fast. You just email resumes where ever they need to go. Saves gas and time... The companies, if they don't want you, they just email back saying no, which saves them a lot of time too." A power user at age 51, Cornelius is a veteran who uses the computers on behalf of several members of his social network, helping them with myriad everyday life problems.

In Baltimore, Maryland, a Spanish-speaking man who wanted to apply for a job as a dishwasher and who had never used a computer relied on a librarian to help him complete the online application for a job at a local hotel.

Across all these examples, the theme emerges that the value libraries provide is not only from access to the online applications necessary for many jobs, but also the support and knowledge necessary to help those who may not have the skills or experience necessary to navigate the online application process.

The availability of trained staff who can walk users through the intricacies of setting up email accounts, finding online applications, and completing the process makes a big difference in the lives of the individuals who come to the library to find a job. Libraries are also providing significant support to other agencies offering job services and the companies looking for workforce in their communities.

### *Getting Interviews and Getting Hired*

For the 33 percent of users who received interviews as a result of their job search at the library (Appendix Table 28), and the 16 percent of those who ultimately got hired after using library resources to search for a job (Appendix

Table 29), the library staff was a major source of support. Community agencies working on job placement also found the library a resource for their clients.

An example was shared by a staff member from a youth program in Oakland, California, who said: “I have a parent who came to the library often to send out her child’s resumes to answer advertisements for jobs. She came back to tell us that her daughter’s now employed and she’s happy.”

Emilio, a 23-year-old immigrant from El Salvador who uses the Enoch Pratt Free Library computers to communicate with friends, practice his keyboarding, and learn English obtained a job for himself working for a delivery company using the library’s computers and had also successfully arranged for a job interview for his brother the same way. Nancy, a 48-year-old massage therapist in Fayetteville, Arkansas, found her job using the computers at her library, which she also used to take online courses and to help her son attend school. Chloe of Baltimore got two interviews as a result of her search for jobs at the library which she hoped would help change her need for local homeless shelters.

Mary, a low income, 72-year-old woman in Baltimore, was going for an interview for a clerical position that she applied for using the Enoch Pratt computers the same afternoon that she interviewed for the case study. Jareb, a 49-year-old who resides at a homeless shelter in Fayetteville, shared his many successes in finding landscaping jobs for himself and friends on Craigslist using computers at the Marshalltown Public Library.

All these users managed to navigate the sometimes difficult process leading from preparing themselves for job searches, through the search process itself, to filing applications or submitting resumes, to the final steps of obtaining an interview and actually getting hired, with the help of the library personnel and the resources available at the library, both online and in their physical collections.

### *Getting Training for Job Skills*

Libraries provided job-related training through library computers to over 7 million people (23 percent of the users who reported using the library’s online resources for employment purposes) last year (Appendix Table 30). This training included formal and drop-in classes, one-on-one assistance with library staff, and self-led tutorials. These skills are often the prerequisites for jobs today, which more and more require employees who have basic computer skills and information literacy.

**Nearly 23 percent of users who use the library online resources for employment purposes obtain job-related training.**

*Of all library computer users, those most likely to use the library for this purpose are:*

- *People with incomes below the poverty guidelines;*
- *Blacks or African Americans, American Indians or Alaska Natives, and Native Hawaiians or Pacific Islanders;*
- *Those between the ages of 25 and 64 years;*
- *Men; and*
- *People who speak languages other than English at home.*

People with household incomes less than the poverty guidelines had higher odds (by a factor of 2.02) of using the library for job-related training than those with incomes 300 percent or greater than the poverty guidelines. Other factors associated with greater likelihood of use in this area are:

- Blacks or African Americans, American Indians or Alaska Natives, and Native Hawaiians or Pacific Islanders had higher odds (by a factor of 2.35, 2.65, and 2.13, respectively) than Whites for this type of use. Asians showed much lower odds ratios of engaging in this activity than Whites, by a factor of 0.50.
- Users of ages 25–64 years showed higher odds (by factors ranging between 1.47 and 1.79) of using the library for seeking jobs than those older than 75 years.
- The odds of women using the library for this purpose were lower than men by a factor of 0.76.
- As in other areas, the odds of those who speak a language other than English at home were higher (by a factor of 2.68) than those who speak English in their homes for this activity.

The types of job-related training that users described included many aspects of information literacy, such as learning how to use computers themselves, software and applications such as office productivity programs, and skills like searching and keyboarding. For example, Aidan, a 27-year-old Baltimore, Maryland, resident studying to be a paramedic, explained, “I’ve definitely learned a lot of stuff because they offer courses—and it’s free. It’s a good advantage to take them up on these free courses. Like the Excel and Word classes, I’ve definitely learned a couple of new skills.” In Baltimore’s Enoch Pratt Library, users who enroll in six-week courses in PowerPoint and other business

applications can receive certificates of completion that demonstrate their competencies in a concrete way.

Job-specific training for particular positions was also described by some users. Sawyer, a 17-year-old high school student in Baltimore, explained: “I’m studying for the Army test, you go to GoArmy.com and they give you a practice test that you can use to better yourself.” An Oakland librarian also talked about training available through the library for specific job-skills, “The county advertised a month ago for an accounting assistant opening and the level of interest in our test preparation material, both in book form and on our databases, was staggering; so there’s a lot of demand now for that kind of help.”

A staff member at the Baltimore library described the rewards of working with employed people who were using library computers for work purposes:

The successes, really, to me are when someone says, “I have a job and if I don’t learn X, Y, Z, I’m going to lose my job,” and they actually learn it and they keep it. We have a mutual relationship and they come in and they ask me stuff. It’s no longer they have to sign up for a class, they just meet with me one-on one and we show them what they need to know for work. That’s successful.

The library serves as a clearinghouse for many types of training offered by government and private agencies. The value the library adds is the immediate assistance available from trained staff, who can not only lead formal training sessions, but also provide one-on-one assistance for users who are working through their own learning process. The steps in becoming information literate are many, and having resources that support all stages of learning available both online and in person create a powerful environment for helping people stay current with the skills necessary for getting and keeping their jobs in the information age.

### *Doing Work*

In addition to the activities related to finding jobs and getting training, we found that 61 percent of those using library computers for employment purposes (almost 19 million people) use the library’s computers, Internet connections, and online resources to do work-related research (Appendix Table 31). Other work activities discussed in interviews and in comments left by survey respondents included keeping in touch with clients and students, printing out memos or other work documents, and posting materials to employer websites. Many users also indicated that they used the library as a substitute office while traveling.

***In the study, 61 percent of users who used library computers for employment purposes carry out work-related research.***

*Of all library computer users, those most likely to use the library for this purpose are:*

- *People whose income falls below 200 percent of the poverty guidelines;*
- *Those of Latino or Hispanic origin;*
- *People of mixed race, Blacks or African Americans, American Indians or Alaska Natives, and Native Hawaiians or Pacific Islanders;*
- *Those between ages 25 and 64 years;*
- *Men;*
- *Those with education more than a high school degree; and*
- *People who speak languages other than English at home.*

Users with household incomes 200 percent or less than the poverty guidelines had higher odds (by a factor of 1.76 for those below the poverty threshold and 1.77 for those with incomes between 100 and 200 percent of the poverty threshold) of using the library for job-related research than those with incomes 300 percent or greater than the poverty guidelines. Other factors associated with a higher likelihood of using library computers for this activity include:

- Those of Latino or Hispanic origin showed higher odds, by a factor of 1.46, than those of non-Latino or non-Hispanic heritage of using the library for work-related research. People of mixed race, Blacks or African Americans, American Indians or Alaska Natives, and Native Hawaiians or Pacific Islanders also had higher odds (by a factor of 1.38, 2.17, 1.59, and 1.80, respectively) than Whites for this type of use.
- Users of ages 25–64 years showed higher odds (by factors ranging between 5.26 and 6.85) of using the library for job related research than those older than 75 years.
- The odds of women using the library for this purpose were lower than men by a factor of 0.75.
- People with some education beyond high school had higher odds of using the library for job-related research than those with a high school diploma.
- Finally, the odds of those who speak a language other than English at home were higher (by a factor of 1.52) than those who speak English in their homes for this type of activity.

An example of someone who uses the library to help them with research related to their work came from Cooper, a church minister in Marshalltown, Iowa, who describes his use of the library Internet connection to help contact his congregation and city officials, and to help him write his sermons: “As I’m writing my sermons, I like to research introductions, maybe find interesting stories from World War II or just other stories I can find to help me to introduce the topic I’m going to be speaking about on a given Sunday.” Other reported uses from the case studies included authors doing research to support writing of books and freelance articles on blogs, as well as marketing research.

For travelers, the case studies revealed that users rely on library computers to do research and other types of work while traveling as a replacement or supplement for an office. A Fayetteville librarian described this typical behavior: “[Some are] managing a business from a distance; travelers come here and hop on to one of our computers or bring their own laptops and stay in touch with a coworker.”

A Marshalltown librarian described a woman from out-of-town who “comes in with her laptop, does her work, has her briefcase, and is here during normal business hours.” In Fayetteville, Arkansas, a user also describes the library computers as a substitute office:

I had to write a memo today for getting an account, and since I don’t have a laptop or a portable printer I could come here and do it. It was very convenient because I needed to find out some information before I wrote the memo. So I could come here, write the memo, print it out, and then go to the meeting.

Commonly, activities of this nature included checking work email while away from the office and telecommuting. For example, a community college teacher from Baltimore, Maryland, reported that she had used the computers at her library to keep in touch with her students: “I teach at a community college, so I often stop by the library on the weekend to check email for messages from students and post information for them on the online program.”

The use of the library computers for work-related activities clearly spans a wide range of activities and types of users, demonstrating the value people from all walks of life place on having a safe, comfortable, accessible venue for conducting their business, either as a primary office or a substitute while away from home.

## Most Prevalent Users for Entrepreneurship

In addition to seeking employment, 7 percent of library computer users took advantage of library online services to start or manage their own business (Appendix Table 32). Of those users, over 46 percent helped someone else with business-related activities (Appendix Table 33).

### Overall Entrepreneurship Use

*Of users, **7 percent** used the library to **start or manage a business**. Of those using library computers and Internet connections for this purpose, **46 percent helped someone else with their entrepreneurial needs**.*

*The users most likely to use the library for **starting and managing a business** are:*

- *People with household incomes below the poverty guidelines;*
- *People of mixed race, Blacks or African Americans, American Indians or Alaska Natives, and Native Hawaiians or Pacific Islanders*
- *People between the ages of 25 and 64;*
- *Men; and*
- *People who speak languages other than English at home.*

Although differing slightly between employment activities and entrepreneurship activities, the general characteristics of users are consistent in both areas:

- Lower income users (people earning less than 300 percent of the federal poverty guidelines) have higher odds of using library computer and Internet access for entrepreneurship than those earning more than 300 percent of the threshold, with the highest odds occurring in those with household incomes below the poverty guidelines.
- The odds of people who are of mixed race, Blacks or African Americans, American Indians or Alaska Natives, and Native Hawaiians or Pacific Islanders are higher (by a factor of 2.79, 2.45, 2.10 and 1.92, respectively) than Whites of using the library computers for these activities on behalf of someone else (Appendix Table 37).
- Unlike other areas studied, the odds of library computer use was evenly reflected across all working-age age groups with highest odds of use between the ages of 19 and 64 for employment activities and 25–64 for entrepreneurship activities (compared to those over 75)—a finding to be expected given that teenagers and retirees are less likely to be job seeking or employed.

- Women show lower odds (by a factor of 0.84) of engaging in employment activities and of using the library’s computers for entrepreneurship (by a factor of 0.65) than men in this area.
- The odds of respondents who indicated that a language other than English was spoken in their homes was greater by a factor of 2.10 for entrepreneurship activities than people who spoke English only at home.

Examples of use for business purposes range from Josephine and Mason in Baltimore, Maryland, who both do freelance writing from the library computers and use the Internet to do research for their writing, to Shawn in Marshalltown, Iowa, and Aidan from Baltimore, who indicated that they use the library computers to do online surveys for money or gift certificates.

In Fayetteville, Arkansas, a librarian told us about a male user who comes in daily to run his eBay business, as well as a woman who is a small business owner who recently used the computers to find information on Workman’s Compensation.

Ophelia, a 20-year-old college student in Oakland, California, describes using the library to help manage a business for her father who “has a Yahoo account for his construction business. I’m his secretary and I answer his phone calls and all that. I write it in his email and leave it as a draft. I then have him check his drafts about all his jobs that come in.”

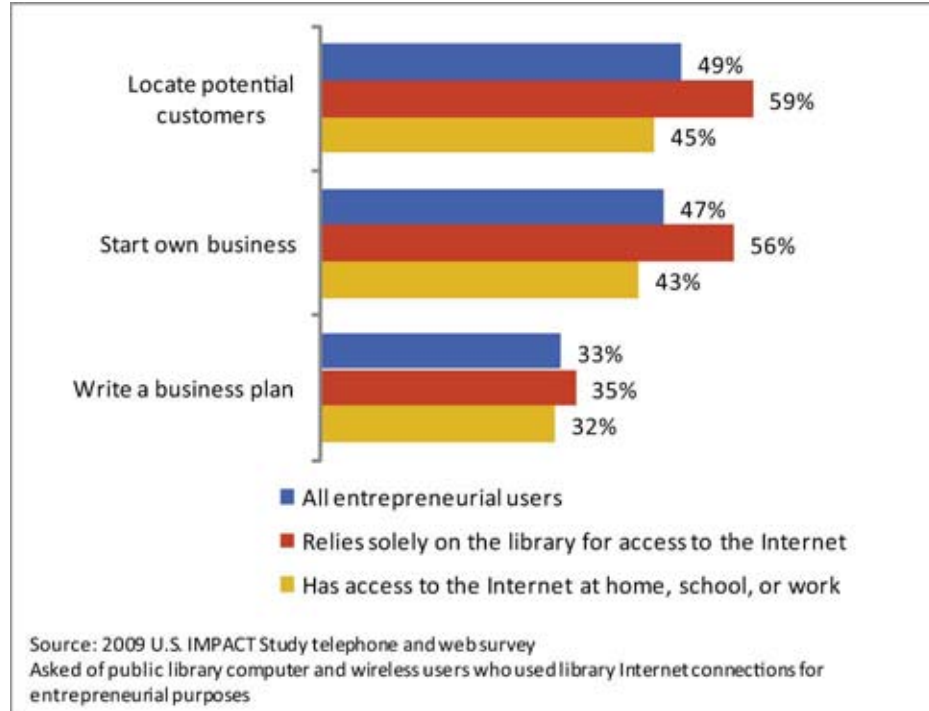
These users find the library a convenient and accessible place to accomplish tasks associated with business needs. As a result of their use, they are able to generate income and contribute to the local economy.

## Activities Associated with Entrepreneurship

The study also asked about the specific activities and outcomes in the entrepreneurship arena shown in Figure 12. Of these activities, locating potential customers and starting a business were the most frequently reported. These two activities were also reported more frequently by entrepreneurial users who use the library as their sole location for Internet access than those who have access at home, school, work, or somewhere else. In contrast, there was little difference between users with or without alternative access when it came to writing business plans; one possible reason for this that was discussed by librarians and interview subjects is that many libraries maintain collections of sample business plans that patrons can look at in the library, thereby making it

more convenient for those writing business plans to do so at the library where all the materials they may need are conveniently located and where they can get help from librarians.

**Figure 12: Entrepreneurial activities by availability of alternative access**



### *Writing a Business Plan*

An early step in starting a business is often writing a business plan; almost 33 percent of the users of library computers for business purposes indicated that they used the library computers to help write a business plan (Appendix Table 34).

***Nearly 33 percent of those users engaging in business activities on library computers used them to help write a business plan.***

*The users most likely to use the library for this purpose are:*

- *Those of Latino or Hispanic origin;*
- *Those of mixed race, Blacks or African Americans, and American Indians or Alaska Natives;*
- *People between the ages of 25 and 64 years;*
- *Men;*
- *Those who are employed; and*
- *People who speak languages other than English at home.*

Although there were no significant differences in use for this purpose based on income, other user characteristics did show variation in the likelihood of use for writing a business plan:

- Those of Latino or Hispanic origin showed higher odds, by a factor of 2.03, than those of non-Latino or non-Hispanic heritage of using the library for writing a business plan. People of mixed race, Blacks or African Americans, and American Indians or Alaska Natives also had higher odds (by a factor of 3.59, 3.56, and 1.83, respectively) than Whites for this type of use. Asians showed a lower odds ratio for this activity than Whites by a factor of 0.82.
- Users of ages 25–64 years showed higher odds (by factors ranging between 1.37 and 1.83) of using the library for writing business plans than those older than 75 years.
- The odds of women using the library for this purpose were lower than men by a factor of 0.53.
- The odds of those who were unemployed were lower by a factor of 0.53 than those who were employed of writing a business plan at the library.
- Finally, the odds of those who speak a language other than English at home were higher (by a factor of 3.13) than those who speak English in their homes for this type of activity.

Antonia, 49 years old and unemployed in Baltimore, provides an example of using the library to create a business plan for someone else:

I have used it recently for adopting some business plans—not for me—for someone in the construction field. I’m doing a business proposal for a friend of mine who wants to revamp his construction company.

Antonia, and many others like her, found the library an important resource to help them plan for an entrepreneurial activity, and gather the necessary information and resources that it takes to get a business off the ground.

### *Starting a Business*

The next step after planning for a business is getting it started. Nearly 3 percent of the users who had used library computers for business purposes indicated that they used the library computers to help them start a business (Appendix Table 35). These users took advantage of the library’s services to take the plunge into entrepreneurship and were able to use the library as a home for

their business, even if they had no place else to conduct the ongoing activities necessary to get their business up and running.

***About 47 percent of those users who used library computers for business purposes started a business.***

*Among all users of library computers, those most likely to use the library for this purpose are:*

- *People living below the poverty guidelines;*
- *Those of mixed race, Blacks or African Americans, and American Indians or Alaska Natives;*
- *People between the ages of 25 and 54 years;*
- *Men; and*
- *People who speak languages other than English at home.*

Users with household incomes below the poverty guidelines had higher odds (by a factor of 2.03) of using the library for starting a business than those with incomes 300 percent or greater than the poverty guidelines. Other factors varying significantly between types of users are:

- People of mixed race, Blacks or African Americans, and American Indians or Alaska Natives also had higher odds (by a factor of 3.25, 2.71, and 1.34, respectively) than Whites for this type of use.
- Users of ages 25–54 years showed higher odds (by factors ranging between 1.34 and 1.72) of using the library to start a business than those older than 75 years.
- The odds of women using the library for this purpose were lower than men by a factor of 0.52.
- The odds of those who speak a language other than English at home were higher (by a factor of 2.55) than those who speak English in their homes for this type of activity.

Olena is an example of a user who relies on the library computers to help start her business. A 33-year-old cosmetology school graduate in Fayetteville, Arkansas, she explains: “I’m researching small business and I’m opening a salon, so I’m looking up shopping for equipment and materials.”

### *Locating Customers*

Finally, about 49 percent of those users engaged in entrepreneurial activities indicated that they used their library’s online resources to locate customers for

their business (Appendix Table 36), and of these users, nearly half (48 percent of the users trying to locate customers) indicated that they actually saw their business increase over the past year as a result of this activity (Appendix Table 37).

***Over 49 percent of users who used library Internet connections for business purposes were trying to locate customers for their business.***

*The users most likely to use the library for this purpose are:*

- *People living below the poverty guidelines;*
- *Those of Latino or Hispanic origin;*
- *Those of mixed race, Blacks or African Americans, and American Indians or Alaska Natives;*
- *People between the ages of 25 and 54 years;*
- *Men; and*
- *People who speak languages other than English at home.*

**→Outcome:** *48 percent of those users trying to locate new customers (1.3 million people) saw an increase in business.*

Users with household incomes below the poverty guidelines had higher odds (by a factor of 1.94) of using the library to look for customers for their business than those with incomes 300 percent or greater than the poverty guidelines. Differences in likelihood of use for this purpose were also significant for the following characteristics:

- People of Latino or Hispanic origin showed higher odds of using the library for this purpose, by a factor of 1.79, than those of non-Latino or non-Hispanic origin. Those of mixed race, Blacks or African Americans, and American Indians or Alaska Natives also had higher odds (by a factor of 3.67, 2.52, and 1.85, respectively) than Whites for this type of use.
- Users of ages 25–54 years showed higher odds (by factors ranging between 1.26 and 1.65) of using the library to look for business customers than those older than 75 years.
- The odds of women using the library for this purpose were lower than men by a factor of 0.49.
- The odds of those who speak a language other than English at home were higher (by a factor of 1.96) than those who speak English in their homes for this type of activity.

Avery, a 60-year-old from Fayetteville, Arkansas, who is self-employed, is an example of someone who uses the library Internet for email direct marketing as a part of her consulting work, creating her own business clientele through the use of the library's resources.

Another example of direct customer interaction was provided by Abe, a 53-year-old man with a disability in Oakland, California, who described using the computers to broker business deals:

I'm dealing with a business that is looking to buy another business and I am trying to assist them in buying, if that makes sense. It's almost management services. I take care of the financial side.

Across all these activities related to entrepreneurship and business, users showed creativity and resourcefulness in making opportunities for themselves and others through the use of the online resources available at their public libraries. Although the percentages of use are not as impressive as some other areas, the numbers of people engaged in entrepreneurial activities at their public library points out an often hidden value for the community in providing online access as a community resource—the ability for citizens to create or supplement their own livelihoods and contribute to the local economy.

## Conclusion

Libraries play a vital role in helping people find and maintain jobs and manage businesses. The study shows that free access to computers and the Internet in libraries across the country has made an impact in helping people prepare resumes, conduct job searches, submit online applications, correspond with employers, carry out job-related work and training, and conduct the varied everyday activities needed to run a successful business enterprise.

The findings have important policy implications at the federal level, as well as for state and local agencies concerned with employment and the economy. The study shows that libraries are central hubs for assisting people of all demographic backgrounds—particularly people facing economic challenges—in making themselves competitive in the job market and maintaining employability.

The findings also indicate how libraries relieve some of the burden of government agencies and community-based organizations that address labor issues by providing computer access and training in ways that these agencies are constrained from or lack resources to provide. Moreover, the study shows that the library computing environment is valued by users for its non-

stigmatizing, open atmosphere, and regular hours that promote positive work behaviors.

## 7.3 Health and Wellness

*People rely on public library computers and Internet access for two of the most critical aspects of their lives: health and wellness. Users are logging in to find ways to improve their diets, find doctors, research their own or others' illnesses, locate health care insurance, and track down discount medications. In fact, libraries have become a nontraditional, and perhaps overlooked, component of the national public health system.*

*The expansion of the Internet is creating a growing number of vital links between access to information technology and personal health at a time when health care stands as one of the nation's biggest public policy issues that impacts the welfare of citizens as well as the financial solvency of the nation's largest social programs such as Medicare and Medicaid.*

*Indeed, meeting health and wellness needs was one of the most frequently reported uses of public access technology, with 37 percent of users reporting having looked for health information, treatment options, care givers, or ways to improve their health; 56 percent of these users also reported seeking out these types of information for relatives, friends, colleagues, and others.*

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This section presents findings about the ways patrons use library computers and Internet access for health and wellness activities. It begins with an overview of the most frequent types of health and wellness activities reported in the U.S. IMPACT Studies and the characteristics of users most likely to use library technology for these purposes. The remainder of the section provides greater depth for understanding the following four clusters of activities associated with efforts to improve health or get treatment for medical conditions:

- **Improving health** by locating information about diet and fitness;
- **Learning about medical conditions and treatments**, medications, and medical procedures;
- **Finding and using health care providers**, including locating support groups for medical concerns; and
- **Accessing health insurance** or locating information about drug discount plans.

In addition to discussing the extent of use in each of these activity clusters and the characteristics of users as found from analysis of survey results, case study interviews with patrons, librarians, and key staff members from peer agencies are also discussed in order to provide greater understanding of how library technology resources are used toward the goals of improving quality of life and longevity and to reduce disparities in access to health information.

Besides serving individuals seeking health and wellness information on behalf of themselves or others, public access technology also supports *Healthy People 2010*, an initiative developed by the U.S. Department of Health and Human Services (HHS) to set standard national health objectives. The two overarching goals of *Healthy People 2010* are designed to identify the most significant preventable threats to health and to establish national commitment to reduce these threats (HHS 2009). They include:

- **Increase Quality and Years of Healthy Life:** The first goal of *Healthy People 2010* is to help individuals of all ages increase life expectancy and improve their quality of life.
- **Eliminate Health Disparities:** The second goal of *Healthy People 2010* is to eliminate health disparities among different segments of the population.

The use of library computers and Internet resources by healthy individuals, as well as those suffering from disease or disability, supports both of the goals outlined in *Healthy People 2010*.

Some people using library computer resources make decisions that improve their health, such as changing their diet and exercise habits, which will lead to increased quality and years of healthy life. The computer and Internet services provided by public libraries also contribute to the elimination of health disparities because they provide free access to health information for people who do not have access to computers and the Internet in their home, workplace, or somewhere other than a public library. In this way, libraries have become a nontraditional, and perhaps overlooked, component of the national public health system.

## Most Prevalent Users for Health and Wellness Needs

Many important linkages exist between health and access to information technology. Lydia, an experienced library and public access technology user, provides an illustration of the multiple and overlapping ways library computers

and Internet connections are used for health and wellness needs. Currently 29 years old, Lydia grew up with computers and uses the library most days because she cannot afford to maintain Internet service in her home. Along with 37 percent of public access technology users, Lydia looks for information about illnesses (Appendix Table 38). As she explains, “I’m bipolar, so I’ve researched my disease. I’ve had cancer [too], so I like to research a lot of stuff on [the library’s computers].” She has also found support from others for her health conditions through the library computers:

I had breast cancer so I’m able to talk with groups of women who’ve had breast cancer. It’s easy. It’s free. You can talk all you want and if you’ve had enough... I don’t like chat rooms per se, but this is more of a therapy and it’s free on the computer, instead of having to travel miles when you don’t have a vehicle to some group in person. It’s kind of nice, when you’ve had a disease you don’t want to talk about it all the time. When you’re on the computer you don’t have to see them face-to-face but you can actually understand what they’re talking about. That’s an easier way for me.

Use of library online services to help others with health and wellness needs was reported by 56 percent of the respondents in the area of health and wellness (Appendix Table 39).

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## Overall Health and Wellness Use

*In the study, **37 percent** of respondents used library computers and Internet access to work on health issues.*

*Use on behalf of others is also high in this area, with 56 percent of health and wellness users reporting that they use library computers and Internet connections to find health or wellness information for a relative, friend, colleague, or someone else.*

*The use of library technology for health or wellness needs among all users of library online services is highest among:*

- *Lower income and impoverished people;*
- *45–64 year olds;*
- *Women; and*
- *People who speak languages other than English at home.*

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Analysis of the social and economic characteristics of users of library computers for health and wellness activities shows a pattern of higher use among people with household incomes below the federal poverty guidelines. Other factors also appeared to suggest higher rates of use for this purpose:

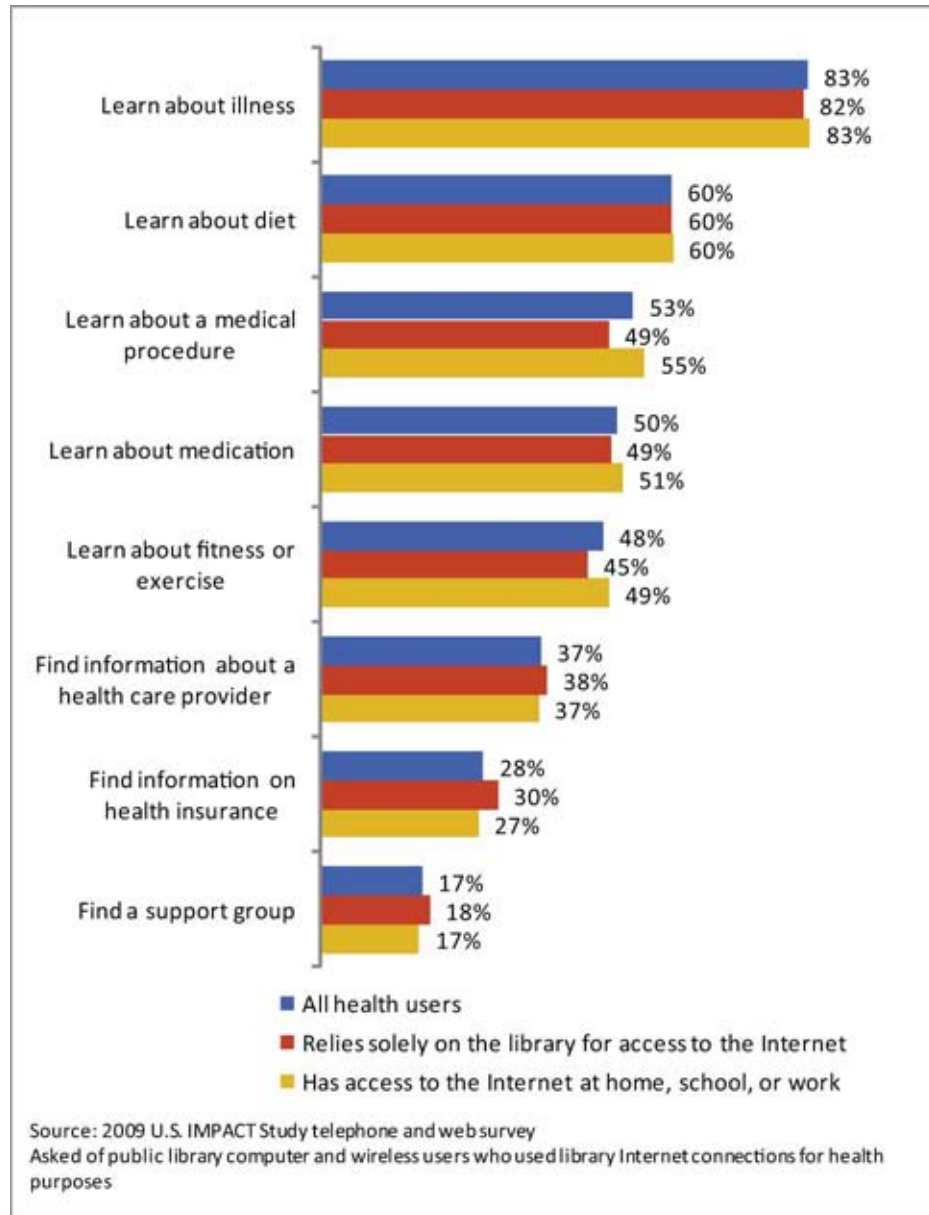
- The odds of library computer use in this area were highest among older age groups, with the highest odds of use between the ages of 45 and 64 years.
- Women show higher odds by a factor of 1.15 of engaging in health activities than men.
- The odds of respondents who indicated that a language other than English was spoken in their homes were greater by a factor of 1.31 of using the library services for health purposes.

Related to social and economic characteristics of users discussed previously, some of the differences between people in terms of their use of library technology for health and wellness activities are attributable to whether the user has alternatives for accessing the Internet. The use of library technology for the most frequent types of health-related activities is generally higher among users who depend on public library Internet connections than those who also have access at home, school, work, or someplace else.

## **Activities Associated with Health and Wellness**

Figure 13 shows health-related activities accomplished with library computers and Internet connections and how use for these purposes is different between users with and without alternative locations for accessing the Internet. The top three health uses are learning about an illness, disease, or medical condition; getting information about diet or nutrition; and learning about medical procedures. Though use of library technology for many of these activities was essentially the same between those with or without alternative access to the Internet, use for learning about medical procedures and learning about exercise and fitness were somewhat higher among those with access at home, school, or work. Like other areas where this is the case, the convenience of having other library materials readily available to supplement Internet searches may be one driver leading to those with access elsewhere showing higher use in some areas.

Figure 13: Health and wellness activities by availability of alternative access



### Improving Health

Making healthy lifestyle choices in eating habits and exercise routines are two key activities public access technology users were asked about. The activities contribute toward meeting the first goal of *Healthy People 2010* to increase quality and years of healthy life, and it is one for which many public access technology users find support using library computers and Internet connections.

## Diet and Nutrition

Learning about diet or nutrition was the second most frequently reported activity reported by those who use library computers for health and wellness purposes, with 60 percent of those users reporting having looked for this type of information (Appendix Table 40). Among users seeking diet information, 83 percent said that the use of library technology online services helped them decide to make a change to their diet, a positive first step toward improving health (Appendix Table 41).

**Diet and nutrition:** 60 percent of users of library computers for health and wellness purposes are **learning about diet and nutrition**.

*Of all library computer users, those most likely to seek out diet and nutritional information are:*

- *People with household incomes below the poverty guidelines;*
- *Latinos or Hispanics;*
- *Mixed races, Blacks or African Americans, and American Indians or Alaska Natives;*
- *45–64 year olds;*
- *Women;*
- *People with education beyond high school; and*
- *People who speak languages other than English at home.*

**→Outcome:** 83 percent of those who researched diet and nutritional information using library internet connections decided to make changes to their diets.

The results of further analysis show that, holding other characteristics of the users constant, the use of library computers and Internet connections for seeking diet and nutritional information is higher among certain groups:

- Users with household incomes below the federal poverty guidelines have increased odds of seeking out diet information using library computers by a factor of 1.55 compared with those earning more than 300 percent of the poverty guidelines.
- The odds of Latino or Hispanic users seeking diet information are higher than those of non-Latinos and non-Hispanics by a factor of 1.57, whereas the odds of use for this purpose is higher by a factor of 1.45 for those identifying with two or more races, a factor of 1.40 for Blacks or African Americans, and a factor of 1.37 for American Indians or Alaska Natives than for Whites.
- Women have greater odds of seeking diet information than men by a factor of 1.27.

17 MILLION USE  
LIBRARY COMPUTERS  
TO LEARN ABOUT DIET  
AND NUTRITION

14 MILLION FIND OUT  
ABOUT EXERCISE AND  
FITNESS

*“We as a family also  
go look up different  
recipes for healthy  
cooking and family  
exercise and social  
activities for our  
family and  
grandchildren.”*

WEB SURVEY COMMENT  
COLUMBUS, OH

- The odds of seeking diet information for users who speak a language other than English at home are higher than those of users from English-only households by a factor of 1.38.

In addition, users between the ages of 45 and 64 years have greater odds of using library computers to seek diet information than both older and younger people. Users who have attended or graduated from college have likewise higher odds of use for this purpose than those who did not.

An example of this type of use comes from Oliver, a 57-year-old wireless user from Marshalltown, Iowa. Oliver uses the library’s wireless Internet connection on his own laptop to find information about food safety and to help him make better food choices. He is concerned about industrial production methods affecting the quality of the food he eats and wants to find out which foods are produced with less processing. His concern about food safety also encompasses what his grandchildren eat and he often passes on the information he finds to one of his children so she can make healthier food choices as well.

### Exercise and Fitness

A similar pattern is seen in the use of library computers and Internet connections for learning about exercise or fitness, another use with the potential to increase health and well-being. Indeed, 48 percent of health and wellness users learned about exercise or fitness using library computers and Internet connections (Appendix Table 42) and 85 percent of those seeking exercises or fitness information actually decided to make changes in their exercise habits based on what they learned (Appendix Table 43).

**Exercise and fitness:** 48 percent of those using library online resources for health and wellness are **seeking information about exercise or fitness.**

*Of all users of library computer resources, those most likely to seek out exercise and fitness information are:*

- *People with household incomes below the poverty guidelines and those with incomes between 200 and 300 percent of the poverty guidelines;*
- *Latino or Hispanics;*
- *Mixed races, Blacks or African Americans, and American Indians or Alaska Natives;*
- *35–64 year olds;*
- *People with education beyond high school; and*
- *People who speak languages other than English at home.*

**→Outcome:** 84 percent of these users decided to make changes to their exercise habits.

Seeking information about exercise or fitness is also higher among certain groups:

- The odds of users with income below 100 percent of the federal poverty guidelines learning about exercise using library computers and Internet connections are higher by a factor of 1.48 compared with those earning more than 300 percent of the poverty guidelines. The odds for users earning between 200 and 300 percent of the poverty guidelines are also higher than those earning more than 300 percent of the poverty guidelines by a factor of 1.41.
- Latino or Hispanic users have greater odds of seeking exercise information than non-Latinos and non-Hispanics by a factor of 1.59, whereas users identifying with two or more races have odds higher by a factor of 1.56, Blacks or African Americans by a factor of 1.50, and American Indians or Alaska Natives by a factor of 1.53 than Whites. Asians have lower odds of engaging in this activity than Whites by a factor of 0.69.
- Users who speak a language other than English at home have odds of seeking exercise information higher than users from English-only households by a factor of 1.53.

Unlike use for seeking diet information, there is no significant difference in the odds of use for fitness purposes between men and women. However, they are similar in that users between the ages of 45 and 64 years have greater odds of using library computers to seek exercise information than both older and younger people and users who have attended or graduated from college have likewise higher odds of use for this purpose than those with just a high school diploma.

Lorenzo, a homeless teenage user from Oakland, California, uses library computers to help with his exercise program. As he explains, “I’ve looked up running because I love running so I know about high school and college websites about running. I just look up good training things and what to eat and in general, running stuff. And I look up some of my friends that ran races. My old race results, stuff like that.” Having recently graduated from high school, Lorenzo’s main source for getting training information now is through the public access computers at the Oakland Public Library.

The high follow through in deciding to make changes to both diet and exercise habits indicates a potential for significant impact from access to library technology resources and services on national, state, and even local health

23 MILLION LEARN  
ABOUT MEDICAL  
CONDITIONS  
THROUGH LIBRARY  
COMPUTERS

15 MILLION  
INVESTIGATE  
MEDICAL  
PROCEDURES

goals, particularly among people who have limited access to health information from other sources.

Nearly everyone agrees that diet and fitness are key components to improving health and living longer. Like the *Healthy People 2010* initiative, many government agencies, nonprofit organizations, schools, and many other groups have invested significant resources in making information available through the Internet to help people make better nutritional and exercise choices. Public library Internet access is especially important in the area of health, as home access is often lowest among those with the most to gain from diet and fitness information.

### *Learning about Medical Conditions and Treatments*

When faced with a health concern, 46 percent of American adults turn to the Internet for help (Rainie, Estabrook, and Witt 2007). Whether looking for information to prevent disease or exploring treatment options for a medical condition, public libraries provide not just the Internet access people rely on to find health information, but also the expertise of librarians to help direct them to reputable resources both online and in the print materials available at the library. In interviews, librarians recalled helping patrons find information about many health conditions including diabetes, heart disease, attention deficit disorder, addictions, and mental illnesses.

### **Learning about Medical Conditions**

A library computer instructor in Oakland, California, described a patron interaction that conveys the value of having trained staff members to assist with health-related research:

There was a woman who was coming in a few times. She was in the area because of a medical condition and so she was trying to find medical information in Spanish. We were able to show her some of the resources that were here: the American Heart Association and some of the other sites that had information in Spanish. She was really happy that she could see that and have access to not just the [library] databases but actually going [to the Internet] and looking at the different sites and organizations and the information they have there.

With the Oakland Public Library located near a major hospital, the librarians there are also experienced in helping recently diagnosed patrons find information about their illnesses.

**Medical conditions:** 83 percent of those using library online resources for health and wellness activities are **learning about a disease, illness, or medical condition.**

*Of all library computer users, those most likely to seek this type information are:*

- *People with household incomes below the poverty guidelines;*
- *55–64 year olds; and*
- *People who speak languages other than English at home.*

Overall, 83 percent of health and wellness users search for information on illnesses, diseases, or other medical conditions (Appendix Table 44). Further analysis shows that seeking this type of information is higher among certain populations:

- The odds of seeking information about medical conditions increases as income decreases, with those with household income below the federal poverty guidelines higher by a factor of 1.49 than those with income more than 300 percent of the poverty guidelines.
- Users who speak a language other than English at home have odds of seeking information about medical conditions higher than users from English-only households by a factor of 1.42.

Holding other characteristics of users constant, there are no statistically significant differences in the odds of using library computers and Internet connections for getting information about medical conditions between Hispanics and non-Hispanics, men and women, or people with different educational attainment. However, users between the ages of 55 and 64 years have greater odds of using library computers to seek this type of information than both older and younger public access technology users.

The information public access technology users gather about medical conditions is often put to immediate use. For example, 22-year-old, unemployed Margarita, who was interviewed at the Oakland Public Library with her boyfriend, used the computers to help diagnose a skin condition: “[Our son] had ringworm and we didn’t even know what that was. We looked online and put in his symptoms and everything and then it told us what he had, told us what kind of medicine to give him. Because we didn’t know what he had at all. We thought it was just a regular rash.” Her fiancé agreed, “When the kids get sick, [we] can just go online and... it helps a lot with that.” With household income for their family of five well below the poverty guidelines, Internet access at the library is critical for Margarita and her family to have access to medical information. Similarly, a 25-year-old survey respondent from Tulsa, Oklahoma, who uses public access technology as his sole means for accessing the Internet, wrote that

he had used a library computer to get pictures of tick bites to help him determine if one he received could have exposed him to Lyme disease.

In many cases, users of the library computer resources distribute information about illnesses or diseases to others. For example, Mark, a 15-year-old high school student with a large, extended family, explained, “Just yesterday I went to use the computer for my aunty. She's the government of the whole family so she asked me to look up Swine Flu, the new flu that's coming out. She asked me to see what to tell [the rest of the family] to help not get that flu.” By passing along the information he had gathered about the H1N1 flu virus in order to help his family avoid contracting it, Nick demonstrates one of the ways that the value of the information retrieved through library computers and Internet connections extends beyond the individual users to encompass families.

## Learning about Medical Procedures

Searching for information on medical procedures and tests is also an important activity for many health and wellness users, 54 percent of whom use library computers and Internet connections for this purpose (Appendix Table 45).

**Procedures:** 54 percent of those using library computers for health and wellness purposes **learn about medical procedures.**

*Among all users of library online resources, those most likely to look for information on medical procedures are:*

- *People with household incomes below the poverty guidelines;*
- *Latinos or Hispanics;*
- *55–74 year olds;*
- *Women; and*
- *People who speak languages other than English at home.*

As with searching for information about medical conditions, certain types of users are more likely to use library technology to find information about procedures:

- For people with household income below the federal poverty guidelines, the odds of using library computers to seek information about medical procedures is higher by a factor of 1.41 than for those with income more than 300 percent of the poverty guidelines.
- Latino or Hispanic users have odds of seeking information about medical procedures higher than non-Latino and non-Hispanic users by a factor of 1.64.

- Women have greater odds of seeking medical procedure information than men by a factor of 1.23.
- The odds for seeking information about medical procedures is higher for people from households in which a language other than English is spoken than in English-only households by a factor of 1.72.

One example of the use of library computers to look for information about medical procedures comes from Jasmine in Fayetteville, a 24-year-old unemployed woman working toward her GED and recently recovered from substance abuse. She talked about using library computers to look for information about a medical procedure for someone else. She recounted:

A friend of mine was recently diagnosed with heart problems, and she asked me if I can look up her specific case, and I was able to get her more information for her health... She has a shunt; they had to put a shunt in her heart because one of the valves was not working properly. She was able to talk to her doctor a lot smoother, she was able to voice her concerns or questions, so I think that kind of helped her a little bit.

Medical procedures can be confusing and frightening. Some public access technology users also use library computers to view videos on medical procedures. One librarian from Oakland, California, explained how access to Medline, an Internet portal maintained by the National Library of Medicine, helped a patron prepare for surgery by actually watching the surgical procedure he was about to undergo. She goes on to explain, “He was particularly nervous, especially because he was going to have to be under a general anesthetic. He just wanted to know what was going to be happening.”

The high bandwidth requirements for viewing videos, as well as access to help from librarians and additional print and electronic resources, may help explain some of why seeking information about medical procedures is among the top activities reported by public access technology users.

### Getting Information about Medications

Seeking information about prescription and over-the-counter medications is also another high-use area with similar patterns to the use of library computers for other health and wellness purposes. Overall, 51 percent of users in the health and wellness area use library computers and Internet connections to look for information about prescription or over-the-counter medications (Appendix Table 46). As a result of the information these users find using public access technology, 68 percent of these users report that that they were able to make a decision about whether to use a medication (Appendix Table 47). Additionally,

18 percent of these users actually use library computers to purchase a prescription or over-the-counter medication (Appendix Table 48).

**Medications:** 51 percent of users looking for health and wellness information use library computers and Internet connections to **find out about prescription or over-the-counter medications.**

*Of all library online service users, those most likely to look for information on medications are:*

- *People with household incomes below the poverty guidelines;*
- *Latinos or Hispanics;*
- *Those 75 and older; and*
- *People who speak languages other than English at home.*

**→Outcome:** 68 percent of the users who indicated using library computers for this purpose report that using library technology helped them decide whether to use a medication.

**→Outcome:** 18 percent of these users used a library computer or Internet connection to purchase a prescription or over-the-counter medication.

Further analysis shows that the odds of seeking information about medication are higher among patrons with certain characteristics:

- The odds of seeking information about medications increases as income decreases, with those with household income below the federal poverty guidelines higher by a factor of 1.46 than those with income more than 300 percent of the poverty guidelines.
- Latino or Hispanic users have greater odds of searching for information about medications than non-Latinos or non-Hispanics by a factor of 1.57
- Users who speak a language other than English at home have odds of seeking information about prescription or over-the-counter drugs higher than users from English-only households by a factor of 1.42.

Although differences in race, gender, and education did not significantly change the odds of using library computers to seek information about medications, age was a factor: the odds of looking for this type of information steadily increases with advanced years.

As is the case with many other activities concerning health and wellness, looking for information on medication is sometimes used to help others. Baltimore user Chloe, described previously, talked about the value of having access to the

library on the weekend to help her find information for her father who was hospitalized because of a bad reaction to a new medication:

He said the doctor gave it to him and it had made him sick. And he had called me that same night because his doctor wasn't there on that Saturday. He went to the hospital on a Friday and I looked up the medication...I came to the library, and I'm glad that they are open on Saturdays too because I went to the library on Saturday and looked up that medication for him and called him that morning and told him what it was. [After I read it to him] he said that he was allergic to it, what he'd been taking. That's why it made him sick."

Avoiding bad reactions to medication by looking for information about side-effects and drug interactions was also mentioned by several users at the case study libraries, as well as in comments left by survey respondents.

### *Finding and Using Health Care Providers*

Seeking out preventative care or treatment for an illness often involves finding a new health care provider, specialist, or resources for support or complementary care. In addition, prior to getting care, many people must first get insurance or other health plans to help with paying medical bills and prescription medications. For many Americans, library technology is used to help fulfill these steps to getting medical attention.

### **Finding a Doctor**

About 37 percent of users engaging in health and wellness activities using library computers and Internet connections looked for information on doctors and other practitioners (Appendix Table 50). Of users who looked for information on health care providers, a number followed through, with 49 percent making an appointment (Appendix Table 51). Of those who made an appointment, 93 percent reported actually receiving the care they needed (Appendix Table 52).

**Health care providers:** 36 percent of users pursuing health and wellness information through their library's online services **seek information about doctors or health care providers.**

Of all users of library computing services, those most likely to look for information on medical providers are:

- People with household incomes below the poverty guidelines;
- 45–64 year olds and those older than 75;
- Women; and
- People who speak languages other than English at home.

→**Outcome:** 49 percent of users seeking information about health care providers report that after using library technology for these purposes, they **made an appointment with a doctor or other health care provider.**

→**Outcome:** 93 percent of users who made appointments reported that they received the care they needed.

The odds of seeking information about doctors or other health care providers are higher among public access technology users with certain characteristics:

- The odds of users with income below 100 percent of the federal poverty guidelines finding out about health care providers using library computers and Internet connections are higher by a factor of 1.59 compared with those earning more than 300 percent of the poverty guidelines. The odds for users earning between 100 and 300 percent of the poverty guidelines were likewise higher than those with incomes above 300 percent of the poverty guidelines, but the odds ratios were less than those in poverty.
- Women have greater odds of looking for information about health care providers than men by a factor of 1.18.
- The odds of users who speak a language other than English at home seeking information about doctors are higher than users from English-only households by a factor of 1.88.

There is no statistically significant difference in the odds of use for looking for information about doctors and other health care providers related to race or education. However, users between the ages of 45 and 64 years have slightly greater odds of using library computers for seeking this type of information than both older and younger people than those over 75, and those over 75 have higher odds than all other age groups except those between 45 and 64.

**10 MILLION FIND INFORMATION ABOUT DOCTORS OR HEALTH CARE PROVIDERS USING LIBRARY COMPUTERS**

**5 MILLION MAKE AN APPOINTMENT TO BE SEEN**

*"I access my health-insurance provider to schedule and cancel appointments and submit health-related questions."*

WEB SURVEY COMMENT  
ROCKVILLE, MD

**5 MILLION GET THE CARE THEY NEED**

Using library computers to find health care providers sometimes involves not just access to online information, but may be supplemented by library programs that provide care. A librarian in Baltimore, Maryland, described how patrons get flu information online, but also discussed how the library can be leveraged for community health care: "The city health department is very cooperative with us. We've done a lot of joint programs. They give free flu shots in the wintertime that's advertised on the [library] website and all over our nice big window outside, 'Come in and get your free flu shot.' They line up. Staff, public, everybody gets the flu shots."

Sixty-year-old Fayetteville, Arkansas, user Carl, a retiree, described an example of his use of the library computers to research a doctor for a friend to see if help for his condition might be available:

Just the other day, a friend of mine asked me to research a physician that is going to be coming to Arkansas and actually heading ... a satellite medical facility up here to teach. They are going to start that up here and this fellow wanted me to find out if he, this physician, knew about Lyme disease because that was his problem.

### **Finding Health Insurance**

Finding health insurance or purchasing medication is often a major barrier for people trying to access health care. For 28 percent of those using library computers to seek information on health and wellness, public access technology users, public library computers and Internet connections provide a means to locate information about health insurance or drug discount plans (Appendix Table 53). Of those who look for this type of information, 63 percent report that their research helped them to decide to purchase health insurance or enroll in a drug discount program (Appendix Table 54). With the changes to the U.S. health care system being currently discussed in Congress, learning about health insurance and discount plans for medication may become an even more significant use of public library computing resources in the near future.

**Health insurance:** 28 percent of users seeking health and wellness through public library computers learn about health insurance or drug discount plans.

Of all library online users, those most likely to seek out this type of information are:

- People with household incomes below 300 percent of the poverty guidelines;
- Latinos or Hispanics;
- 45–64 year olds; and
- People who speak languages other than English at home.

→**Outcome:** 63 percent of users seeking information about health insurance or drug discount plans decided to purchase health insurance or enroll in a drug discount plan.

Further analysis shows that the odds of seeking information about health insurance or drug discount plans is higher among public access technology users with certain characteristics:

- The odds of seeking information about health insurance is higher for lower income people compared with those making more than 300 percent of the federal poverty guidelines. Among those with income below the federal poverty guidelines, the odds are increased by a factor of 1.39. For those with income between 100 and 200 percent of the poverty guidelines, the odds are higher by a factor of 1.24, and for those with income between 200 and 300 percent of the poverty guidelines, the odds are higher by a factor of 1.44.
- Latino or Hispanic users have greater odds of searching for information about health insurance than non-Latinos or non-Hispanics by a factor of 1.56.
- Users who speak a language other than English at home have odds of seeking information about health insurance or drug discount plans higher than users from English-only households by a factor of 1.60.

Race, gender, and education were not statistically significant factors affecting the odds of using library computers to seek information about health insurance. However, age was a factor: the odds of looking for this type of information is greater for 45- to 64-year-olds than for library technology users who are younger or older.

As an example, 61-year-old Baltimore power user Silas, described previously, discussed his efforts to help a friend find a less expensive source for his medications through a drug discount program using the library computers:

Someone was looking for a medication that was costing him too much. He couldn't afford it any longer. So I went online to find out who made his medication and told him where he could possibly get discounts or free medication. Most of the drug manufacturers subsidize their medication. I think you have to be at the poverty level, or something. But I did search and find out who made his medication and how to contact them.

Library computers and Internet connections are also used to find affordable health insurance. Twenty-one year old Baltimore user Jillian explained how she researched three insurance companies before settling on one to enroll with, "I didn't have to go through the phone, all I had to do was go through the computer and it went straight to them and I got the cards in the mail. You can do a lot on the computer." A single parent with two children and working on her GED, Jillian does not have computer access outside the library.

Finding information about government-sponsored health insurance plans was discussed by many library technology users in both interviews and in survey comments. Veterans participating in case study interviews all reported using the computers to contact the U.S. Department of Veterans Affairs to learn about their coverage for medical treatment and prescription medications.

### Connecting with a Support Group

Once medical care is secured, patients often need additional support to help them manage or cope with illness. Like Lydia, the Fayetteville user described at the beginning of the Health and Wellness section, 17 percent of health and wellness users find an online or face-to-face support group for medical conditions using library computers (Appendix Table 49).

**Support group:** 17 percent of health and wellness users **find an online or face-to-face support group for a health concern** using library computers and Internet connections.

*Of all users of library online services, those most likely to look for information on support groups are:*

- *People with household incomes below 300 percent of the poverty guidelines;*
- *Latinos or Hispanics;*
- *Mixed races, Blacks or African Americans, and American Indians or Alaska Natives;*
- *45–54 year olds; and*
- *People who speak languages other than English at home.*

As with other types of use, certain characteristics of users are related to increased odds of using library computers for finding support groups.

- For people with household income below the federal poverty guidelines the odds of using library computers to look for a support group is higher by a factor of 3.08 than for those with income more than 300 percent of the poverty guidelines. The odds of using library computers for this purpose were also greater, though to a lesser degree, for people earning between 100 and 200 percent of the poverty guidelines by a factor of 2.15 and those earning between 200 and 300 percent of the poverty guidelines by a factor of 1.95 than those earning more than 300 percent of the poverty guidelines.
- Latino or Hispanic users have odds of seeking support groups using library computers and Internet connections higher than non-Latino or non-Hispanic users by a factor of 1.61.
- The odds of using library technology for finding a support group is higher for people from households in which a language other than English is spoken than in English-only households by a factor of 1.91.

Although one of the less frequently reported uses of library computers and Internet connections, interviews with users like Lydia and others demonstrate how important this can be for those who have no other access to the Internet. Nelson, a 20-year-old public access user from Marshalltown, Iowa, also shared how he used library computers to help him find a support group to help him recover from drug and alcohol addictions. For Jack, having access to library computers also allowed him to attend live support group meetings in a chat room and also to make friends who can provide face-to-face advice and support that helps him stay sober.

## Conclusion

The range of activities engaged in by users of library computers and Internet connections in the area of health, and the high use of library public computer services to help others with health issues, indicates that the library computer resources are valued both by the community and the individuals who are using the computers. One of the board members interviewed in Fayetteville, Arkansas, summed this up well in her comments: “People who have a medical emergency and want more information come to the library. They may or may not have a computer setup at home where they can do that. A lot of people are drawn here to do that research because they know there is expertise here to help them if they get stuck. I would probably be one of those if it were outside of my field.”

Although not a substitute for medical care, the Internet provides information about diseases, illnesses, and other medical conditions that can help people make informed decisions about whether and what type of care to pursue. As discussed by the librarians from Oakland, California, libraries offer not only access to the Internet for seeking medical information, they also help patrons quickly find the information they need to prevent illness and manage treatments.

The types of use described in this section and the greater odds of certain types of use among lower income, minority, and people from households speaking languages other than English (indicating a higher likelihood of immigrant status) support both goals of the *Healthy People 2010* by increasing the quality and years of healthy life and helping to eliminate health disparities for those who take advantage of the public computing resources available across the nation in public libraries.

## 7.4 Accessing Government and Legal Services and Information

*The use of the Internet to deliver federal, state, and local government services and as a means for providing access to the justice system has become more and more prevalent in recent years. People use the library's computers to access government programs and services, get help from government agencies, look for government forms, learn about laws and regulations or permits and licenses, and look for assistance with legal questions or problems. In many cases, they are able to follow through in these areas by completing activities online such as signing up for government programs, obtaining a permit or a license, or completing legal forms or finding legal help.*

*As in other areas discussed in this report, libraries have become a de facto service center for many people who use these increasingly important public offerings. Many government agencies are relying on online delivery to improve their efficiency and reach more citizens; for many, this is the only place that access to these services is available. In addition, in times of disaster, the library may be the only functioning access point for critical government services for people from all walks of life.*

*Among all users of library computers and Internet connections, 34 percent of users report that they found government programs or services, obtained important government forms, discovered information about laws or regulations affecting their activities, found and submitted permits or license applications, or*

*obtained help with a legal issue. Although not as high as in some other areas, 40 percent of these users indicated that they had undertaken these activities on the library's computers to help a relative, friend, colleague, or others.*

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The following section explores the ways that people use public library computer and Internet services to find and use government and legal services important to their lives. An overview of the most frequent types of use reported in this area and the characteristics of users who engaged in these activities is followed by a more in-depth look at each of the six activities the U.S. IMPACT Study asked about:

- Learning about government programs or services;
- Getting help from a government official or agency;
- Obtaining government forms;
- Learning about laws and regulations;
- Learning about permits and licenses; and
- Looking for assistance with a legal question or problem.

The use of public library computers to engage in these activities related to government service or program offerings or legal needs is of high interest to those public agencies and services that are trying to improve services to people across the country.

## **Most prevalent users for government and legal services**

Antonia is an avid user of the Enoch Pratt Free Library computers and freely tells others about the library's computers and free classes. At 49 and college educated, she also often looks up information for others without being asked. Antonia describes her use of the computers for gaining access to government information:

Everyone's suffering economically, but when you force a senior to live on \$700 a month then somewhere along the line there's going to have to be some sacrifices and a lot of [seniors] do it with food. So there are rules and regulations governing food stamps. So I just come to the library, look it up on the computer, and then I go tell them.

As online delivery becomes the norm for everyday government services, reliable access to the Internet becomes an important issue for those who are using these services. A Pew Internet study in 2007 examined the role of public libraries in providing access to government information and found that, “Americans on both sides of the digital divide—those with both low-access and high-access to computing—are equally likely to use the public library for information that helps them address matters and solve problems in their lives—especially those matters that lie in some way within the government domain.” (Estabrook, Witt, and Rainie 2007).

The heavy use of libraries as an access point for government services came to national attention during the hurricanes of 2004 and 2005 (Jaeger et al. 2007), but restrictions in hours and locations of government sponsored access centers were a factor in pushing those who use them toward public libraries (Bertot et al. 2006a, 2006b; McClure, Jaeger, and Bertot 2007). The widespread distribution of libraries, their often proximate location to government agencies, and their convenience to users also contribute to heavy use for these services.

The study found that 34 percent of users of library computers and Internet connections were accessing government or legal information and services (Appendix Table 55), and of those users, 40 percent helped a family member, friend or stranger with needs in this area (Appendix Table 56).

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## Overall Government and Legal Use

*In the study, **34 percent of the users took advantage of library computers to access government and legal services.***

*Use on behalf of others is also reported in this area, with 40 percent of these users indicating that they use library computers and Internet connections to complete activities related to government or legal services for a relative, friend, colleague, or someone else.*

*The use of library technology for government or legal needs is highest among:*

- *People without access to the Internet except at a public library;*
- *Lower income and impoverished people;*
- *Hispanic or Latino people; and*
- *45–64 year olds.*

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The use of library technology for government or legal needs is highest among those with lower incomes. Those having incomes between 100 and 200 percent of the poverty threshold have higher odds of using the library computers for this

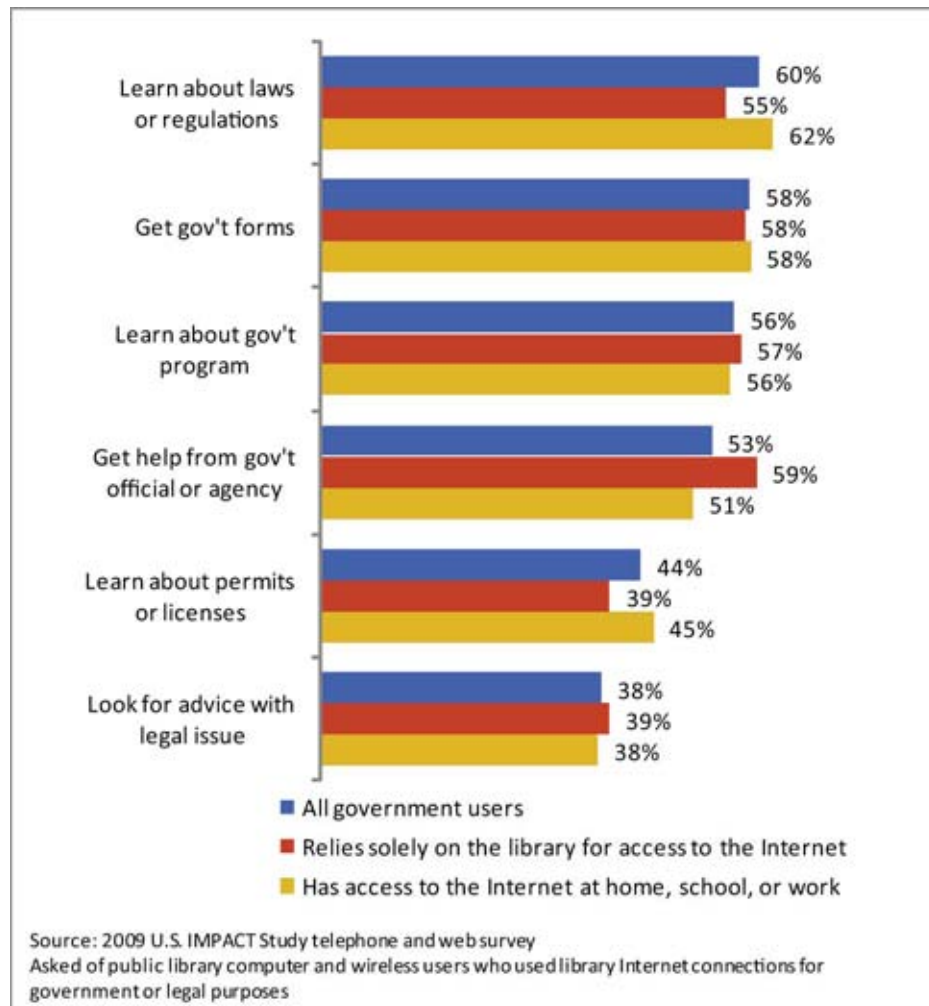
purpose by a factor of 1.52 and those below the poverty threshold by a factor of 1.23 compared to those with incomes above 300 percent of the poverty threshold. It is likely that for people with limited income, the library provides their only access to important government and legal services. In addition, users with the following characteristics are also more likely to use library computers for this purpose:

- The odds of Latino or Hispanic users seeking government and legal services or information are higher than those of non-Latinos or non-Hispanics by a factor of 1.48.
- The odds of library computer in this area were highest among users between the ages of 45 and 64 years compared with all other age groups.
- Women show lower odds (by a factor of 0.82) of engaging in government or legal activities than men.

## **Activities Associated with Government and Legal Services**

Figure 14 shows use across the government and legal activities by availability of alternate access to computers and the Internet. The top activities reported by all users in this activity area were learning about laws and regulations, getting government forms, and learning about government programs.

Figure 14: Government and legal activities by availability of alternative access



While there is no substantial difference between users with or without alternative access to computers for some of the activities shown in Figure 14, 62 percent of government and legal users with alternative access learned about laws or regulations compared with 55 percent of those who rely on libraries for Internet access; this pattern holds for use aimed at learning about permits or licenses. Conversely, government and legal users without alternative access were more likely to look for help from government officials or agencies than those who have access at home, school, or work.

### *Using Government Services and Programs*

The U.S. IMPACT Study asked about three different aspects of government service use: getting help from a government official or agency, accessing government programs or services, and retrieving and submitting government forms. Users were also asked about three aspects of legal services: learning about laws and regulations, getting legal help, and obtaining permits and

14 MILLION SEEK HELP FROM GOVERNMENT AGENCIES OR OFFICIALS

13.5 MILLION GET THE HELP THEY NEED

licenses. Each of these activities is discussed in more detail in the following sections.

### Getting Help from a Government Official or Agency

Seeking help from government officials or agencies was one of the most frequently reported activities, with 53 percent of those using the library computers to get government or legal information indicating that they used library computers and Internet access for this purpose (Appendix Table 57). Of these users, 84 percent reported that they were able to get the help they needed, suggesting a high follow through and outcome in this use area (Appendix Table 58).

*The study shows that 55 percent of the users are seeking help from a government official or agency. The users most likely to use the library for this purpose are:*

- *People with household incomes less than twice the poverty guidelines;*
- *Mixed races, Blacks or African Americans, and Native Hawaiians or Pacific Islanders;*
- *45–64 year olds;*
- *Men; and*
- *People who speak languages other than English at home.*

**→Outcome:** *84 percent of those seeking help from a government official or agency indicated that they had received the help they were seeking.*

Further analysis shows that certain populations have higher odds of using library computer services for seeking information about government agencies and officials:

- The odds of seeking help from a government agency are higher for those with lower incomes, with those having a household income below the federal poverty guidelines higher by a factor of 1.42 and those with an income between 100 percent and 200 percent of the poverty guidelines higher by a factor of 1.48 than those with income more than 300 percent of the poverty guidelines.
- Users identifying with two or more races have greater odds of seeking government information by a factor of 1.49 than Whites and odds are higher for Blacks or African Americans and Native Hawaiian or Pacific Islanders by a factor of 1.31 and 1.30, respectively. Asians have lower odds of using the library for this purpose, by a factor of 0.48 compared to Whites.

- The odds of women using the library computers for this purpose are 29 percent lower than men.
- Users who speak a language other than English at home have odds of seeking information about government agencies or officials higher than users from English-only households by a factor of 1.52.

In addition, users between the ages of 45 and 64 years show greater odds of using the library for seeking information on government agencies and individuals than those who are younger or older.

Owen is a 59-year-old Vietnam veteran who earned \$30,000 in 2008. He has been using the Enoch Pratt Free Library's computers daily, sometimes twice a day, for many purposes, especially information searching, email, classes and training, and connecting with others. Owen is a strong library technology advocate who looks up information for other people, helps others with their computing skills, and refers new people to the library's computer lab. His main activity involves finding information from the U.S. Department of Veterans Affairs. When interviewed, he was searching for information about getting hip replacement surgery covered and was also researching a Department of Veterans Affairs-covered educational program for phlebotomy that he hopes—despite his disability—will help him find a new career.

Like Owen, many users of public access computing who seek help from government agencies are motivated to use online services for economic, health, and educational reasons. The wide range of government agencies that have moved resources online makes Internet access an essential prerequisite for finding assistance.

### Accessing Government Programs or Services

Using library computing services to learn about government programs or services was reported by 56 percent of users seeking government or legal services and information (Appendix Table 59), with 37 percent of these users actually applying for a program or service using the library computer (Appendix Table 60).

***In the study, 56 percent of the users seeking government or legal services or information reported using the library computers to learn about government programs and services.***

*Among all users of library computer and Internet services, those most likely to engage in this activity are:*

- *People with household incomes below 200 percent of the poverty guidelines;*
- *Users of mixed race, Blacks or African Americans, and Native Hawaiian or Pacific Islanders;*
- *45–64 year olds;*
- *Men; and*
- *People with grade school education or education beyond high school.*

**→Outcome:** *37 percent of these users applied for a government program or service using a library computer.*

Further analysis shows that certain populations have higher odds of using library computer services for seeking information about government agencies and officials:

- The odds of learning about government programs and services are higher for those with lower income levels, with those having a household income below the federal poverty guidelines higher by a factor of 1.33 and those with an income between 100 percent and 200 percent of the poverty guidelines higher by a factor of 1.51 than those with income more than 300 percent of the poverty guidelines.
- Users identifying with two or more races have greater odds of seeking government information by a factor of 1.69 than Whites and odds are higher for Blacks or African Americans and American Indians or Alaska Natives than Whites by a factor of 1.47 and 1.80, respectively.
- Women have lower odds of men using the library computers for this purpose than men, by a factor of 0.70.

In addition, users between the ages of 45 and 64 years show greater odds than both older and younger users, and those with only grade school education, some college, a two-year degree, or post-graduate education show greater odds than those with a high school diploma of using the library for accessing government programs and services.

The age dimension may be a reflection of health issues or employment needs. For example, Rick was able to receive government assistance through research he did on library computers. A 53-year-old from Oakland, California, Rick was

able to receive government assistance as a result of research he did on library computers. Rick has disability coverage because of previous heart attacks and learned from using the library computers that he is eligible to receive a pacemaker and defibrillator. He used the library computer to apply for these benefits and checks the status of his coverage from the library on a regular basis.

In Baltimore, Maryland, a librarian explained that although unemployment applications are on the rise, she was also seeing “people who are poor immigrants who need to have reservations, appointments at ICE [Immigration and Customs Enforcement]. ICE requires that they make the reservation online and directs them to the public library to make the reservation or the appointment.” This is another example of the importance of public library computers as an adjunct to government agencies that have moved their services online. For many people, the library is the only way to reach these agencies.

### Retrieving and Submitting Government Forms

The increasing use of online forms by government agencies for purposes ranging from filing tax returns to seeking citizenship makes it imperative that users have access to computers and the Internet. In many cases, public libraries are the only, or the most convenient, place for people to obtain or file these forms. Libraries also have the added value that library staff can provide help in cases where users might not have the knowledge or expertise to find or complete forms on their own.

A good example of this added value came from a Teen Zone librarian in Oakland, California, who commented that, “For immigration, there is a whole family that we’re helping. There were online forms that they had to fill out, but they didn’t speak English that well so we had to get visa renewal forms for them. The whole family was huddled around the reference desk while we were trying to access this form.”

This use of library computers to obtain government forms (58 percent of government and legal users; Appendix Table 61) and submit them online (46 percent of users who retrieved them; Appendix Table 62) was the second most frequently reported activity in the government and legal use area.

*In the study, 57 percent of those using library computers for government and legal services and information indicated that they had used the library computers and Internet services to **obtain government forms**.*

*Of all users of public library computer services, those most likely to use the library for this purpose are:*

- *45–64 year olds and those older than 75;*
- *Men;*
- *Those with grade school or post high school education; and*
- *People who speak languages other than English at home.*

**→Outcome:** *46 percent of these actually submitted a government form.*

A few factors increased the odds of someone using the library's computers to help find and submit government forms:

- Users who had completed some high school or had the equivalent of a high school diploma had the lowest odds for use in this area than all other levels of educational attainment.
- People who speak languages other than English at home have greater odds than those who speak English of using the library to obtain government forms by a factor of 1.36.

As in other areas of government activity, users between 45 and 64 years of age and those older than 75 have slightly higher odds of using the library for this purpose than those of other ages, and the odds of men completing this activity are higher than those of women.

Other types of forms that users commonly need include income taxes, social security, and disability applications. Marshalltown, Iowa, user Shawn and his girlfriend both did their taxes online at the library; another user in Oakland, California, Rick, discussed previously, uses library computers to fill out his social security paperwork: “[I] fill out forms like applications. And, I’m on Social Security/Disability so I have a PIN number for my social security site and I go in there and see if there are any changes or anything to it.”

A final example of the use of library computers for access to government forms was mentioned earlier. In times of disaster, the library is often the only place people have to access the Internet. A staff member in Fayetteville, Arkansas, described such a situation: “One story I remember after Hurricane Katrina—we’re only an 11-hour drive north of New Orleans—the hotels were so full,

**17 MILLION  
PERFORM LEGAL  
RESEARCH USING  
LIBRARY COMPUTERS**

*“Library computers are a big valuable resources for my disabled consumers to research current laws, the Americans with Disability Act especially.”*

WEB SURVEY COMMENT  
STOCKTON, CA

people just kept coming and there was an older gentleman here. We had him on a research computer and our staff helped him fill out the FEMA paperwork.”

It is clear that libraries provide a critical access point for many users to gain access to the forms that enable them to procure services in daily life as well as emergency situations. The increasing emphasis by government agencies on using online forms to improve the efficiency and effectiveness of their services means that providing access for all is particularly important, and public libraries provide an important part of the service delivery network. The presence of helpful and knowledgeable staff that can assist those users who are struggling is an added benefit that can be significant in many cases.

### *Legal and Regulatory Issues*

For those who are in need of legal help or working with the justice system, the availability of computers and Internet connections at the library provides the opportunity not only to learn about laws, regulations, and other legal information, but to actually follow through on their research to complete activities that may be easier (or only available) in an online mode, such as obtaining permits and filing legal forms.

### **Learning about Laws and Regulations**

A heavy use of public library computing services relates to finding out about laws or regulations, a growing area of need for those who cannot afford to pay for legal services. In the study, 60 percent of users in the government and legal area indicated that they had used library computers or wireless networks to access this type of information (Appendix Table 63).

*In the study, 60 percent of those using the library online services for government and legal services and information were **learning about laws and regulations**.*

*Of all library computer users, those most likely to seek out this type of information are:*

- 45–64 year olds;
- Men;
- People with education beyond high school; and
- People who speak languages other than English at home.

The study shows that certain populations have higher odds of using library computer services for seeking information about laws and regulations:

- Women show lower odds of using the library for these purposes than men by a factor of 0.67.

**12 MILLION LEARN ABOUT PERMITS OR LICENSES**

*"I looked up information to obtain a hunting license at the Ohio Dept. of Natural Resources website."*

WEB SURVEY COMMENT  
COLUMBUS, OH

**3.3 MILLION APPLY ONLINE USING A LIBRARY COMPUTER**

*"I renewed my car registration."*

WEB SURVEY COMMENT  
Richmond, VT

- The odds of someone who speaks a language other than English at home are greater by a factor of 1.38 than someone with English as their primary home language of using the library for seeking information about laws and regulations.

In addition, users between the ages of 45 and 64 years show greater odds than both older and younger users, and those with some college, a two-year degree, or a post-graduate degree show greater odds than those with a high school diploma of using the library for seeking information about laws and regulations.

Immigrants tell about using the library's computer services to work through the legalities of gaining resident status, making it possible for them to participate in the community more effectively. Lorenzo, an 18-year-old Oakland, California, user, said: "I took it upon myself to look up how to stay here legally. It's free information, instead of consulting with a lawyer; you can actually get free help online. I did that to help my entire family."

Others used the library's computers to help friends and family avoid situations that could cause legal problems, by doing research ahead of time and using the information to make better choices than they might have without access to the services provided by the library. Carl, a 60-year-old retiree who uses the computers every day at the library in Fayetteville, Arkansas, says: "One time I looked up something for my sister-in-law who was taking her parrot down to California and I just happened to know that at that time there was an outbreak of this Avian Newcastle disease and I said you had better check it out, find out if you can take that bird down there. It was a good thing because they couldn't. Or if they took it there and they found out it would have to be destroyed."

The use of public libraries for direct access to the laws and regulations of our country, our cities, and other jurisdictions contributes both to a better informed citizenry and to the ability of people to avoid unnecessary conflicts with the law and other regulatory agencies. The availability of these resources to those without other access is one important benefit that the computers and Internet connections in the libraries provide to their users and the communities in which they live.

### Getting Permits and Licenses

As legal and regulatory agencies move toward more online services, being able to learn about and apply for permits and licenses online becomes a necessary part of many people's lives. Results from the survey show that 44 percent of the government and legal users find information on permits and licenses (Appendix Table 64), and 27 percent of those using it for this purpose (Appendix Table 65) go on to actually apply for a permit or license through the library computers.

**Getting permits and licenses** was reported as an activity by **44 percent** of the users who were looking for government or legal information or services.

Among all users of library online services, those most likely to engage in this activity are:

- Latinos or Hispanics;
- All races other than White;
- 45–54 year olds;
- Men;
- People with some college or two-year degrees; and
- People who speak languages other than English at home.

→**Outcome:** 27 percent of these users applied for a permit or license.

The odds are higher that people with the following characteristics will use library computers to look for information on permits and licenses:

- Latinos or Hispanics, by a factor of 1.66 over those who are non-Latino or non-Hispanic.
- Mixed race, Black or African American, Asian, American Indian or Alaska Native, or Native Hawaiian or Pacific Islander users, by a factor of 1.64, 1.44, 1.52, 1.31, and 2.07, respectively, over Whites.
- Women show lower odds than men of use for this purpose by a factor of 0.74.
- Those who speak a language other than English at home by a factor of 1.41 over someone with English as their primary home language.

In addition, users between the ages of 45 and 54 years show greater odds than both older and younger users, and those with some college or a two-year degree show greater odds than those with a high school diploma of using the library to learn about permits and licenses.

An example of this use comes from an interview in Baltimore, Maryland: 23-year-old Emilio from the Dominican Republic who used the library computers to help a friend get a passport. His friend needed the address of the office in Washington, D.C., where a passport could be obtained on short notice, and Emilio was able to find that information for his friend.

As with those who use the library to find government forms, the availability of the computers and Internet connections provide access to regulatory services that are important in day-to-day activities, and may not be available to them without the library's services.

## Getting Legal Help

Finding legal help can be a challenge for many people, and the library computer services are often one way to get that help. Indeed, more than 38 percent of the users indicated that they had used their library's computing services to research or get assistance with legal issues (Appendix Table 66), with 83 percent of those who used the library for this purpose (Appendix Table 67) indicating that they had found the legal help needed to assist them with their problems.

**More than 38 percent** of government and legal users looked for **advice or assistance with a legal question or problem.**

*Of all library computer users, those most likely to use the library for this purpose were:*

- *People with household incomes below 200 percent of the poverty guidelines;*
- *Hispanics;*
- *All races other than White;*
- *45–54 year olds;*
- *Men;*
- *People with some high school or some college; and*
- *People who speak languages other than English at home.*

→**Outcome:** 83 percent of these users indicated they had found the legal help they were looking for.

The study shows that the odds of seeking legal help are higher for those with certain characteristics:

- People with household income below the federal poverty guidelines have higher odds by a factor of 1.71. Those with income between 100 percent and 200 percent of the poverty guidelines were higher by a factor of 1.75 than those with incomes more than 300 percent of the poverty guidelines.
- The odds of Latinos or Hispanics using the library for this purpose were higher by a factor of 1.53 than those who are non-Latino or non-Hispanic.
- Mixed race, Black or African American, Asian, American Indian or Alaska Native, or Native Hawaiian or Pacific Islander users have higher odds of using the library for this purpose than Whites (by a factor of 1.72, 1.48, 1.25, 1.27, and 2.50, respectively).
- The odds of men using the library for this purpose were higher by a factor of 1.27 over women.

- Those who speak a language other than English at home were higher for this use by a factor of 1.43 over someone with English as their primary home language.

In addition, users between the ages of 45 and 54 years show greater odds than both older and younger users, and those with some high school or some college show greater odds than those with a high school diploma of using the library to seek legal help.

Users interviewed in the study indicated that they used the library computers in many ways to help them with legal problems. Moses, a 29-year-old man with a disability who relies solely on the Fayetteville library for his computer and Internet access, described researching specific laws when his brother was accused of a felony that he argued was unwarranted. Moses was able to help his brother by becoming familiar with the law and how it applied to his brother's situation. As a result, Moses' brother was not charged with the crime.

Cornelius (discussed previously in Employment), a 51-year-old who was formerly homeless, used library computers to seek legal help for a woman he was providing care for in exchange for a place to live. His charge was an adult woman with severe cognitive and physical disabilities, who had recently been declared legally incompetent. Cornelius used the library's computers to research her case and learn how to submit a countersuit. He filed the documents online and was able to get the ruling overturned. Today, the woman has supervised visitation rights with her son because of Cornelius' skilled use of the library's computer resources for legal help.

These and many other instances point out the active use people make of the library's computers for access to the legal system and as a means of finding help for their legal problems. In some cases, it makes a difference not only in their own lives but in those around them. Particularly for those who are unable to afford or find legal assistance or advice, the library provides a way for them to gain access to an important resource, and gain valuable information that can help them in many ways.

## Conclusion

The wide variety of activities reported by users in the realm of government and legal services demonstrates the intricate connection between users and their community on a local, regional, and national level. The increasing reliance of government agencies and the legal system on online transactions, from reservation systems for immigration appointments to legal filings, makes it ever more important to ensure that all people have access to these services.

The characteristics of those users who have higher odds of using the public library services to accomplish the many activities described in this section, from obtaining government forms, to learning about laws and regulations or government programs or services, to gaining help from a government official or agency, indicates that many of them would not be able to gain access to these services were it not for the library. In particular, those people who have no other access to the Internet except at a public library, those with lower incomes, and those speaking languages other than English at home stand out as primary beneficiaries of these services.

Free access to the Internet through the library's computing services is an important adjunct to government and judicial efforts to move programs online, and should be considered an integral component of efforts to make those services more widely available, not just to those who have home or work access to the Internet, but to everyone, including those who may only be able to access these services at their local library.

## 7.5 Participating in Community Life

*With the increasing use of the Internet and online media to support political and social activities and provide access to news and current events across the country, access to the Internet becomes an important component of community life. The study found that people use their library's computers and Internet connection to organize or participate in community groups, volunteer, engage in political and social causes, and keep up with the news and current events.*

*The actions enabled by access to the library computers for many users are perhaps even more important, ranging from finding funding sources or members for community groups to donating to political or social causes. As communities become more distributed and less based on geographic proximity, the library is helping those who might otherwise have no other access to online communities participate in an active way in our society.*

*Overall, 33 percent of users (25.5 million people) used their public library's computer and Internet resources to learn about social or political issues or to participate in community life. Of these users, 40 percent indicated they had undertaken activities in this area for a relative, friend, colleague, or someone else in the past year.*

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Since the publication of Robert Putnam's *Bowling Alone* in 1995, researchers across many disciplines have paid increased attention to the notion of civic engagement, and the effect of technology on participation in political and

community affairs. Although Putnam emphasized the negative effect of technology on civic engagement, many organizations, including international and domestic government agencies, nonprofits, and universities, have been working toward developing ways to harness technology to increase participation in collective efforts in the public sphere.

The following section explores the ways that people use public library computer and Internet services to participate in their communities and the national political arena. An overview of the most frequent types of use reported in this area and the characteristics of users who engaged in these activities is followed by a more in-depth look at each of the three activity areas the U.S. IMPACT Study surveys asked about:

- Organizing and managing community groups;
- Participating in political and social activities; and
- Keeping up with news and current events.

For each of these areas, survey results discussing the number and characteristics of the users are illuminated by excerpts from interviews with library staff and administrators, community agencies, and the users themselves.

## **Most Prevalent Users for Community Participation**

Roberto, a 60-year-old man who was introduced in the discussion of power users, provides a good example of how people use the library for community engagement. He gets his news through the Fayetteville Library's Internet services: "News, I don't bother with newspapers any more. I don't have a TV and no cable access, and so either the radio, NPR, or the computer access for news is my primary news source. I like staying on top of the news." The library's Internet services also allow him to participate in national events: "I watched Obama's inauguration here... I couldn't go to Washington but it still felt like a historical moment watching it with the community here."

He also is an active participant in political affairs through his use of the library computers to participate in independent media: "I'm listening in real time - I'm typing up what's going on... I'm putting it on the Indie Media Network so that it was going out to a global audience. Citizen journalism at a level I've never seen before, and I learned to do that using the library computers and the higher bandwidth they have here." Roberto's use of the library computers and Internet connections demonstrate that they can be powerful agents for including those

who may not have other means of access to local and national community activities.

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## Summary of Findings

*The study shows that **33 percent of the users take advantage of library computers to participate in community life.***

*Use on behalf of others is also reported in this area, with 40 percent of community participation users indicating that their use was for a relative, friend, colleague, or someone else.*

*The use of library technology for activities related to community participation is highest among:*

- *People without access to the Internet except at a public library;*
- *Lower income and impoverished people;*
- *Hispanic or Latino people;*
- *People of mixed race, Blacks or African Americans, American Indians or Alaska Natives;*
- *14–24 year olds;*
- *Men; and*
- *Those with some high school or education beyond a high school degree.*

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The U.S. IMPACT Study shows that lower income users (those making less than 300 percent of the poverty guidelines) have higher odds of using the library's online services for community participation than those making more than 300 percent of the poverty guidelines (by a factor of 1.34 for those below the poverty guidelines, rising to a factor of 1.43 for those making 200–300 percent of the poverty guidelines). Other user characteristics that affect the likelihood of use for this purpose include:

- The odds of Latinos or Hispanics using the library for this purpose are greater by a factor of 1.47 than non-Latinos or non-Hispanics. People who are of mixed race, Black or African American, or American Indians or Alaska Natives have higher odds (by a factor of 1.33, 1.36, and 1.58, respectively) than Whites of using the library computers for community purposes.
- Perhaps because of their familiarity with technology, the study also found that younger library users had higher odds of using the computers for these purposes as well (14–18 year olds by a factor of

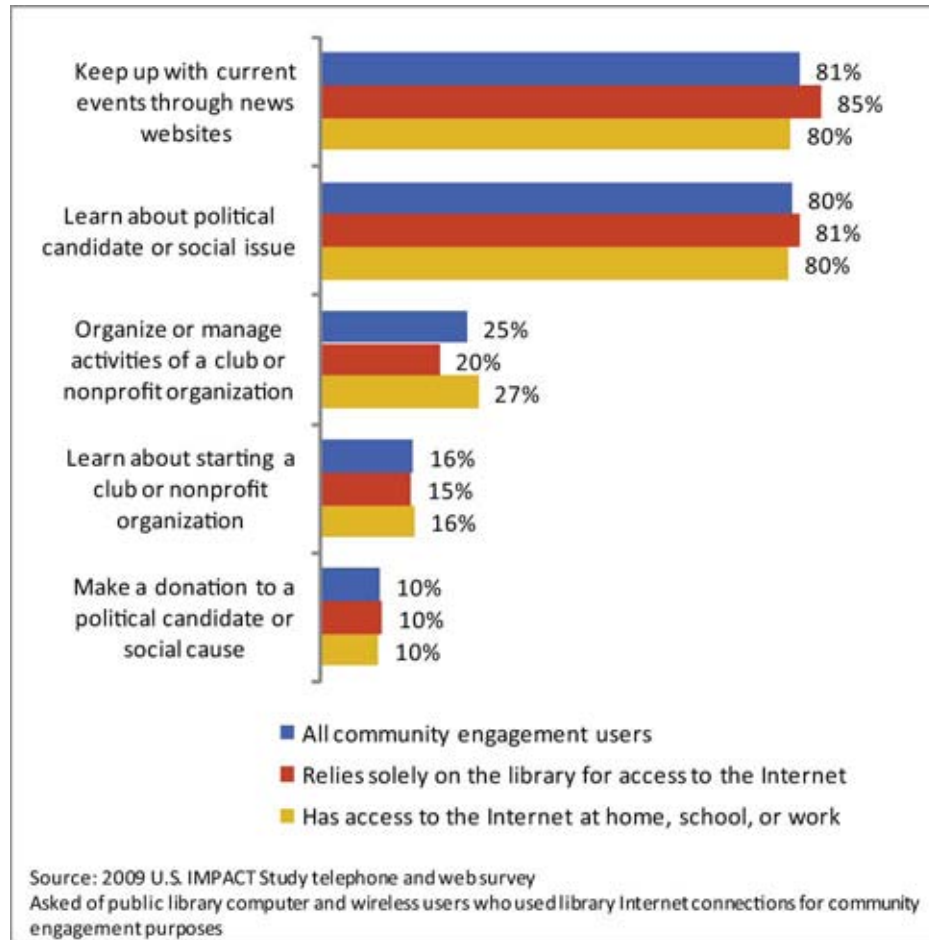
1.86, and 19–24 year olds by a factor of 1.79 greater than those older than 75 years).

- As in many other areas explored in this study, women show lower odds (by a factor of 0.75) of using the library for community engagement than men.
- Finally, those individuals with education levels of some high school or higher than a high school diploma uniformly show higher odds of use for community engagement than those with a high school diploma, perhaps indicating a greater awareness of social and political events.

## **Activities Related to Participating in Community Life**

The top activities related to participating in community life were keeping up with current events through news websites and learning about political candidates or social causes (Figure 15). Users in the area of community participation showed mostly minor variations across all reported activities in this area based on whether they depend solely on the library for their Internet access or have alternative access at home, school, or work. The one area where those who had access only at the library showed higher use was in the use of library online services to keep up with news and current events (85 percent compared to 80 percent). Conversely, those users with alternative access showed a higher use for organizing or managing a club or nonprofit organization (27 percent compared to 20 percent).

Figure 15: Top community participation activities by user type



### *Participating in Community Life*

For the purposes of identifying community activities that could be accomplished through the use of library computer services, this study defined civic engagement as individual and collective actions using online resources designed to identify and address issues of public concern, including efforts to work with others in a community to solve a problem or interact with the institutions of representative democracy. Flowing from this, the study asked about three core activities: organizing and managing community groups, participating in political and social activities, and keeping up with the news and current events.

### **Organizing and Managing Community Groups**

Participation in civic groups, including clubs, community organizations, and nonprofit associations, although not one of the most frequent uses of public access computing services and resources, is important for many users and has broad implications for the impact of the library on community connectedness.

**4 MILLION LEARN  
ABOUT STARTING A  
CLUB OR NONPROFIT  
GROUP**

**6 MILLION MANAGE  
THEIR GROUP'S  
ACTIVITIES**

*“We used the Internet to develop a working donor list to provide funding for an international problem solving competition.”*

WEB SURVEY COMMENT  
TULSA, OK

Nearly 16 percent of community participation users, or 4 million people, learned about starting a club or nonprofit association (Appendix Table 70) and 35 percent of these users actually started a club or association (Appendix Table 71).

*The study shows that **nearly 16 percent of community participation users (4 million people) learned about starting a club or a nonprofit association.***

*Among all users of library online services, those most likely to use the library for this purpose are:*

- *People who are of mixed race, Blacks or African Americans, or American Indians or Alaska Natives;*
- *Men; and*
- *Those who speak languages other than English at home.*

**→Outcome:** *35 percent of users who learned about starting a club or nonprofit (1.4 million people) indicated that they had used the information they found to start a club or nonprofit organization.*

People who are of mixed race, Black or African American, or American Indian or Alaska Native have higher odds (by a factor of 2.06, 1.99, and 1.60, respectively) than Whites of using the library computers for finding information about starting a club or nonprofit association. The odds of women learning about starting a club or association were lower than men by a factor of 0.58, and the odds of those who speak a language other than English at home were higher by a factor of 2.00.

Nearly 25 percent of users organized activities of an already established club, civic or community group, or nonprofit association (Appendix Table 72). Users with incomes less than 300 percent of the poverty guidelines have higher odds of using library computers for this purpose than those with incomes 300 percent or greater than the poverty guidelines. The odds of American Indians or Alaska Natives are greater by a factor of 1.33 than Whites of using the library for managing a community organization, and the odds of using the library for this purpose increase steadily with increasing education beyond a high school degree. Finally, those whose language at home is other than English have higher odds by a factor of 1.73 than those whose primary home language is English of engaging in this activity.

**Nearly 25 percent of community participation users manage the activities of a club or nonprofit association using the library's online services.**

*Of all users of library computer services, those most likely to use the library for this purpose are:*

- *People with household incomes less than three times the poverty guidelines;*
- *American Indians or Alaska Natives;*
- *People with education beyond a high school degree; and*
- *People who speak languages other than English at home.*

**→Outcomes:**

- *Of users who said they used library computers to manage a club or nonprofit, 76 percent scheduled meetings with members of their organization.*
- *Of users who said they used library computers to manage a club or nonprofit, 68 percent used the library computers to promote their organization's activities or recruit new members.*
- *Of users who said they used library computers to manage a club or nonprofit, 33 percent looked for grants or funding for their organization.*
  - *57 percent of those who looked for grants applied for funding.*
  - *68 percent of those who applied for grants received funding (over 813,000 people).*

The study asked further questions about these activities and found that users had specific things they were trying to accomplish through their use of the library's online services. These include scheduling or reporting on meetings (76 percent of the users who reported using the library computers to manage a club or nonprofit; Appendix Table 73), promoting activities or attracting new members (68 percent of these users; Appendix Table 74), and looking for grants or funding (33 percent of these users; Appendix Table 75).

In this last category, 57 percent of the users who looked for funding (about 1.2 million people) indicated that they had actually applied for grants or funding (Appendix Table 76), and 68 percent of those users who applied (over 813,000 people) had actually received funding (Appendix Table 77). This is concrete evidence that libraries are providing the necessary tools and monetary support for people to engage in community activity, providing a valuable service to their users who may not have access to other means of connecting with people in their community.

Examples of these community organizing activities come from many different areas. In Baltimore, Maryland, a librarian recounted the story of a user who, "plans her church bible school and does stuff on the computer for the handouts. This is a place where service people like her come to use the computer; they do

newsletters, calendars, flyers, and all that sort of thing.” Charise, a 63-year-old retired school teacher who was visiting family in Marshalltown, Iowa, at the time of her interview at the library, also uses the library computers to participate in church activities: “It keeps me up to date on my activities in Minneapolis. I’m active in my church, and I sometimes have church emails to write and answer.”

Oakland, California, patrons, both adults and youth, reported using the library computers for organizing community groups. The Oakland youth focus groups included one consisting of members of the library’s youth advisory board. A member explained, “On the leadership council we also take minutes, so we actually take turns taking minutes and we type it up and send it to everyone. There’s also a group, a Yahoo group for the YLC so we use Internet for that.” Another participant added, “We have an upcoming project and we’re going to use the Internet to help create posters because we’re trying to recruit YLC members.”

A user in Oakland also noted her use of public computing resources to help with her role in a nonprofit organization: “I take the meeting notes and type it up so I have to use the Internet to send it to everybody. I also do the statistics.” Ophelia, a 20-year-old college student introduced in the Education section, uses the computers for multiple purposes, including supporting her father’s business. She is the secretary for her sports club at UC Berkeley and uses the computers at Oakland’s libraries “to talk with the treasurer” because she can “keep up-to-date on how much money [they] have for travel expenses.”

Although we did not specifically ask, 87 survey respondents reported that they used the library computers to find out dates and times for events in their local communities either through news outlets or government websites. For example, a patron of the Free Library of Philadelphia in Pennsylvania uses the computers for “looking at event calendars for city-sponsored events and community-sponsored events like block clean-ups.” Users also reported using office applications on library computers to manage mailing lists or create fliers for community groups.

These examples, and many others, provide evidence that public library technology provides important resources for building community within populations that may not have other means of connecting with each other. This role may help integrate these users into the larger community, or provide a way for them to build support for their community needs by providing the important online tools that allow them to stay in touch, raise funds, and recruit new members. Although the percentage of users reporting these activities is smaller than other uses, these users are actively engaged in working with their

community and making a difference in the lives of others through their activities.

## Volunteering

Although this study did not ask about the use of library computers to find volunteer opportunities, survey comments showed volunteer activity occurring in many different situations. For example, one respondent reported having found a volunteer opportunity with the American Red Cross, and another reported getting involved with his local chapter of the Big Brothers/Big Sisters organization.

A user in Fayetteville, Arkansas, described finding volunteer opportunities through the library's computers: "Occasionally, I will see a site about some local thing going on, like there was a clean-up of a creek and there's a website for a little organization that does restorations of wetlands and that sort of thing, and I found about the whole thing; I participated in that."

An Oakland, California, user described her use of the library computers for volunteer activity: "One of my friends wanted to volunteer. So she wanted to do something in childcare, [she has] fun doing that. So I really didn't know where to go on the computer but went to Americanvolunteers.com and they had childcare and tutoring and all kinds of other stuff on there."

In addition, the library's computers sometimes were used for actual volunteer activities. For example, some respondents reported using the library computers to tutor others.

## *Participating in Political and Social Activities*

Perhaps not surprising, considering that data collection occurred in an election year, learning about political and social issues and political candidates was a high use of library computer services: 80 percent of community participation users used the library's computers to learn about political candidates or social issues (Appendix Table 78). Evidently, these users do more than learn about political issues, however, because 76 percent of these users also used library computers and Internet connections to help them decide whether to support a political cause or candidate (Appendix Table 79).

*The study shows that **80 percent of community participation users learned about a political issue, a candidate for office, or a social cause.***

*Of all users of library technology services, those most likely to use the library for this purpose are:*

- *People with household incomes less than 300 percent of the poverty guidelines;*
- *People of mixed race, and Blacks or African Americans, and American Indians or Alaska Natives;*
- *14–24 year olds and 45–74 year olds;*
- *Men; and*
- *People with some high school education or education beyond a high school diploma.*

**→Outcome:** *76 percent of the users learning about a social or political issue or candidate indicated that the information they found helped them decide whether to support the issue or candidate.*

Certain characteristics increased the odds of users engaging in political activity using library computers:

- Users with incomes less than 300 percent of the poverty guidelines have higher odds of using library computers for this purpose than those with incomes 300 percent or greater than the poverty guidelines.
- People who are of mixed race, Blacks or African Americans, or American Indians or Alaska Natives have higher odds (by a factor of 1.30, 1.22, and 1.40, respectively) than Whites of using the library computers for finding information about political or social issues.
- The odds of youth (age 14–24 years) and people aged 45–74 years were higher than those aged 75 years or older of using the library’s online services to learn about social or political causes.
- The odds of women were lower by a factor of 0.67 than men of using the library computers for political and civic activities.
- Those with education levels more than a high school diploma showed the highest odds ratios of engaging in political or social activities, perhaps reflecting a greater political awareness from their education, although those with some high school also showed higher odds than those with a high school diploma but lower than those with post-high school education.

Similar to the reluctance to use the library computers found in activities associated with other financial transactions, however, only 10 percent of the community participation users made a donation to a political cause or candidate using a public access computer or wireless Internet connection (Appendix Table 80).

*Of the library computer users who engaged in community participation activities, 11 percent **used the library computers to make a donation to a political candidate or social cause.***

*Of all library computer users, those most likely to use the library for this purpose are:*

- *People of mixed race, Blacks or African Americans, and American Indians or Alaska Natives;*
- *23–34 and 55–74 year olds;*
- *Men; and*
- *People who speak languages other than English at home.*

A few factors increased the odds of someone using the library’s computers to make a donation to a political candidate or social cause:

- People who are of mixed race, Blacks or African Americans, or American Indians or Alaska Natives have higher odds (by a factor of 2.68, 2.18, and 3.21, respectively) than Whites of making a political donation through the library’s online services.
- The odds of people age 25–34 and 55–74 were higher than those aged 75 years or older.
- The odds of women were lower by a factor of 0.59 than men of using the library computers for political donations.
- Finally, those whose language at home is other than English have higher odds by a factor of 2.00 than those whose primary home language is English of engaging in this activity.

Interview subjects from the case studies provided additional depth for understanding what types of activities people engage in under the broad question asked in the survey. Avery, who is semi-retired at age 60, for example, watched the presidential debates and inauguration on the public access computers at the Fayetteville Public Library: “I watched all the debates online... because I don’t have a television. I didn’t get all of the hype but I got the debates. It was fabulous.”

Zachary, who is 24 years old and unemployed, was living in a homeless shelter in Marshalltown, Iowa, and about to move to a larger city. He used the library computers and Internet access to organize political events in his area. He participated in the local Republican Party exhibit at last year's Oktoberfest, and used email and Facebook to publicize the event and get others involved. Zachary also uses the library Internet to email politicians about issues that are important to him.

Survey respondents also expanded on their use of the computers for learning about political and social issues. A patron from Prince George's County, Maryland, reported that she used the library's computers to track legislator voting records and to contact them regarding specific issues of interest to her.

### *Keeping up with News and Current Events*

Access to news websites was one of the highest uses of library computers and Internet connections, with 81 percent of the community participation users reporting having used the library for this purpose (Appendix Table 81).

*Of those users who used library computers and Internet connections for community participation, **81 percent of users keep up with current events through online news sites.***

*Of all library computer users, those most likely to use the library for this purpose are:*

- *People with household incomes less than three times the poverty guidelines;*
- *People of mixed race, Blacks or African Americans, and American Indians or Alaska natives;*
- *Men; and*
- *People with some education beyond a high school diploma.*

Factors that tend to increase the likelihood of library use for this purpose include:

- Users with incomes less than 300 percent of the poverty guidelines have higher odds of using library computers for this purpose than those with incomes 300 percent or greater than the poverty guidelines.
- People who are of mixed race, Blacks or African Americans, or American Indians or Alaska Natives have higher odds (by a factor of 1.33, 1.29, and 1.60, respectively) than Whites of using the library computers for accessing news and current events.

- The odds of women were lower by a factor of 0.70 than men of using the library computers for keeping up with the news.
- Those with education levels more than a high school diploma showed higher odds ratios of engaging in this activity than other levels of educational attainment.

Besides keeping abreast of local news, case study and web survey respondents emphasized their use of the library's computers for keeping up with news from other places, both to gain an international perspective on U.S. and world affairs, as well as keeping up with local news from hometowns or other locales with which they have a connection. Fayetteville, Arkansas, user Sheldon, a 38-year-old sports editor, reflected this type of use, "I'm a transplant from Kentucky so I'm usually looking at newspapers in Kentucky." For Sheldon, the library serves as his only source of computer and internet access; he particularly values the library's physical location in the community and its internal setting which he described as conducive for meeting up with friends.

In Marshalltown, Iowa, a staff member at an education training center that works with primarily immigrant populations explained, "A lot of [immigrant] students go online to find articles from newspapers in their countries and they like to know what is going on in their countries so they are reading the newspaper online."

A teen librarian in Oakland, California, commented that using the library computers for younger patrons:

...is just how they learn about what's going on in the world, whether they read some news or music or what's happening. It broadens people's horizons, it makes them see more of the world, stumbling upon it on the Internet and realizing that there's more than just their block. People just see things locally and nothing else seems to matter but if you can expose people to different things, maybe they can see things differently, expand their horizons.

## Conclusion

There are two roles the library's computers and Internet services can play in community participation: enabling engagement in local activities related to community life, or by providing a window to the wider world through access to national political events and current events. Across all the activities discussed in this section, whether the users are organizing or managing a club or association, or engaging in political activity at a local or national level, or keeping up with the

news and current events in their hometown or across the world, the public library provides a critical resource through their online services.

Although the percent of users actively engaged in managing or organizing community organizations is relatively small, this is not atypical of the society at large, where a small percentage of the population are the ones who are leaders and enablers within any realm. The characteristics of the users who are more likely to engage in this activity, with lower income levels, languages other than English at home, and less likely to have access to the Internet elsewhere, suggest that the library is providing a way for these emergent leaders to help their community take care of itself and provide a safety net for people who might not otherwise have support.

On the broader political horizon, the ability of people who are less likely to have access to the Internet elsewhere to gain entry to the political conversation is important at both a local and national level as a way to grow and maintain an informed and involved citizenry. The fact that youth in particular seem to have higher odds of using the library for political engagement is worth further exploration to find out what it is about libraries that encourages them to take advantage of the services there for this purpose.

The uses reported on in this section show the many ways that users take advantage of the availability of computer and Internet access at public libraries to foster community, and participate in our democratic society. The library's services are clearly being used by many to build stronger local communities and stay engaged in our national political process, helping to create the kinds of social ties that Robert Putnam pointed out almost two decades ago are so important to healthy communities in *Bowling Alone*.

## 7.6 Managing Household Finances

*Online banking, web-based bill payment systems, investment advice, and loan and credit information are all commonplace services offered through the Internet in today's world. Comparison shopping has become easy with online tools and the buying and selling of goods and services through the Internet is a new engine in the U.S. economy. All of these activities save time and money for those who can take advantage of them and, for many people, are a part of their daily routines.*

*Not everyone has ready access to these services at home or work, however, and this study found that a large percentage of people who use the library's online services (25 percent) are engaged in financial management and the purchasing of goods and services, with 29 percent of these users helping others with these*

*tasks. For many, this access provides the only way to accomplish important activities that help keep their finances solvent and manage their money effectively.*

*Banks, investment companies, credit and loan organizations, and online retailers may be surprised to learn of the variety of financial activities taking place in the public library, and would do well to consider this market as an important one when designing their services. Partnerships with libraries in the delivery and support of their offerings could both increase their business and help educate their customers in the effective use of their online services.*

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The following section explores the ways that people use public library computer and Internet services to manage their household finances and compare and purchase goods and services. An overview of the most frequent types of use reported in this area and the characteristics of users who engaged in these activities is followed by a more in-depth look at each of the two areas and six activities the U.S. IMPACT Study surveys asked about:

- **Managing household finances**, including doing online banking, paying bills, managing investments, and managing debt; and
- **Comparing and purchasing goods and services**, which consists of comparing products and services, and buying and selling online.

For each of these areas, survey results discussing the number and characteristics of the users are illustrated by excerpts from interviews with library staff and administrators, community agencies, and the users themselves.

## **Most Prevalent Users for Financial Management Activities**

Managing money for personal needs, finding out how to reduce debt or look for loans, looking up financial information, or engaging in researching, buying, and selling products is becoming a part of everyday life for many Americans.

Without access to the Internet, many of these activities are becoming harder to complete, with dwindling face-to-face services available and less emphasis on personal service from financial institutions. Individuals without access are likely to pay more, spend more time conducting financial transactions, and fall farther behind in their financial management activities, exacerbating debt or credit problems.

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## Overall Financial Management Use

The study shows that **25 percent** of the users take advantage of library computers for activities related to **financial management**.

Use on behalf of others is also reported in this area, with 29 percent of financial management users indicating that their use was for a relative, friend, colleague, or someone else.

The use of library technology for activities related to financial management participation is highest among:

- People without access to the Internet except at a public library;
- People of Latino or Hispanic heritage;
- People of mixed race, Blacks or African Americans, American Indians or Alaska Natives, and Native Hawaiians or Pacific Islanders; and
- Those with grade school or some post high school education.

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The importance of this resource for those who might not have access elsewhere was described by one of the staff members we interviewed in Oakland, California:

At Temescal, there's a large immigrant population from Ethiopia and Eritrea...a lot of the kids we knew from that community were pretty much running the finances of their family. One girl used [the computer] everyday... she had figured out a way to have it show the characters and it was actually typing in Amharic.

This use of the library's computers to manage finances helps individuals as well as families to pay their bills, manage debt, or otherwise keep track of their financial resources.

This study found that 25 percent of public library computer users engaged in activities related to their finances or buying and selling goods (Appendix Table 82), with 29 percent of those users reporting use on behalf of someone else (Appendix Table 83). User characteristics associated with a higher likelihood of using library technology for this purpose include:

- People of Latino or Hispanic heritage have odds of use for financial management activities higher by a factor of 1.51 than those of people with non-Latino or non-Hispanic heritage. Those of mixed race, Blacks or African Americans, American Indians or Alaska Natives, or Native Hawaiians or Pacific Islanders also had higher odds of this type of use (by a factor of 1.59, 1.29, 1.23, and 1.21, respectively) than Whites.

- Odds were consistently higher for use in this area for those with education more than a high school diploma, with the anomaly that those with only a grade school education also showed higher odds of use than those with high school diplomas.

In looking at individual activities, the higher odds by people with only grade school education occurs primarily in the management of household finances, not in the buying and selling of goods online, perhaps indicating a deeper penetration of online banking services into the general population than activities related to eCommerce, which might be perceived as discretionary activity. The one anomaly here is the higher odds of those with a grade school education of monitoring online investments. This would be an interesting area for further exploration in future studies.

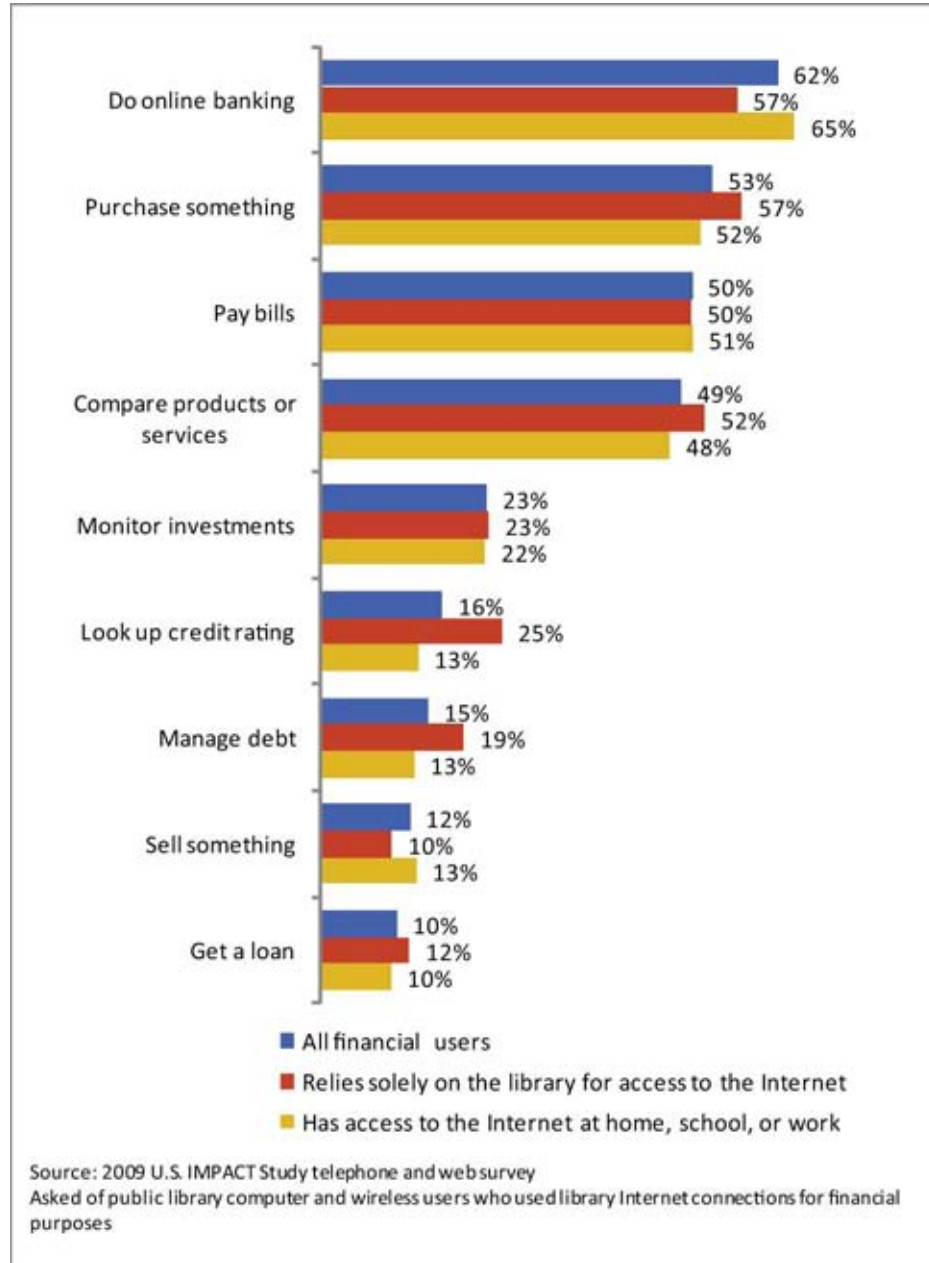
A significant finding in the area of finance is that of public access technology users who did not use library computers for this purpose. A large percentage indicated that their reason for nonuse had to do with security (19 percent) or privacy (18 percent) concerns; far fewer respondents cited these reasons for nonuse in the other activity areas discussed in this report (Appendix Table 84). As in other areas where transactional activities occurred (making donations to political causes, for instance), there seems to be a reluctance to use public computers for this purpose. This presents an opportunity for commercial or public entities that depend on private online transactions to investigate more effective methods of working with public institutions such as libraries to improve the ability of people to conduct business online in a secure and private manner, through education, resources, or services specifically tailored to users in a public environment.

## **Activities Related to Meeting Financial Needs**

The top financial activities users accomplished with public access technology were managing bank accounts, making online purchases, and paying bills. Users of library online services for financial management activities who rely solely on the library for their Internet access show higher use than those who have alternative access at home, school, or work in a number of activities, including purchasing items online (57 percent compared to 52 percent), comparing products and services (52 percent compared to 48 percent), looking up credit ratings (25 percent compared to 13 percent), and managing debt (19 percent compared to 13 percent), and obtaining loans (12 percent compared to 10 percent) (Figure 16). Conversely, those who have alternative access show

higher use of library computers for online banking (65 percent compared to 57 percent) and selling items online (13 percent compared to 10 percent).

**Figure 16: Most common financial activities by user type**



## *Managing Household Finances*

For many people, the use of the Internet to manage their bank accounts, pay bills, investigate investment opportunities, and manage their credit history and loans is a routine activity. This ability to transact financial activities online saves time and often money, as well as offering opportunities to take advantage of services that may not be available without a considerable investment of time and energy in the offline environment. When online access is limited, or disrupted, the library may be the only place that this business can be conducted. The following section explores the use of the library's online services for some of these activities: doing banking, paying bills, managing investments, and managing credit and debt.

### **Doing Banking**

Nearly 62 percent of users engaging in financial activities on library computers indicated that they had engaged in online banking (Appendix Table 85).

*The study shows that **nearly 62 percent of users doing financial activities on library computers (nearly 12 million people) engaged in online banking.***

*Of all users of library computers and Internet connections, those most likely to use the library for this purpose are:*

- *People with household incomes below 300 percent of the poverty guidelines; and*
- *People who have a grade school education or higher education than a high school diploma.*

The study showed that people with household incomes below 300 percent of the poverty guidelines had higher odds of using the library computers for online banking than those making more than 300 percent of the poverty guidelines. In addition, those with some post high school education and those with only a grade school education had higher odds than those with a high school diploma or GED of engaging in online banking.

A number of users spoke to the value of the library computers for their online banking needs. A long-time user of library computing services in Baltimore, Natascha, 20, wants to go to college to become a forensic scientist. She explained that one of her main uses of the computers is to do online banking, and that she uses her bank's online financial planning tools to create a budget. One of her main reasons for preferring the library to do computing is its environment and rich range of other services.

12 MILLION MANAGE  
BANK ACCOUNTS  
ONLINE USING  
LIBRARY COMPUTERS

10 MILLION PAY BILLS

4 MILLION MONITOR  
INVESTMENTS

*"I view Value Line, an electronic investment report. It's too expensive for me to buy. I am delighted the library has electronic access to Value Line. I use it every week to review stocks."*

WEB SURVEY COMMENT  
GALESVILLE, MD

Nancy, a 48-year-old Fayetteville, Arkansas, resident, uses the computers for many purposes, including attending online massage school, finding information for work, keeping up with the news, helping her son complete college admissions and loans applications; however, checking her savings account and paying bills, especially her house payment, are regular activities.

Regis, a 53-year-old retired college graduate who earned \$11,000 last year, described using the library computers to access, "the Internet banking system for my bank to check my account balances and to pay bills, too." Regis relies solely on the library for his computer access since his laptop was stolen, which he cannot afford to replace, and uses the computers for such additional purposes as shopping and writing music for his guitar. Like Natascha, Nancy, and Regis, many others have come to rely on the public library's computers as a way to keep up with their banking needs and make sure their finances are in order without the time and expense of having to travel to financial institutions in person.

### Paying Bills

About 50 percent of financial management users used the library's online services to pay various types of bills, ranging from credit cards to house payments (Appendix Table 86).

*The study shows that **about 50 percent of financial management users (9.7 million people) paid bills online.***

*Of all library computer users, those most likely to use the library for this purpose are:*

- *People of Latino or Hispanic origin;*
- *Those between the ages of 25 and 34 years; and*
- *People with education beyond high school.*

Those of Latino or Hispanic origin had higher odds of completing this activity than non-Latino or non-Hispanic users by a factor of 1.84. Users between the ages of 25 and 34 had the highest odds of using the library computers for this purpose compared to those older than 75, though the odds ratio of users from 19 to 64 were all higher compared to those older than 75. Users with post high school education also had higher odds of using the computers for this activity.

A librarian in Fayetteville, Arkansas, pointed out the value of the library's computers for bill paying for those who don't have a computer at home, saying they often come to, "Pay bills and manage their finances for a business or for themselves."

At 40 years old, Oscar is a heavy user of the library's wireless, including after hours when he uses it outside the building. Jacob is a former computer programmer and now works full-time earning \$11,000 annually in his own business. He said, "Sometimes I'll do online bill payments for my computer, for other credit cards, and I'll check my bank balance. That's a normal day at the library." In a similar vein, Marshalltown, Iowa, user Upwood, a 67-year-old retiree who learned about the library's computer services from a friend, uses the library computers to pay his department store bill as well as to check bottle caps for prize money and his cell phone minute usage.

The use of the library's computers for paying bills provides a convenient and accessible means of being a responsible financial citizen, but is especially critical for those who have no other Internet access, because this is frequently the only place they have to conduct their financial business.

## Managing Investments

A smaller percentage of financial management users (23 percent) indicated that they looked up or monitored investment information (Appendix Table 87). The odds of engaging in this activity were higher for those with incomes greater than 300 percent of the poverty level than those with incomes below 300 percent, perhaps because of the greater financial sophistication of those with higher incomes.

*The study shows that **23 percent of financial management users (over 4.3 million people) looked up or monitored investment information.** The users most likely to use the library for this purpose are:*

- *Those users with household incomes more than 300 percent of the poverty guidelines;*
- *People of Latino or Hispanic origin;*
- *Those 65 years of age and older;*
- *Men;*
- *People with an education at grade school level or higher than a high school degree; and*
- *People who speak languages other than English at home.*

Other characteristics consistent with higher odds of using library computers for monitoring investment information include:

- Those of Latino or Hispanic origin had higher odds of engaging in investment-related activity than non-Latino or non-Hispanic people by a factor of 2.11.

- Both those who are older than 65 and men also had higher odds than those of other ages and women of engaging in this activity.
- Those with an education higher than a high school degree or who had only completed grade school.
- Finally, the odds of those who spoke a language other than English at home were higher by a factor of 1.44 than those who spoke English at home to look up or monitor investment information.

Some of the reasons for the higher odds of older, higher-income people of engaging in this activity are reflected by comments from users indicating that they are managing retirement funds or other investments previously made. For example, 66-year-old Sandra and 53-year-old Abe, both users in Oakland, California, indicated that they monitor their retirement investments at the library.

Avery, a 60-year-old semi-retired genealogist in Fayetteville, had recently begun exploring investment options:

I follow the stock market and tried to learn about that because I turned 50-something, and I decided that it would be a good idea to learn something about money. Well, there was a whole world that I hadn't discovered, and so I researched the stock market and companies and things like that.

Although she has computer access at work, she prefers using the library computers rather than paying for a computer and Internet access at home.

One of the Baltimore, Maryland, librarians called out the use of the library computers for investment purposes: "Investing, too, it's such an easy thing to look up an old stock online if they need a price. There's tons of free information available about public companies, especially online. It makes it so much easier."

Other case study participants shared examples of using library computers for investing purposes, including Faulkner in Fayetteville, Arkansas, who uses it regularly for day trading. All of these users find the library's online services an important resource in keeping their investments intact and healthy.

## Managing Debt

Those who used library computers and Internet connections for managing household finances reported using the library computers to manage debt through three activities:

- Checking credit scores (16 percent of these users; Appendix Table 88);
- Learning about getting out of debt (15 percent of these users; Appendix Table 89); and
- Seeking new loans or restructuring old ones (10 percent of these users; Appendix Table 90).

In addition, 2 million people (74 percent of those who learned about getting out of debt) reduced or better managed their debt through the use of the library computers (Appendix Table 90).

*The study shows that **16 percent of users who reported using library computers for managing their finances (3.2 million people) checked their credit scores.***

*Of all users of library online services, those most likely to use the library for this purpose are:*

- *Those of Latino or Hispanic origin; and*
- *People of mixed races, Blacks or African Americans, or Asians.*

As with other activities in this area, those people of Latino or Hispanic origin had higher odds by a factor of 1.80 of using the library for checking credit scores than those not of Latino or Hispanic origin. People of mixed race, Black or African American, or Asian race also showed higher odds of using the library for this purpose (odds ratios of 1.35, 1.72, and 1.12, respectively).

*In the study, **16 percent of users who reported using library computers for managing their finances (2.8 million people) learned about getting out of debt.***

*Of all users of public access technology, the users most likely to use the library for this purpose are:*

- *People of Latino or Hispanic origin;*
- *People of mixed races, Blacks or African Americans, and American Indians or Alaska Natives;*
- *25–54 year olds; and*
- *People with an education level higher than a high school diploma.*

**→Outcome:** *74 percent (2.1 million people) who learned about getting out of debt used the information they found to reduce or better manage their debt.*

Users of Latino or Hispanic heritage showed a higher odds ratio (2.51) of using the library computers for learning about ways to get out of debt than those of non-Latino or non-Hispanic heritage. The odds ratios were also higher for

people of mixed race (1.86), Blacks or African Americans (2.15), or American Indians or Alaska Natives (1.65) than Whites.

The odds ratios for those between the ages of 25 and 64 were most likely to use the computers for learning about debt relief, and those with education beyond a high school diploma showed the highest odds of using the library for this activity.

As mentioned previously, 74 percent those who used the library computers and Internet resources to learn about getting out of debt (2.1 million people) used the information they found through the library's online services to reduce or better manage their debt. This outcome may be of interest to financial institutions or government agencies, because it indicates that public libraries may be fertile territory for debt management assistance, and would be good partners in programs related to this area.

*In the study, 10 percent of financial management users (2 million people) found a new loan or restructured an old one. The users most likely to use the library for this purpose are:*

- *People of Latino or Hispanic origin;*
- *People of mixed race, Blacks or African Americans, American Indians or Alaska Native, or Native Hawaiians or Pacific Islanders;*
- *People with an education level higher than a high school diploma; and*
- *People who speak languages other than English at home.*

As with other activities in this area, the odds were higher (by a factor of 2.48) that people of Latino or Hispanic origin would look for loans or restructure an old one online than people of non-Latino or non-Hispanic origin. People of mixed race, Blacks or African Americans, American Indians or Alaska Natives, and Native Hawaiians or Pacific Islanders also showed higher odds of engaging in this activity than Whites (by a factor of 2.87, 1.65, 2.05, and 4.20, respectively).

Those with education above a high school diploma showed higher odds of engaging in this activity than those completing high school, as did people speaking languages other than English at home, by a factor of 1.72 over those whose home language is English (Appendix Table 91).

Although the percentages of users engaged in these activities are not as high as some others reported in this study, there does seem to be consistent use of the library's online resources for matters related to managing debt, and strong indications that people are using the computers to help them maintain and improve their financial condition. Particularly in the current economic climate,

9 MILLION USE  
LIBRARY COMPUTERS  
TO COMPARE  
PRODUCTS AND  
SERVICES

10 MILLION  
PURCHASE  
SOMETHING ONLINE

*"I've surfed the Internet especially for mom and baby products and I often buy stuff at the library. I also search ebay.com and half.com and buy stuff while at the library usually using paypal.com."*

WEB SURVEY COMMENT  
FLINT, MI

programs related to this area would do well to include libraries in their plans and budgets to help reach the users who are taking advantage of the resources available to them in the library.

### *Comparing and Purchasing Goods and Services*

According to Horrigan (2008), 66 percent of online Americans use the Internet for online shopping. This study found that for many people, the library's computers are their shopping guide and their checkout counter as well. Consumer-related activities and outputs asked about in this study included gathering information or comparing products or services (49 percent of financial management users), purchasing items online (53 percent of financial management users), and selling items online (12 percent of financial management users).

### **Comparing Products and Services**

Online shopping can often help save money or provide access to a greater variety of goods and services than are available within easy reach in the physical world. Particularly for those with limited means, using Internet services can expand choice and provide better use of limited resources when looking for necessary items.

The study found that 49 percent of financial management users took advantage of the library's online services to compare products and services (Appendix Table 92). The odds of people of mixed race were greater by a factor of 2.16 than Whites of using library computer services for this purpose. Users with education levels more than a high school diploma were also more likely than those with only a high school degree of engaging in this activity.

*The study shows that **49 percent of financial management users (9.5 million people) compared products or services.***

*Of all users of library computers and Internet services, those most likely to use the library for this purpose are:*

- *People of mixed races; and*
- *Those with some education beyond a high school diploma.*

One of the users interviewed in Fayetteville, Arkansas, Eastman, a 55-year-old who works with a federal agency, says he uses the Internet to comparison shop for products and finds good prices. He will often purchase things from the Internet if he can't find them at a local store.

Survey respondents and interview participants also reported using the library computers to look for discounts and coupons. For example, Jillian, a 21-year-old unemployed mother of two in Baltimore, Maryland, said she uses the computers to get coupons for formula, diapers, and other baby items.

Survey respondents also commented about using consumer reviews or other subscription databases available through public library websites. Luke in Marshalltown, Iowa, a 37-year-old wireless user who even sits outside the library when it's closed with his laptop, explained how his favorite website tracks gas prices around the country and enables him to save a few dollars.

For all of the users like Eastman, Jillian, and Luke who are engaged in online comparison shopping, the rewards of being able to compare prices without leaving the library are saving money or finding items not available to them locally. A member of the Baltimore Friends of the Library summed it up well: "I see people shopping on the computers. I think that's a good idea because there are deals you can get on the web that you can't get elsewhere."

## Buying and Selling Online

Not only do 49 percent of financial management users comparison shop online at the library, but an even larger proportion, 53 percent, actually buy goods and services online (Appendix Table 93). For online retailers, this number might be worth paying attention to, and public libraries should be considered as potential partners in their efforts to reach customers. A small investment in library computers or Internet services could return large rewards in added business.

*The study shows that **53 percent of financial management users (10.3 million people) purchased something online.***

*Of all users of library online services, those most likely to use the library for this purpose are:*

- *Latino or Hispanic;*
- *Men; and*
- *People who have some education beyond a high school diploma.*

As with other activities in this area, the study found that people of Latino or Hispanic heritage had greater odds of using the library's online services for purchasing goods or services online by a factor of 1.61 than those of non-Latino or non-Hispanic heritage. People with educational attainment higher than a high school diploma were also more likely to use the library for this purpose.

Along with buying, selling online is becoming another activity many Americans engage in, but this study found relatively few users engaging in this pursuit. About 12 percent of the financial management users reported having sold something online through the library in the past year (Appendix Table 94).

***The study shows that 21 percent of financial management users (2.3 million people) sold something online.***

*Of all users of library computer and Internet services, those most likely to use the library for this purpose are:*

- *People of mixed race, Asians, American Indians or Alaska Natives, and Native Hawaiians or Pacific Islanders;*
- *Those between the ages 19 and 44; and*
- *Men.*

People of mixed race, Asians, American Indians or Alaska Native, and Native Hawaiians or Pacific Islanders had higher odds of engaging in online selling (by a factor of 2.73, 1.17, 1.60, and 2.39, respectively) than Whites, whereas those between the ages of 19 and 44 years (peaking in the 25- to 34-year-old age range) were more likely to do so than those older than 75 years. Women had lower odds than men (by a factor of 0.74) of selling something online at the library.

An added value of the library in the area of buying and selling is the availability of trained and trustworthy staff members. A good example was brought out by a librarian in Oakland, California, who described a patron who came in asking to buy an airline ticket, speaking Spanish. He had only cash, and the librarian was able to help him understand that he would need to bring a family member with a credit card in to make the transaction. The librarian pointed out that in many other situations the gentleman might have lost his cash without getting a ticket, but the library provided a safe place with the information he needed to complete his business.

Users reported using the library computers to make travel arrangements, such as buying tickets, booking hotels, printing boarding passes, and investigating places to travel. Oriana, a 17-year-old page at the Marshalltown Library, recounted helping patrons with purchasing and printing air travel tickets. A user interviewed at Baltimore's Southeast Anchor branch said of travel and the library's computers: "I find the bargains. I get emails, I accept those kinds of emails. I'm planning for a trip right now with a friend. We're off to the Bahamas." Interviewed in Marshalltown, Iowa, 80-year-old Edward is a retired minister with a post-graduate education. With a friend, he was also planning a

vacation and, that day, used the computer to book hotel accommodations. An avid stamp collector who uses the computers primarily to research stamps, Howard relies solely on the library for his computer and internet access.

## Conclusion

Although managing money is an important component of library computer use, it is also evident that this is a difficult area for many users—the high percentage of users who cited lack of privacy and security as a reason for not taking advantage of these services indicates that a barrier exists to expanded use of the library computers for this purpose in many cases.

Further research in this area might be something that the larger Internet-based consumer services would be interested in as a way to expand their markets, and engage users who might otherwise not take advantage of their online products and services. Tracking the use in this area over time may provide an indicator of the comfort level of the average library computer user with online financial transactions, and provide a picture of change in behavior and attitudes with time.

Even with this caveat, however, it is clear that users of public library online services are taking advantage of the access that the library provides to better manage their financial resources and use their money wisely. Without access at the library, many of these users would find it harder to take care of their daily financial needs.

## 7.7 Building and Maintaining Social Connections

*Computers and the Internet have radically changed how people communicate and socialize with one another, express themselves, seek help for problems, and learn about their family histories. Recent research has pointed out secondary effects which have may have downstream results affecting the users and their families who engage in social activities using computers in libraries and other public places. Milner (2009) found that, “Internet users reported an easier social life than non-users, and a stronger awareness of important current affairs. They also tended to have higher self confidence than non-users.” Immigrant communities may also use public access computers to help keep their families together (Parkinson 2005).*

*Social activities are an important component of many users’ interaction with library computer and Internet services, providing an entry point into more practical uses of the computers such as the others discussed previously. Learning*

*how to use the technologies associated with computers and the Internet, and forming a social support group that can assist with future activities, may be important indirect contributing factors to the impact of library computers on the individuals and communities they serve.*

*Overall, 60 percent of users (46.3 million people) used their public library's computer and Internet resources to connect with other people, find support for a problem or concern, or enjoy other social activities. Over 34 percent of these users indicated they had undertaken actions in this area on behalf of a relative, friend, colleague, or someone else in the past year.*

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This section examines how people use computers and Internet access in public libraries to pursue personal or socially meaningful ends. An overview of the most frequent types of use reported in this area and the characteristics of users who engaged in these activities is followed by a more in-depth look at each of the activities the U.S. IMPACT Study surveys asked about, including:

- Keeping families strong (communicating with family and friends, doing something online with family or friends, finding support for a personal or family issue, and exploring family genealogy);
- Building social networks (visiting social network sites such as MySpace and Facebook, getting in touch with old friends, making new friends, and maintaining a blog or website); and
- Exploring the world (pursuing skills and hobbies; finding, attending, and organizing events and activities for oneself and others; travel; spirituality; and entertainment).

For each area, the survey results are illustrated using excerpts from interviews with library users, staff and administrators, and staff of community agencies.

## **Most Prevalent Users for Building and Maintaining Social Connections**

Communicating with people near and far in different languages, including new friends and those with whom contact has been lost, has been greatly facilitated by Web 2.0 technologies. The ability to post and stream information about oneself, research one's family's history and connect with relatives, organize events, communicate with people who have experienced a shared personal or family issue, and do activities within one's children, family, and friends are also hallmarks of today's information society that are abetted by the availability of free access to computers and the Internet at public libraries.

People without such access are potentially at risk for experiencing greater social isolation than people who do have access to their social networks online, and therefore excluded from a richer range of social and informational interactions that can improve the quality of one's daily life and the overall social cohesion of families and communities across the country (Hampton et al. 2009). In a highly complex mobile society where people have turned from traditional geographies of family homesteads and inherited occupations, computer and Internet access hold strong potential to build connectedness across miles of physical and social distance.

Sheldon, a 38-year-old sports editor from Fayetteville, Arkansas, who uses library computers as a supplement to his office computer to keep in touch with his family who live in Kentucky, is representative of the many case study interviewees who emphasized how library Internet access had reconnected them with family.

My mother, sister, and father—I'm 12 hours away from anyone who could claim me as kin. They benefit from hearing that their son is still alive. I have more time to chat with my sister; we catch up when I don't have that much time during work hours. I've grown quite close to my sister because of those silly computers.

In Marshalltown, Iowa, a staff member from a social service agency elaborated on the value of the library computers for connecting youth, particularly street youth, with friends and with service providers who can offer needed help:

If they can't afford a cell phone, if they're street kids or couch hopping, they can come to the library and check Facebook or MySpace accounts, send emails, email us. It's really been a great asset for us to have public access for the computers here (at the library) so the kids can communicate in the style that they like which is via the Internet and computers.

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## Overall Social Connection Use

*The study shows that **60 percent of users take advantage of library computers for social or recreational purposes.***

*Use on behalf of others is also reported in this area, with 34 percent of social and recreational users indicating that their use was for a relative, friend, colleague, or someone else.*

*The use of library technology for activities related to social connection is highest among:*

- *People without access to the Internet except at a public library;*
- *Lower income and impoverished people;*
- *People of mixed race, Blacks or African Americans, American Indians or Alaska Natives;*
- *14–18 year olds; and*
- *Men.*

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These descriptions of how youth and adults interact with each other using library computers illustrates the kinds of non-instrumental use that occur quite often in the use of public library computers and Internet connections. Earlier studies reporting similar findings that have found this same type of behavior in libraries and other public computer settings include Curry (2002), Heuertz et al. (2002), Eve and Brophy (2001), Gamage and Halpin (2007), Gitta and Ikoja-Odongo (2003), Haseloff (2005), Mercer (2005), Parkinson (2005), Parkinson and Ramirez (2006), Robinson (2004), Stewart (2000), Strover, Chapman, and Waters (2004), and Kuriyan and Toyama (2007).

Recent work by Milner (2009) in libraries and other computing centers in England found that, “Internet users reported an easier social life than non-users, and a stronger awareness of important current affairs. They also tended to have higher self confidence than non-users.” Although more research needs to be done in this area, the high percentage of use found for social connections points out the need people have to maintain their linkages with families and friends, and certainly is an important aspect of community in the digital age.

The U.S. IMPACT Study found that 60 percent of public library computer users engaged in activities related to building and maintaining social connections (Appendix Table 95), with 34 percent of those respondents using on behalf of another person (Appendix Table 96). As with other types of use, certain characteristics of users are related to increased odds of using library computers for this purpose:

- Lower income users (those making less than 300 percent of the poverty threshold) have higher odds of using the library’s online services for

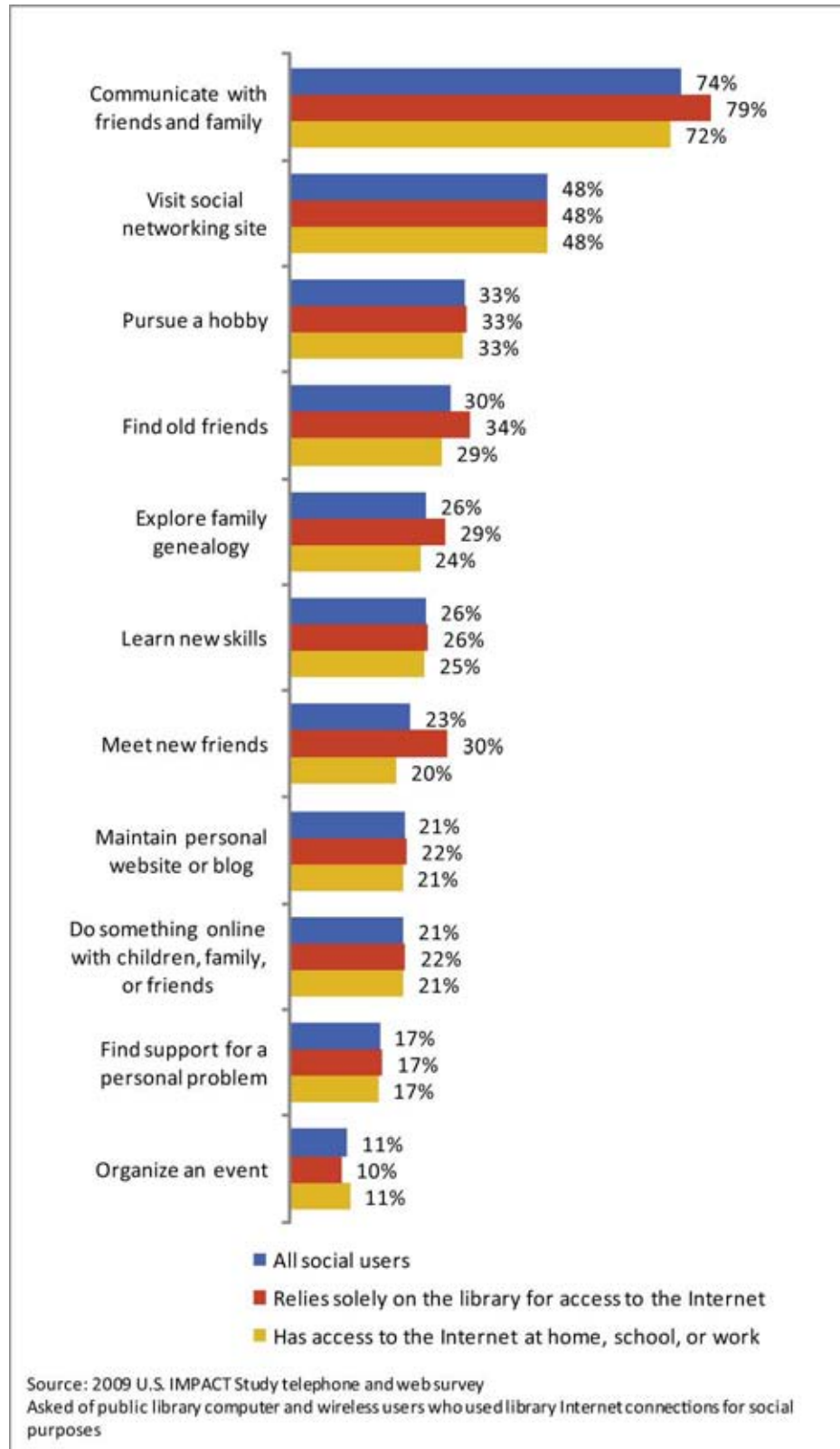
social purposes than those making more than 300 percent of the poverty threshold (by a factor of 1.80 for those below the poverty threshold, decreasing to a factor of 1.33 for those making 200–300 percent of the poverty threshold).

- The odds of people who are of mixed race, Blacks or African Americans, or American Indians or Alaska Natives have higher odds (by a factor of 1.66, 1.18, and 1.07, respectively) than Whites of using the library computers for social purposes.
- Likely because of their familiarity with technology, the study also found that the youngest library users had higher odds of using the computers for these purposes as well (14–18 year olds by a factor of 6.82, and 19–24 year olds by a factor of 4.14 greater than those older than 75 years).
- As in most other areas investigated in this study, women show lower odds (by a factor of 0.88) of using library computers for social purposes than men.

## **Activities Associated with Building and Maintaining Social Connections**

The top social activity was using library technology to communicate with friends and family, followed by visiting social networking websites, and pursuing hobbies (Figure 17). People who rely solely on the library for their Internet access have remarkably similar use rates in most activities associated with building and maintaining social connections to those who have alternative access at home, school, or work. An exception occurs in the activities related to communicating with family or friends, where those who only have access at the library comprise 79 percent of the social connection users compared to 72 percent of the social connection users who have alternate access. This pattern is reinforced in the other two activities related to communication with friends, finding old friends (34 percent compared to 29 percent), and meeting new friends (30 percent compared to 20 percent). Genealogy also showed a higher use by those without alternative access (29 percent compared to 24 percent).

Figure 17: Social activities by availability of alternative access



**34 MILLION**  
COMMUNICATE WITH  
FRIENDS AND FAMILY  
USING LIBRARY  
COMPUTERS

**12 MILLION** CONNECT  
WITH FRIENDS AND  
FAMILY LIVING  
OUTSIDE THE UNITED  
STATES

**14 MILLION**  
RECONNECT WITH  
OLD FRIENDS

**10 MILLION** MAKE  
NEW FRIENDS

For the purposes of identifying activities pertaining to social connectedness through the use of library computer services, this study defined three areas:

- Keeping families strong (communicating with family and friends, doing something online with family or friends, finding support for a personal or family issue, and exploring family genealogy);
- Building social networks (visiting social network sites such as MySpace and Facebook, getting in touch with old friends, making new friends, and maintaining a blog or website); and
- Exploring the world (pursuing skills and hobbies; finding, attending, and organizing events and activities for oneself and others; travel; spirituality; and entertainment).

Each of these areas shows a rich variety of activities, often helping users become more proficient with their use of computers and online resources, and contributing to their ability to engage with family and community, both locally and remotely. These activities are often performed in parallel with the more directed activities found in the other areas studied, as people become more accustomed to using computers as part of their daily life.

### *Keeping Families Strong*

The study asked about four activities in this area: communicating with family and friends, doing something online with family or friends, finding support for a personal or family issue, and exploring family genealogy. Each of these contributes in its own way toward helping people to stay connected to their immediate family and support system.

### **Communicating with Family and Friends**

Nearly 74 percent of social or recreational respondents (34 million people) indicated that they used library computers and Internet access to communicate with family or friends (Appendix Table 97).

**Nearly 74 percent of social and recreational users (34 million people) used library computers to communicate with friends or family.**

*Of all users of library computer resources, those most likely to use the library for this purpose are:*

- *People with incomes below 300 percent of the poverty threshold;*
- *People of mixed race; and*
- *People between the ages of 14 and 24.*

**→Outcome:** *66 percent (22.4 million) of users who relied on library computers to communicate with family and friends did so with those who live in their local communities.*

**→Outcome:** *35 percent (11.8 million) of users who relied on library technology to communicate with family and friends did so with those who live outside the United States.*

**→Outcome:** *18 percent used (6.2 million) of users who relied on library technology to communicate with family and friends did so in languages other than English.*

The U.S. IMPACT Study shows that lower income users (those making less than 300 percent of the poverty threshold) have higher odds of using the library's online services for community participation than those making more than 300 percent of the poverty threshold (by a factor of 1.76 for those below the poverty threshold, decreasing to a factor of 1.23 for those making 200–300 percent of the poverty threshold).

People who are of mixed race have higher odds by a factor of 1.47 than Whites of using the library computers for this use. Although people in all age brackets had higher odds of using library computers to communicate with family and friends than users ages 75 years and older, the odds factors were highest for the youngest age groups, people 14–18 and 19–24 years of age (by a factor of 5.77 and 4.44, respectively) and decreased as age increased.

#### *Communicating with Family and Friends Locally and in the United States*

Using computers to communicate with people locally was reported by 66 percent of these respondents (Appendix Table 98). However, examples from the case studies indicate that using library computers for communicating with family and friends often happens outside the local community. For example, Lydia, a 29-year-old White woman with a disability from Fayetteville, Arkansas, who does not have a home computer, discussed discovering family she didn't know she had:

I found out I had another brother so there's seven kids. I knew about my two younger sisters. I didn't know about the other siblings because I had been adopted when I was eight. Adoption.com was able to reach me through my family and then a sister I had been estranged from for years finally called me up after seeing my MySpace page. Seeing all this other stuff and reconnecting with other members of the family. Now we're in contact.

A 28-year-old gas station employee, Calvin, uses the library Internet in Fayetteville to keep in contact with his brother and parents who live in different cities. It is important to him to have access at the library because he is saving money to buy his first home and he saves the cost of long distance phone calls and home Internet service when he uses library resources.

Fayetteville's Director Louise Schaffer reflected on the importance of email during their recent ice storm in keeping people connected:

This ice storm was really devastating and Fayetteville was declared a national disaster area by FEMA. The place was a mess with trees and power lines down. We were completely unable to connect to the outside world. The library was closed on Tuesday and Wednesday because we didn't have power. We opened on Thursday but most people and businesses didn't have power for a week or more. Many were without heat. The first thing that the community came in for was computer access. They were here to socialize and be with the community, and to escape the cold and get a hot cup of coffee at the café, but the main thing was that they needed to connect by checking their email. People didn't have power to charge their cell phones or get online, so their connection to the world was severed. It was surreal to see a community just shut down by disaster. Having a place in the community that has the ability to provide public access computing in disaster situations is critical, and there is no better community institution to provide this than the public library.

Another user from Fayetteville, Olena, 33, described how using the Internet through the library enabled him to communicate with a family member who had been hospitalized and was unable to receive visitors: "My uncle was diagnosed with leukemia so we can't talk to him face to face because his immune system is down so he joined Facebook and that's been really nice."

### *Communicating with People Outside the Country*

As the world becomes more interconnected, families and friends are often spread far and wide: 35 percent of users who reported use of library online

services for communicating with family and friends connected with family and friends outside the United States (Appendix Table 99). It is not surprising that those who speak a language other than English in their homes showed a higher percentage of use in this area than those whose home language is English (28 percent compared to 12 percent).

Immigrants and military families also use the library Internet to keep in touch with friends or relatives in other countries. A staff member at a Marshalltown, Iowa, education training center, who works with primarily immigrant populations, explained: “A lot of them now are using email and stuff like that to communicate with their families back home in other countries. The more I work here, the more I see people do that and in the past they didn’t even know what email was. Now it seems like they are using it.”

In Oakland, California, Director Carmen Martinez commented, “At our Chavez Branch, we know that folks are coming in to send and read email to Mexico and Central America. It’s important to keep in touch with what’s going on at home.” She added, “We get notes—‘Thank you, I can now talk to my sister once a week in Guatemala or Ecuador.’ I remember when I worked at the Los Angeles Public Library, branch staff telling me about a retired old school teacher who left El Salvador in the war and lives in a little tiny apartment by herself in Echo Park. She goes to the library everyday to read the Salvadorian newspapers and keep up with who dies because she couldn’t afford the phone calls.”

### *Communicating in Languages Other than English*

In the study, 18 percent of the users who reported using the library computers to communicate with friends and family indicated that they communicated in languages other than English, demonstrating the value of the multi-language software installed on many library computers (Appendix Table 100). As expected, most people who responded affirmatively to this question also indicated speaking a language other than English at home.

The director of the Oakland library described how the public library computers helped an immigrant senior population: “We opened the first seniors’ computing center at the Asian branch and what that did was make the world smaller for many Asian immigrants. These folks left countries that they loved, places where they thought they would end out their lives, but here they are now in the Bay Area, clinging to each other for language and culture. Excited by all the new social services within reach, we invited them to the library to see what a computer was all about. They caught on fast, set up email accounts, and learned to navigate the web so that they too can read daily newspapers from their homelands.”

This use of alternate languages provides an important link to family and homeland for many people, and gives them additional support in their transition to a new life and language. Placed in the library setting, they are exposed to a uniquely American institution and still get support in their own language, the best of both worlds.

## Do Something Online with Family or Friends

Over 21 percent of social and recreational users (9.9 million) indicated that they use library computers and Internet access to do something online with their children, family, or friends through a social website.

***Over 21 percent of social and recreational users use library computers to do something with their children, family, or friends through a social website.***

*Of all library computer users, those most likely to use the library for this purpose are:*

- *People with household incomes less than 300 percent of the poverty threshold;*
- *People of mixed race, Blacks or African Americans, American Indians or Alaska Natives;*
- *Those between the ages of 14 and 44 years;*
- *Women; and*
- *People who speak languages other than English at home.*

The study shows that certain populations have higher odds of using library computer services for doing things online with children, family, and friends:

- People earning less than 300 percent of the federal poverty threshold had higher odds of using social websites to do something with their family (by a factor of 1.51 for those below the poverty threshold to 1.35 for those with incomes between 200 and 300 percent of the poverty threshold) than those making more than 300 percent of the poverty threshold.
- Those of mixed race, Blacks or African Americans, and American Indians or Alaska Natives also showed higher odds of use for this purpose (by a factor of 1.50, 1.23, and 1.25, respectively) over Whites.
- Those between the ages of 14 and 44 years had the highest odds ratios of engaging in this activity (ranging from 4.08 for 14–18 year olds to 3.73 for 35–44 year olds), compared to those older than 75 years.
- In contrast to the norm in other activities, women had higher odds than men of using library computers to do an activity with others online (by a factor of 1.33). People who spoke languages other than English at home

had higher odds of engaging in this use than those who spoke English at home, by a factor of 1.48.

Examples of this type of use come from the web survey responses, many of them are related to shared activities with children, such as playing educational games or looking up books in the library catalog to help with homework or recreational reading. Respondents also indicated use to help build computer skills for family members through shared online interaction.

A good example of how the library online services can be important even for families who have access at home was given by one of the respondents:

We as a family come to the library to go online because we have dial-up at home. Our system is not fast enough to go to most websites, so we come to the library to do most things. We also come to the library to do book reports and projects because you get two hours on a computer and I have two children usually doing a project at one time.

Others described using the library computers to look up book lists and children's activities related to a theme, find ideas about money-saving family budgets and family-friendly activities, set up family calendars, engage in homeschooling activities online, find city park and camp resources, and search for legal support for a disabled child.

### Finding Support for a Personal or Family Issue

For all the situations that arise as part of everyday living in people's varied roles as parent, child, spouse, or neighbor, public libraries offer an important haven to reach out to others for support through electronic resources. The study found that 17 percent of respondents (7.7 million people) had used library computers and Internet access to find support for a personal or family issue through a social website.

***In the study, 17 percent of social and recreational users rely on library computers to find support for a personal or family issue through a social website.***

*Of all library computer users, those most likely to use the library for this purpose are:*

- *People with household incomes less than 300 percent of the poverty threshold;*
- *People of mixed race and American Indians or Alaska Natives;*
- *Those between the ages of 19 and 34 years; and*
- *People of education levels beyond grade school.*

As in other activities related to social interaction, people earning less than 300 percent of the federal poverty threshold showed higher odds of using the library

for this purpose than those with incomes 300 percent or higher than the poverty threshold, with those below the poverty threshold showing the highest odds ratio (2.02). In addition:

- Those of mixed race and American Indians or Alaska Natives had higher odds of use for this purpose, by a factor of 1.57 and 1.34, respectively, than Whites.
- The highest odds of use by age occurred in the 19- to 24- and 25- to 34-year-old age groups, with odds ratios of 8.12 and 7.21, respectively compared to those over the age of 75 years.
- People who had more than a grade school education all had higher odds of use for this purpose than those with a high school degree, by factors ranging from 1.56 to 1.84.

Nelson, a 20-year-old library user interviewed at the Marshalltown library and mentioned briefly in Section 7.3, describes his use of the library computers for support through an online support group: “Through Narcotics Anonymous they have an online meeting. It’s a live meeting in a chat room and you have to do a lot of typing to say what you’ve got to say. And it’s fun. I’ve been in there once or twice when I was in recovery first. Then I went out back and used and just got out of recovery again. I haven’t been on the site for a while. I have e-mails from people in other states saying people missed me.”

Another example comes from Janice, 21, at the Marshalltown library, who helped organize a fundraiser for a friend dealing with cancer. Hoping to do something special, she personalized a poem she found online, printed copies on colored paper, and sold them at the benefit. A third user from Marshalltown, Earth, an unemployed 22-year-old woman studying to be a certified nursing associate, describes gaining support for herself during a failed pregnancy: “It’s called Escapist magazine. You can go on and talk about politics, movies. I was on there when I was pregnant and lost my little girl. I got support from everybody on the site.”

These examples, and others, point out the way that these activities can provide support for more substantive activities related to employment, health, and education. Although not specifically providing direct outcomes, this type of use can help those outcomes be more effective in people’s lives, and provide an important secondary support system for many individuals.

### Exploring Family Genealogy

Long known as a traditional library activity, exploring family genealogy continues in popularity among library computer users as well, with 26 percent

of social and recreational users (11.8 million people) indicating that they had used library computers for this purpose in the past year. Beyond traditional paper-based resources, genealogists now have expanded access to records, people, and genealogical history-keeping tools through library computers, often through subscription services paid for by the library. This availability of expanded access has generated increased interest among users who might not have engaged in genealogical research in the past.

***The study shows that 26 percent of social and recreational users (11.8 million people) used library computers to carry out genealogical research.***

*Of all library computer users, those most likely to use the library for this purpose are:*

- *People with incomes below 300 percent of the poverty threshold;*
- *People of mixed race, American Indians or Alaska Natives, Native Hawaiians or Pacific Islanders; and*
- *People who speak languages other than English at home.*

The research shows that lower income users (those making less than 300 percent of the poverty threshold) have higher odds of using the library's online services for genealogical research than those making more than 300 percent of the poverty threshold (by a factor of 1.76 for those below the poverty threshold, decreasing to a factor of 1.20 for those making 200–300 percent of the poverty threshold). In addition, a higher likelihood of use for genealogy was found in users with the following characteristics:

- People who are of mixed race have higher odds by a factor of 1.55 than Whites of using the library computers for genealogy as do people identifying as American Indian or Alaska Native (by a factor of 1.45) or Native Hawaiian or Pacific Islander (by a factor of 1.13).
- People who reported speaking a language other than English at home had higher odds of using library computers for genealogy than people who did not (by a factor of 1.37).

For people searching for family history or cultural roots, using library computers provides them with not only access to subscription databases, but also to the services of reference librarians who are trained in genealogical research. The additional help provided by librarians often makes the difference for patrons to have a successful research experience.

Mike, a 68-year-old retiree in Marshalltown, Iowa, who relies solely on the library for his computer access, explained some of the universalities of how and why people, such as himself, engage in genealogical research:

I've done several family names, including my own and my mother's side and my ex-wife and her side of the family and her mother's side, so it relates to the grandparents on my maternal and fraternal side for my son. I didn't know much about my own family until I got into genealogy. But not only do I search family history. A person is far more than just a statistic like birth, marriage, death. They did certain things in their life, and whatever they did, good or bad, hopefully I can find recorded, because there are skeletons in the closet in everybody's family, but there's good to be found. I'm trying to find out where I came from.

Located in an ethnically diverse region, the Enoch Pratt Free Library in Baltimore, Maryland, gets heavy use of its genealogy reference services. Patrons also use the library's public access computers for looking up Census records and other genealogical background. Like many other libraries, the Enoch Pratt puts on special workshops to help patrons with their genealogical research. One of the genealogy librarians talked about some of the workshops recently offered, "We did a Jewish genealogy and before that an Eastern European genealogy session out at our Southeast Anchor Branch, which is in an area of Polish, Greeks, and Lithuanians. That was very popular; they got a lot of response." The Baltimore director says: "We have a special computer for genealogical use, that gets used heavily, but that's all looking up census records and so forth."

In addition to workshops attended by many patrons, a librarian from Fayetteville, Arkansas, helped explain the importance of one-on-one help: "An older woman was doing genealogical research. African American genealogy is notoriously tricky. We were able to help her and made her very happy to find some." This also offers an explanation regarding the statistical finding that Blacks or African Americans are less likely to be engaged in genealogy research: the difficulty in finding such records may present a barrier to entry.

Sometimes, people embarking on research, genealogical or otherwise, have a difficult time getting started because general searches through commercial search engines yield too many sources to be sorted through, leading to frustration and not meeting the goals of their searches. The help from librarians both one-on-one and in classes and workshops helps patrons learn more effective search strategies and helps develop technology and information literacy skills that are transferable to any technology use. Exploring genealogy on library computers, especially for older patrons, can become a gateway through which other uses of technology are explored and worlds expanded.

When people interact across generations, emailing images and sound, they strengthen both family ties and community ties, and genealogy library resources become local history resources.

All of these activities involving the use of the library computers contribute to building and maintaining stronger ties between family members, providing them the means to stay in touch with each other no matter where in the world they might be, and share parts of their lives even at a distance. Without the library's computers and Internet connections, many of these users would have no other means of staying in touch and keeping their core family ties alive.

### *Building Social Networks*

Beyond the immediate family, users took advantage of the library's online services to access social networking sites such as MySpace and Facebook, using them for many purposes, such as getting in touch with old friends and making new friends. Users also took advantage of library computers and librarians' expertise to create or maintain blogs or websites as a way to interact with the larger community, locally and beyond.

### Visiting a Social Networking Site

Throughout the case studies and surveys, the prevalence of social networking sites arose as a key means used by the public for keeping in touch with other people for basic correspondence, posting pictures, sharing music, sending gifts, and many other uses. More than 48 percent of social and recreational respondents indicated having used the library's computers for this purpose (Appendix Table 104).

***The study shows that 48 percent of social and recreational users (22.4 million people) used library computers to visit a social networking site.***

*Of all library online services users, those most likely to use the library for this purpose are:*

- *People with incomes below 300 percent of the poverty threshold;*
- *People of mixed race, Blacks or African Americans, and American Indians or Alaska Natives; and*
- *People between the ages of 14 and 24 years.*

Lower income users (those making less than 300 percent of the poverty threshold) have higher odds of using the library's computers for using social networking sites than those making more than 300 percent of the poverty

threshold (by a factor of 1.88 for those below the poverty threshold, decreasing to a factor of 1.31 for those making 200–300 percent of the poverty threshold).

People who are of mixed race, Blacks or African Americans, and American Indians or Alaska Natives have higher odds (by a factor of 1.66, 1.22, and 1.54, respectively) than Whites of using libraries to access social networking sites. The odds of youth ages 14–18 and 19–24 years were higher than those aged 75 or older by a factor of 8.28 and 10.12, respectively, for this use, which reflects the increasing use of these services by younger people in general.

Janice, a 21-year-old high school graduate who works part-time in Marshalltown, Iowa, and was discussed previously, gives an example of why these social networking sites are important to younger users. She uses them at her library to keep in touch with old friends, but also to find new people to talk to. Janice seeks out new friends online because she says there's not much else to do because local recreation facilities were closed, and she likes to talk about relationships and give advice. The library Internet provides an important social arena for Janice.

Although these uses for social networking undoubtedly have recreational purposes, some users indicated that using these sites in the library actually replaced other communication means such as telephones, either because it was cheaper or alternatives were not available. The library computers provide a way for them to stay connected to a support network they might not otherwise have.

Jillian, a young unemployed mother of two working toward her GED in Baltimore, Maryland, indicated that she used a social networking site to stay in touch with her family when she did not have money to pay for a phone: "I didn't have a phone in my house for a while, so to contact my cousin I came to the library and got on MySpace, emailed her, and she knew everything I needed to know [about my problems]. We were emailing back and forth."

And Lydia from Fayetteville, described previously, indicates that she uses MySpace regularly for communicating with family and friends from her travels:

For me it has a lot to do with the fact that I'm able to send pictures, emails, and texts to my family daily. On the computer, I can talk for an hour without taking minutes off my phone, and then see pictures and feel like I'm talking to them person to person without having to hold a phone in my ear. Like MySpace, I have friends from everywhere we've traveled.

This interactive use of the library computers provides a richer means for people to engage with friends and family, and also a way to practice skills beyond typing, because many of the social networks allow uploading of files and at least limited design capabilities. This incidental skill building provides yet another way that the library computers contribute to individual growth.

## Getting in Touch with Old Friends

The study asked users specifically about the use of social websites for getting in touch with old friends, and found that 30 percent of the social and recreational users took advantage of the library for this purpose (Appendix Table 105).

*The study shows that **30 percent of social and recreational users (13.9 million people) used library computers to get in touch with old friends through a social networking site.***

*The users most likely to use the library for this purpose are:*

- *People with incomes below 200 percent of the poverty threshold;*
- *People of mixed race, Blacks or African Americans, and American Indians or Alaska Natives; and*
- *People between the ages of 14 and 34.*

People making less than 200 percent of the poverty threshold have higher odds of using the library's computers for finding old friends on social networking sites than those making more than 300 percent of the poverty threshold (by a factor of 1.84 for those below the poverty threshold, and a factor of 1.51 for those making 100–200 percent of the poverty threshold).

People who are of mixed race, Blacks or African Americans, and American Indians or Alaska Natives have higher odds (by a factor of 2.18, 1.11, and 1.33, respectively) than Whites of using libraries to find old friends through social networking sites. The odds of youth aged 14–18 years and those between the ages of 19 and 24 and 25 and 34 years were higher than those aged 75 years or older by a factor of 5.89, 6.38, and 4.60, respectively, for this use.

Users provided comments in both the case studies and survey responses that describe the use of the library computers to find and reconnect with old friends. Fayetteville user Jasmine, 24, uses her email accounts to keep in touch with out-of-state family and friends while working toward her GED and job searching. Marshalltown user Luke keeps in contact with friends he's had for a long time using library computers too. Though he's never met any of them face-to-face, he values the range of topics that they cover, from the price of gas to politics. Newtonia in Oakland described reuniting with a high school friend and how they

now communicate regularly using the library computers. At 40 years old, Newtonia and her family have been homeless for several years and use the computers almost daily for helping meet everyday needs.

## Making New Friends

Social and recreational users also used the library's online services to make new friends through social software, with 23 percent of the users indicating activity in this area (Appendix Table 104). People making less than 300 percent of the poverty threshold have higher odds of using the library's computers to make new friends on social networking sites than those making more than 300 percent of the poverty threshold (by a factor of 2.45 for those below the poverty threshold, 1.87 for those making 100–200 percent of the poverty threshold, and 1.78 for those making between 200 and 300 percent of the poverty threshold).

*The study shows that **23 percent** of social and recreational users (10.5 million people) used library computers **to make new friends using a social networking site.***

*Of all users of library computer and Internet services, those most likely to use the library for this purpose are:*

- *People with incomes below 300 percent of the poverty threshold;*
- *People of mixed race, Blacks or African Americans, and American Indians or Alaska Natives; and*
- *People between the ages of 14 and 24 years.*

Other characteristics of high odds users for this activity include:

- People who are of mixed race, Blacks or African Americans, and American Indians or Alaska Natives have higher odds (by a factor of 1.95, 1.65, and 2.04, respectively) than Whites of using libraries to make new friends through social networking sites.
- The odds of youth aged 14–18 years and those between the ages of 19 and 24 years were higher than those aged 75 years or older by a factor of 22.91 and 42.12, respectively, for this use.

An example of this type of use comes from a focus group of teenagers in the Enoch Pratt Free Library in Baltimore, Maryland: “You can send them a friend request and if they want to be your friend, they accept it so from there they will be on your friend page and you can send them a message like ‘what’s your

name’—you can get to know each other. You can instant message each other and stuff like that.”

Survey respondents also mentioned using the library’s online resources to meet people around the world as a way to find out more about other countries and cultures, to find new friends for people in their family who were lonely, and to make acquaintances with potential business contacts.

## Maintaining Personal Websites or Blogs

The study found that 21 percent of the social and recreational users were maintaining a personal website or blog using the library computers (Appendix Table 107). These activities require more technical skill than other communication uses, and also require some effort to create and maintain, showing a more sophisticated knowledge of technology by these users.

For maintaining personal websites, analysis of the surveys show that lower income users (those making less than 300 percent of the poverty threshold) have higher odds of using the library’s computers to maintain their own websites than those making more than 300 percent of the poverty threshold (by a factor of 2.17 for those below the poverty threshold, decreasing to a factor of 1.23 for those making 200–300 percent of the poverty threshold).

*The study found that **21 percent** of social and recreational users rely on library computers to **maintain personal websites or blogs**.*

*Of all library computer users, those most likely to use the library for this purpose are:*

- *People with household incomes less than 300 percent of the poverty threshold;*
- *People of Latino or Hispanic origin;*
- *People of mixed race, Blacks or African Americans, American Indians or Alaska Natives;*
- *People between the ages of 19 and 24;*
- *Men; and*
- *People with grade school or some high school education.*

Other user characteristics associated with a greater likelihood of using library computers to maintain personal websites or blogs include:

- People of Latino or Hispanic origin have higher odds (by a factor of 1.68) than those of non-Latino or non-Hispanic origin of using the computers for personal website maintenance, as do people of mixed race (by a factor of 2.09), Black or African American (by a factor 1.44), and American Indian or Alaska Native (by a factor of 1.49).

- People aged 19–24 years have the highest odds of using library technology to maintain websites (odds ratio of 6.32) with odds ratios of 3.79 for ages 14–18 years, 4.50 for ages 25–34 years, and 3.39 for ages 35–44 years compared with people aged 75 years and older.
- Women have lower odds of using library computers for website maintenance than men by a factor of 0.76.
- People with grade school or some high school education had higher odds of using library resources for website maintenance (by factors of 2.19 and 1.47, respectively) than those with high school degrees.

The higher use by lower educated users is unusual in the activities examined in the study and would be worth further study; it would be interesting to learn how these users pick up the skills necessary for this activity as a possible training model for others.

As in the preceding section, the use of social websites for connecting with others helps many people to broaden their exposure to the world, and brings support and connection to their lives. Particularly for those of lower income, who are less likely to have the ability to travel or be exposed to different environments, the interaction through social media gives them a connection to other parts of the community that might not otherwise be available.

### *Exploring the World*

Every day, people use public libraries to explore their world, including pursuing hobbies and skills; finding, attending, and organizing events and activities for themselves and others; engaging in actual and virtual travel; investigating spiritual aspects of life; and pursuing entertainment. These activities are part of the social life of users, whether they are at home or away. Public access technology in libraries helps users engage with the world around them through easy access to the Internet.

### **Hobbies and Skills**

Beyond the formal educational purposes discussed in the Education section, the surveys and case studies revealed that many library computer users are engaged in informal learning, skills enhancement, and other forms of life-long learning. Asked specifically about learning new skills, 25 percent of the social and recreational users engaged in activities such as learning foreign languages, typing, and math through library-supported resources (**Appendix Table 108**).

**9 MILLION LEARN  
NEW SKILLS USING  
LIBRARY COMPUTERS**

*“I’ve used the services to learn how to do household tasks related to plumbing, decorating, various maintenance tasks, gardening, etc.”*

WEB SURVEY COMMENT  
BALTIMORE, MD

**12 MILLION PURSUE  
HOBBIES**

Nearly **26 percent** of the social and recreational users used the library computers to learn new skills.

Of all library computer users, those most likely to engage in this activity are:

- People with incomes below the poverty guidelines;
- Those of mixed race, Blacks or African Americans, and American Indians or Alaska Natives;
- Those between the ages of 14 and 34;
- Men;
- People with some college or a two year college degree; and
- Those who speak a language other than English in their home.

People with household incomes below the poverty guidelines had higher odds of using library computers to learn new skills, by a factor of 1.78 greater than those with incomes 300 percent or higher than the poverty guidelines. Other demographic factors that appear to influence the likelihood of library use for learning new skills are:

- Those of mixed race, Blacks or African Americans, and American Indians or Alaska Natives had higher odds (by a factor of 1.79, 1.61, and 1.18, respectively) than Whites for this type of use.
- The odds for using library computers to learn new skills were highest for 14–18 year olds, followed by those for 19–24 year olds and 35–54 year olds.
- The odds of women using the library for this purpose lower than those of men by a factor of 0.77.
- People with some college or a two-year degree had higher odds (by a factor of 1.21 and 1.14, respectively) of using the library for learning new skills than those with just a high school diploma or GED.
- Those who speak a language other than English at home showed higher odds by a factor of 1.42 of using the library online resources for this purpose than those whose home language was English.

A librarian at the Oakland Public Library provided an example of how services provided by the library to assist computer users help patrons with special needs acquire new skills:

A woman who was probably in her seventies... was learning to read. She was studying Shakespeare’s sonnets of all things... and she needed

ZoomText to be able to see. She was on that computer every day. She couldn't have learned without that screen enlarger.

Besides learning new skills, public access computers are also frequently used to find resources to help with hobbies and do-it-yourself projects. Almost 33 percent of the social and recreational users used library computer resources to pursue a hobby (Appendix Table 109).

*Almost **33 percent** of social and recreational users took advantage of the library's computers and Internet connections **to pursue a hobby**.*

*Of all library computer users, those most likely to use the library's online resources for this purpose were:*

- *People with incomes below the poverty guidelines;*
- *Those of mixed race;*
- *Younger users;*
- *Men; and*
- *People with some college or a two-year degree.*

People with household incomes below the poverty guidelines had higher odds of using library computers to pursue hobbies than those with incomes 300 percent or higher than the poverty guidelines by a factor of 1.76. Other factors increasing the likelihood of pursuing hobbies using library computers include:

- Those of mixed race had higher odds by a factor of 1.56 than Whites for this type of use, while all other races were less likely than Whites to find help with hobbies.
- The odds of using the library computers for this purpose decreased with advancing age.
- The odds of women using the computers and Internet connections in libraries for hobbies were lower than those of men by a factor of 0.62.
- People with some college or a two-year degree had slightly higher odds (by a factor of 1.24 and 1.15, respectively) for this type of use.

Many of the specific types of hobbies and projects mentioned by case study participants and in web survey comments included car, home, and computer repair. For example, the Oakland user Joseph (mentioned earlier) said he used information found using the library's wireless network to remodel his bathroom and kitchen. Sewing, cooking, canning, and other household arts were also commonly mentioned as hobby-type activities, with several respondents

reporting that they were searching for information about these types of use in order to save money.

## Finding, Attending, and Organizing Events

Nearly 11 percent of social and recreational users indicated that they had used the library computers to organize an event using a social website.

*Almost **11 percent** of social and recreational users use library computers to **organize an event**.*

*Of all library computer users, those most likely to use the library for this purpose are:*

- *People of mixed race, or Blacks or African Americans;*
- *People between the ages of 14 and 34 years; and*
- *People who speak a language other than English at home.*

People of mixed race and Blacks or African Americans have greater odds of using library computers to organize an event than Whites by a factor of 1.72 and 1.54, respectively. Organizing social events using online tools was more popular among younger users—the odds of people aged 14–18 and 19–24 years were the highest, by factors of 6.56 and 7.99, respectively, compared to people over age 75 years. Those who speak a language other than English at home also have greater odds of using library computers to organize events online (by a factor of 1.60).

Many users mentioned the use of the library computers to find local events or participate in them online. The library’s online resources often provide organized links to local community events as part of their public services. The director of the Marshalltown library explained the value of their Arts and Cultural Alliance calendar:

People find out what the cultural life of the community is about. It should be an excellent way that people can find out what job openings are available, find things even a simple as how to get around in town, like where a business is located. It also gives kids something to do. When people come in they’re seeing children, they’re seeing Latino folks, they’re seeing all ages, all kinds of economic groups and that’s got to be healthy. It makes you realize how rich your community is and makes you less separate.

An example of this type of activity in a broader context is the role libraries can play in helping people investigate and connect with their native cultures. A Native American user at the Cesar E. Chavez branch in Oakland, California,

talked about his use of the computers to help support his family's Native American cultural activities: "I use [the computers] to find upcoming ceremonies for me and my family. Or, special days that we need to go to on other websites that they told us to go on to in order to find out stuff. Native American ceremonies—we like to go to that stuff."

## Travel

Another use that was mentioned in the web survey responses and case studies was finding travel information and making travel plans. Other users mentioned using the library while traveling to stay in touch or conduct business on the road.

In Baltimore, Maryland, an Enoch Pratt Librarian described summer foreign exchange students who "come in and get on their country's version of Yahoo! or Gmail to stay in touch with their families." As he further explained, "There was a young woman here on a student visa doing work but also studying and sight-seeing; she filled up her digital camera. She needed to have her pictures transferred to her flash drive. I helped her with that so she could continue to take pictures."

In Oakland, California, the director said, "We do get a lot of tourists; we don't really keep tabs, they'll just drop in, 'Hey, we're out of town, can we use your computer?'" The director of the Fayetteville library describes a similar situation: "The library is a destination in our community, a place to spend the day and the place to take visitors. Newcomers and tourists alike are just bowled over by its warmth, beauty, collections, and services. I've received customer comment cards and emails raving about the Fayetteville Public Library from people all over the world. It's a nugget of our community's commitment to reading, learning, and the creative culture."

There are also armchair travelers like Uberto, a 37-year-old immigrant living in Baltimore. Uberto uses sites like Google Maps to look at places around the world that he would like to visit; he goes on to explain: "When I use the computer I like to go places. I like to go to Israel. Go to websites where people take their vacations, like the Caribbean Islands, Mexico, Central America, and South America. It seems like you travel through the Internet to a lot of different places."

## Spirituality

Although not specifically asked about in this research study, survey respondents and case study participants reported using library computers for pursuing spiritual matters. Activities included getting information on world religions, both to understand others as well as to strengthen their own spiritual orientation,

and finding religious texts, bible study resources, church services and events, inspirational messages, and retreats.

One web survey respondent reported that he, “use[s the library’s computers] to provide spiritual care to hospital or home bound clients.” Respondents also reported investigating metaphysical resources and other resources for personal growth. The resources accessed for all these activities include watching topical videos or listening to web broadcasts.

## Entertainment

Web survey respondents suggested a wide variety of entertainment and social uses for the computers, including listening to music, downloading music from sites like iTunes to portable electronic music players where possible (though often respondents likewise complained about library policies that prohibited this type of activity); or watching videos on sites like YouTube or network stations to keep up with favorite shows.

In Baltimore, Maryland, the director of the Enoch Pratt Free Public Library describes how these uses may actually be filling a strong social need: “All these people had many needs. It was pretty rough. What would happen before we had the computers—you'd see these guys sitting at tables really nodding off, trading cigarettes, doing other things. Now, they're at the computer. They're doing searches, playing chess ... I would rather see them doing that, because they're picking up skills and they're engaged and awake and they're doing something.”

Games are also important to children as learning activities. In Marshalltown, Iowa, a staff member from a local family literacy organization refers families to the library for their gaming services, online and in-house, focusing on “children’s games, literacy games like Starfall.com, and PBS.org’s word games.”

In Baltimore, a librarian recounted that,

You can't always tell the reason someone is watching videos when they come in. I've been startled when it hasn't been what I was expecting. One young man that comes in, he's a little mouthy, he's young, and he's flip. His music got too loud and he had headphones, I went over to hush him and I was expecting to find hip hop or something. He was listening to gospel music. It turns out he's a minister. I wouldn't have pegged him as that. So you can't always tell.

Two interesting extensions of using the library computers for entertainment are shown in the following quotes, which demonstrate that these activities may in fact be serving other purposes more related to family engagement.

Baltimore user Antonia, a 49-year-old user introduced in other sections, described using the computers to evaluate her young daughter's activities on the Internet to stay on top of her online behavior: "I have an 11-year-old daughter and I have to keep up with the sites that she goes on, and the only way I can do that is while she's in school. I see all the new shows, to make sure that I'm aware of the things that are out there that I can tell what they're utilizing and then I can track what sites my daughter goes onto."

Adam, a 26-year-old unemployed user in Fayetteville, uses the computers to keep track of television and entertainment activities for his mother and other family members: "It's mainly me using it and taking it back to them. When my mother needed information about some shows that were coming on or some Christian artist that was coming to town, I'd hop online and get it for her. I do it for my sister and dad too."

## Conclusion

The U.S. IMPACT Study clearly shows that Americans value libraries for the access they provide to computers and the Internet for building and maintaining social connectedness. Key to this access is the assistance and formal training offered by library staff, and the free access enjoyed by users that enable them to apply the skills they learn in the use of social software applications to other areas of their lives.

The range of library computer use for communication, entertainment, and informal education reflects the variety of ways that individuals take advantage of library computing and use it for their own purposes and needs. Many of these activities are likely to have downstream impacts in other areas, because they build familiarity with the tools and resources available through libraries, and help users to be more comfortable with them as a means for accomplishing activities that have more direct measurable impacts. Of equal importance, however, is the intrinsic value that people derive everyday from being able to keep in touch with other people, both near and far, as they share the moments of their current lives, interact around meaningful activities, and find ways to share their lives.

# 8 Recommendations

The U.S. IMPACT Studies provides compelling evidence for the way in which one public library service – free computer and Internet access – helps address a wide range of needs for residents in communities large and small. This report demonstrates that libraries have been a silent partner in workforce development, educational achievement, delivering health information, and bringing government services to citizens. It also documents the significant public benefit of investments in library technology and calls on policy makers to develop and implement coordinated strategies to more fully integrate libraries’ roles in achieving positive public outcomes.

Public libraries are unique community-based institutions that serve an incredibly broad spectrum of the American public. Overall, an estimated 149 million American’s visited public libraries in the last year and nearly half of these visitors made use of library computers and wireless networks to access the Internet in the past year; three-quarters also used library computers to access library resources like the library catalog and online directories, subscription databases, and audio and visual collections. Two out of three Americans paid “virtual visits” to libraries, accessing library resources remotely through library websites.

Beyond estimating the number of computer users in libraries, this study has a great deal to say about how people use these new technologies to meet their needs. The uses vary as broadly as a patron’s interest can extend. Survey respondents and interview participants reported using library computers to create resumes, apply for jobs, access homework help, enroll in distance education courses, find out about their health, download government information, secure government services, and even to communicate with family members across the globe.

Library technology services are not used by a chosen few. The study found that a broad cross section of the American public make use of computer technologies at their local libraries. Regular users range from school age children to the elderly, from business travelers to the unemployed, from long-term residents to recent immigrants and English language learners. The study also found that library computer use wasn’t limited to people on the wrong side of the digital divide. More than three-quarters of the library computer and Internet users reported they have regular access to the Internet at home, work, school, or somewhere else. The great number of “wired” users suggests that library computers offer more than simple access. The combination of current technologies, a wide variety of information resources from books to video and

databases and savvy, information-navigating librarians make public libraries a unique community resource for millions of computer haves and have-nots.

At a time when access to technology and the Internet is becoming a necessary resource for full participation in society, public libraries provide an especially vital service to households in need. The study found that low income households, the elderly and English learners, were among the groups most likely to make use of computer training opportunities at local libraries. For these households, public libraries may provide the only, low-cost entry point into an increasingly Internet-dependent world.

Public and private investments in library technology have made an extraordinary difference. From 1998 to 2006, the average number of public access Internet terminals available in library outlets has more than doubled. This study found that there has been a dramatic return on this investment, with 32 percent of the country's residents over the age of 14 reporting use of computers or wireless networks to access the Internet at their local library.

Although the number of users is an extraordinary achievement for any community based service, it also highlights what is at risk if future public and private investment doesn't keep pace with demand. During difficult economic times it is incumbent on all agencies to invest in services that are effective and to leverage existing resources to address a broad set of policy priorities. The recommendations here highlight strategies for policy makers to make smart investments in library technology to increase positive policy outcomes in broadband adoption, educational achievement, health information delivery, citizen satisfaction with government services, and civic engagement.

### *State and Local Government Should Include Libraries in Comprehensive Broadband Deployment and Adoption Strategies*

The National Broadband Plan provides an important framework for communities hoping to extend broadband access to all residents. Local libraries are an important entry point for residents who lack access and a valued resource for residents who may already have access but want the additional support and resources that local libraries provide. State and local broadband strategies should account for the varied ways in which libraries address technology needs of their community. For new users, libraries provide access, support, and training. For experienced users, libraries provide high speed connections, research databases, and other resources that aren't available at home or through a commercial vendor. People are voting with their feet and the use of library technology services continues to grow steadily. This trend has

continued despite the increasing household computer and Internet penetration rates over the last 10 years.

### *Business and Government Agencies Should Engage Libraries in Economic and Workforce Development Strategies*

Given the high use of library services for employment related activities, with over 30 million users reporting this type of use in the last 12 months, it is clear that libraries are playing a key role in connecting workers and prospective employers and in helping individuals to develop new skills. The study highlights a number of ways in which people are using libraries to further their careers. Respondents reported using computers in libraries for resume writing, searching for jobs, acquiring new technology skills, and researching business opportunities. With this many reported users, libraries are likely to be one of the most efficient ways to access job seekers in a given area and connect them to employment support services. Partnerships between libraries, workforce development, and small business development agencies can strengthen the impact of local economic development efforts by building broader and more seamless workforce information networks for the public.

### *State and Local Education Reform Initiatives Should Partner With and Invest in Public Libraries to Extend the School Day for K–12 Students and to Broaden Educational Opportunities for Adults*

Libraries represent a unique community resource that helps expand learning opportunities for students of all ages. In many communities, the public library is the only noncommercial venue for accessing computers and the Internet. The physical and human resources in libraries are often available seven days a week and libraries provide a safe environment for students to get acquainted with new technologies, communicate with teachers and peers, and to access an almost infinite world of information resources. The report highlights several of the ways in which residents use library computers for homework and self-directed learning. Strategic partnerships between schools, nongovernmental organizations, and libraries can help build stronger educational interventions by marshalling the resources and capabilities of a variety of community learning institutions toward a common set of educational goals.

### *Public and Private Health Officials and Organizations Should Support the Public Library as a Partner in Disseminating Health and Wellness Information and as a Resource for Future Health Communications Research*

The number of users seeking health information presents clear opportunities for broadening public health promotion and wellness campaigns. With approximately 37 percent of the respondents reporting that they used library technologies to search for health information, which amounts to an estimated 28 million people, libraries are an important conduit for delivering health information to the public. Users at local libraries appear to be highly motivated to change their health behaviors. Among the respondents that reported using library technology to learn about their diet and nutrition, 83 percent decided to make changes in their diets. Among users seeking information about exercise or fitness, 84 percent (an estimated 11 million users) decided to make changes in their exercise habits. Health information campaigns through library systems may benefit from the fact that many users are already motivated to find out about their health and are ready to make changes in certain health behaviors. And because libraries are so widely distributed in communities across the country, public health information can be targeted to address an area's needs based on local health surveillance information or the presence of a particular demographic subgroup. Working with libraries can help build a stronger health communications network in communities across the country.

### *Government Agencies at the Federal, State, and Local Level Should Support Libraries in Their Role as Points of Access for Many eGovernment Services*

Government agencies continue to migrate a tremendous amount of information onto the Internet. However, few consider the significant "downstream" impact that this migration can have on local anchor institutions like libraries. For many residents, libraries are the only place where they can get unbiased, personal attention from a knowledgeable professional who will help them access information and, on occasion, help them enroll in public programs. As more government services go online, the downstream effect will continue to grow. Given the high use of library technologies, particularly among vulnerable populations, communication strategies developed in collaboration with public libraries could help lessen the burden on local libraries in advance of major eGovernment initiatives and could help the sponsoring agencies extend their reach.

### *Supporting Technology Services that Build Communities*

Respondents of all ages reported that library technologies helped them connect with family (locally and around the globe), keep up with current events, and identify volunteer opportunities. For these users library technology services were like a contemporary version of the old town square, a place where one could go to connect with family and friends, learn about current affairs, or cultural programs. New technology services in libraries have preserved the role of libraries as the information commons in the 21st century. Local civic and government organizations should consider ways to promote and support this vital role that libraries continue to play in the information age.

# 9 Future Research

This study provides a solid base for future investigation. The research program establishes a systematic, comprehensive approach based on mixed methods that. While the survey yields statistically generalizable results the case study investigation provides rich detail from the field data. The findings suggest the following areas for further study of the impact of free access to computers and the Internet in public libraries:

## Further Exploration of Activities and Users

More work is needed to understand the impact of the social inclusion activities identified in this study. There were very large numbers of people engaged in communication with family, social networking sites, email, and web surfing. The full impact of this type of use could not be measured in a study of this type. It is possible that the value derived from these uses are indirect, in that they further develop technology skills of users or perhaps they occupy time that might otherwise be spent on other antisocial activities. Further study is needed to document that value and understand the factors that can make social inclusion activities most successful for individuals, families, and communities.

Further study is also needed on how particular sociodemographic groups use library computers. While this study revealed the value of library computer and Internet access to low income populations across all subject areas, significant differences in odds ratios were reported amongst social groups, particularly people of different age, gender, ethnicity, and language within specific activities in different domains. A key emergent question, for example, pertains to the role of gender: whereas women are heavier users of libraries in general, men showed greater odds of using library technology in most every area. What are the reasons for this difference?

## Extending the Impact, Helping Others

A significant finding from this research was that two out of every three library computer users were seeking information or performing an instrumental task on behalf of another individual. The implications of this observation are important for policy making, and the design of both professional services and technical applications. Further research is required, however, into why people act in this helping capacity and to what extent their library computer use is for this purpose. Likewise, research is needed on those who primarily fill the role of the people being helped, particularly whether they are non-users, how they select their helpers, and whether they have networks of helpers. Applying these

findings in the library setting may help to improve services and reduce staff load with a better understanding of the workings of this behavior.

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# Appendices

The appendices to this report are available at the following links:

## **Theoretical frameworks**

[http://impact.ischool.washington.edu/documents/OPP4ALL\\_Appendix1.pdf](http://impact.ischool.washington.edu/documents/OPP4ALL_Appendix1.pdf)

## **Research methods**

[http://impact.ischool.washington.edu/documents/OPP4ALL\\_Appendix2.pdf](http://impact.ischool.washington.edu/documents/OPP4ALL_Appendix2.pdf)

## **Tables**

[http://impact.ischool.washington.edu/documents/OPP4ALL\\_Appendix3.pdf](http://impact.ischool.washington.edu/documents/OPP4ALL_Appendix3.pdf)

## **Telephone Survey Instrument**

[http://impact.ischool.washington.edu/documents/OPP4ALL\\_Appendix4.pdf](http://impact.ischool.washington.edu/documents/OPP4ALL_Appendix4.pdf)

## **Web Survey Instrument**

[http://impact.ischool.washington.edu/documents/OPP4ALL\\_Appendix5.pdf](http://impact.ischool.washington.edu/documents/OPP4ALL_Appendix5.pdf)





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