

U.S. Public Libraries

and the Broadband Technology Opportunities Program (BTOP)

February 2013

ALA American Library Association

Through the American Recovery and Reinvestment Act of 2009, the National Telecommunications and Information Administration (NTIA) awarded just over \$4 billion to 233 Broadband Technology Opportunities Program (BTOP) projects.¹ NTIA established BTOP to increase broadband access and adoption nationwide, and U.S. state and public libraries have been critical partners in many of these projects around the country.

These investments have enabled libraries to improve their public access technology resources, better address workforce development needs, expand digital literacy training opportunities, and create stronger community linkages and integrated services. This pre-publication report from the American Library Association presents state-level library projects underway across the country, and provides a broad (but not yet comprehensive) look at the library improvements and community impacts that are resulting from BTOP funding. The final version of this report will be available by April 2013.

America's public libraries serve as a lifeline to the technology resources and training essential to building digitally inclusive communities that empower full participation in civic life and the nation's economy. Libraries report services for job seekers as the most important public internet service they provide. According to a 2010 study from the Institute of Museum and Library Services, 30 million people relied on library public access technology for job search resources and assistance in one year. Of these people, 76 percent used the library's computers or internet access for their job search, and 23 percent received job-related training at the library.

"I really think that this program is a success. I've recently started my life over, and this program has really helped me progress. I am computer literate now! I found a nice job and am moving on with my new life. Thanks for this opportunity!"

- Patron at Albany (NY) Public Library

With more than 16,400 locations providing no-fee public access to computers and the internet, libraries combine trained staff, relevant digital content and a trusted community institution to support digital opportunity. Public libraries host more than 30 million in-person visits each week, and 58 percent of U.S. adults have public library cards.

Improved technology capacity

In a time of flat and decreased budgets, BTOP funding has been a gateway to improved technology access at thousands of libraries nationwide. While libraries continue to report challenges meeting the technology demands of their communities, a marked improvement in access is providing some measure of relief. According to the 2012 Public Library Funding & Technology Access Study:

- Public libraries reported an average of 16.4 computers in FY2012, up from 14.2 computers two years earlier. Sixty-five percent of libraries report insufficient public computers to meet demand, down from 76 percent the previous year.
- Thirteen percent of libraries added or replaced computers with BTOP funds in FY2012, and 12 percent plan to add or replace computers with such funds in FY2013.
- Nearly one-third of libraries report offering connection speeds greater than 10Mbps in FY2012, up from 18 percent two years earlier. Forty-one percent of libraries report insufficient internet connection speeds, down from 45 percent the previous year.ⁱⁱ

Several state libraries have exceeded their BTOP plans and goals, adding or replacing more computer workstations and upgrading more broadband connections to libraries. The Nebraska Library Commission, for instance, expects to more than double its grant goal (45 libraries) for upgrading broadband speeds in this mostly rural state. Of the 85 libraries upgraded so far, the average speed moved from 2.9Mbps to 18.2Mbps. All 147 Nebraska libraries now offer Wi-Fi.

Several state libraries also are investing in videoconferencing capacity that will better support and connect remote rural communities. The Alaska Online with Libraries (OWL) project, for instance, is bringing videoconferencing equipment and services to all of its libraries. As of the third quarter 2012, libraries had hosted more than 400 programs and meetings, including job-related trainings and a Pitchapalooza event that gave aspiring authors in Alaska an opportunity to pitch their book ideas to experts in the field. In Oklahoma an OKconnect program is offering a Public Administration degree for Education in partnership with a local university using its new videoconferencing equipment. Thirteen students from across the county attend class at the Pryor Public Library two nights a week, saving travel time and money. The course provides training for future principals and school superintendents.

Addressing workforce needs

More than 90 percent of libraries provide access to job databases and other online job resources; and 78 percent of libraries report that staff members help patrons complete online job applications (an increase of 10 percent from two years prior).

With so many people already turning to libraries for job searching and skills building assistance, it's no surprise that many of the library BTOP projects focused on building capacity and partnerships to meet this demand.

The Idaho Commission for Libraries, for example, drew from the Idaho Department of Labor's Youth Corps program to train high school and college students to serve as Digital Literacy Coaches in libraries over the summer. While the coaches help patrons with computer basics and internet fundamentals, they gain practical, hands-on experience through projects that enhance their communities. In 2012, coaches were deployed to 27 libraries. In addition to the training, they also provided nearly 1,000 hours of other computer assistance to more than 1,500 people. Through collaboration with the New Jersey Community College Consortium (NJCCC), the New Jersey State Library has delivered over 1,000 job readiness computer skills workshops. Through December 31, 2012, over 10,000 N.J. residents have accessed the online career resources at public libraries. This includes over 44,000 user sessions, over 9,400 resumes created, and over 183,000 job searches



conducted. In addition, over 36,500 searches have been conducted using the online small business and entrepreneurial resources.

Supercharged digital literacy

There is an emerging understanding that access to technology is only a part of the solution needed to ensure digital inclusion and empowerment. Increasing digital skills and competencies make up the rest of this equation. Twenty-first century digital literacy skills are basic to classroom performance and workforce readiness, as well as full participation in civic life. America's libraries are on the front lines of digital inclusion and digital literacy efforts nationwide. Close to 90 percent of libraries offer formal and informal technology training to library patrons.

The majority of library-led BTOP projects fall under the Public Computer Center (PCC) category. Every library PCC project included digital literacy training and support. For instance, more than 365,000 Coloradans increased their digital literacy skills through that state's BTOP project. Ninety-five percent of those who took formal classes in Colorado stated they learned a valuable skill. The New York State Library BroadbandExpress@your library project created public access computer and teleconferencing centers in 30 libraries in economically distressed communities and put five broadband-equipped "e-Mobile" computing training units on the road to rural locations and underserved communities. Together, these facilities reached more than 400,000 residents. More than 200 people who participated in library programs and used online job resources went on to secure employment.ⁱⁱⁱ Mobile computer labs were included in many library BTOP projects – allowing them to deploy trainers and technology where it was most needed, particularly in rural communities.

Powerful partnerships

Partnerships built through BTOP projects have broadened the depth and scope of library-based projects so that more and more efficient services can be offered. New or expanded partnerships range from state departments of labor, education, commerce, health, and information technology to community colleges and universities to public media, rural development and small business development.

Beyond economies of scale, the partnerships create opportunities for joint learning and leveraging respective expertise (e.g., workforce, health, legal). Partnerships also aid in sustaining initial investments by enabling organizations to pool resources, either financial or expertise, and physical space. Libraries report that BTOP projects have led to strengthening existing partnerships but, especially in workforce-related projects, have encouraged forming new partnerships to the benefit of both entities.

The Vermont Department of Libraries and the Vermont State Colleges partnered to create the Internet Interns program, which provides student interns for one-on-one assistance for patrons, as well as collaborating with librarians to design special technology projects. The program has provided a solution for libraries unable to meet demand for digital skills training, and the interns gained valuable experience as instructors. The Maine State Library is working with the Volunteer Lawyers Project to provide legal information clinics through new library videoconferencing technology. The clinics will be in real time, allowing patrons at multiple locations, and especially in rural locations, to attend and ask questions directly of the presenting attorney.



The capabilities of libraries have been, and will continue to be strengthened as BTOP initiatives are deployed. The estimated number of impacted libraries extracted from the Connecting America’s Communities Map illustrates the high volume of libraries and communities benefitting from stimulus funding.

BTOP Projects	Location of BTOP library sites	Estimated No. of Library Sites
Comprehensive Community Infrastructure (to Community Anchor Institutions)	42 states, District of Columbia, 4 territories	1,438
Public Computer Centers	25 states, District of Columbia	1,744
Sustainable Broadband	6 states	226

BTOP Library Projects

The Pew Research Center’s January 2013 report, *Library Services in the Digital Age*, reports that the availability of free computers and internet access (including Wi-Fi) now rivals book lending as a vital service of libraries. In a national survey of Americans ages 16 and older, 77 percent say free access to computers and the internet is a “very important service” of libraries, while 80 percent say the same for borrowing books. As 62 percent of libraries report being the only source of free public access to computers and the internet in their communities, the critical role libraries play in their communities is amplified. Following are examples of BTOP library projects that illustrate the diversity and vitality of library technology services and resources. Wherever possible, data has been pulled from third quarter 2012 reports filed to NTIA or, in some cases, even more recent information provided by state library agencies or in news reports.

Alaska

The Alaska “Online with Libraries” (OWL) project is enhancing PCCs at 97 libraries. In addition to providing faster internet connections to many of these libraries, most in remote rural areas, OWL will establish a public videoconferencing network for all of the libraries that will enable purposes ranging from online training in remote villages to recording and preserving indigenous languages. As of September 2012, 132 new computers were available across the state, and 90 percent of bandwidth upgrades had been completed, including new wireless connectivity in many locations.

Provision for the OWL PCCs with the latest computer and videoconference technology, as well as increased broadband capability, has decreased the dependence on expensive travel to visit job training centers or employment agencies. Users are able complete online job applications, and attend training and continuing education at libraries for the first time. IT aides were able to learn basic troubleshooting, online resources, and videoconferencing basics – skills that will be useful throughout their communities and improve their future job prospects.^{iv}

In Action: Commercial fishermen Scott Vorath and Mariah Warren depend on the internet access at the Craig Public Library to keep competitive. Harbors rarely have internet access, and commercial fishing boats are not necessarily Wi-Fi capable. Ongoing access to the National Weather Service website is essential, as well as the Alaska Department of Fish and Game website, as areas open to fishing change from week to week. They also use the library computers to apply annually for the crew license required to work on commercial fishing vessels.^v



Arizona

The Arizona State Library, Archives and Public Records is the lead for one PCC project, Arizona Public Access Computers (AZPAC), and a managing subgrantee with the Arizona Governor's Office of Economic Recovery on a second program, Arizona Job Assistance Center (AZJAC). AZPAC placed more than 1,000 public access computers in 85 libraries across the state. AZJAC has two components: Job Help Hubs are established at 33 public and tribal libraries and include a trainer and computer lab for both scheduled training and open lab time; and 180 Virtual Workforce Workstations with a dedicated desktop computer and printer/fax/scanner, plus access to job-assistance resources, have been added in almost every public library in Arizona. Altogether, the two projects have made more than 1,600 new computers available throughout the state.^{vi}

I have been coming to the library every day for the last six months. I was starting to lose hope in finding a job. Getting up every morning and going to the library had become my job, as it keep me in the habit of doing something. **The library kept me from losing hope. It had become a place where I had a chance.**

– patron at the Joel D. Valdez Main Library
(Tucson, AZ)

In Action: The Job Help Hub partnership between the Mohave County Community Services Department and Mohave County Library served more than 800 job seekers in its first seven months of service in 2012. “A middle-aged gentleman who was hard to employ because of a criminal history sought our assistance,” said Workforce Investment Act (WIA) Program Representative Toni Ambrose. “We helped him create a resume and fill out online job applications and we offered advice on interviewing skills. He has been successfully employed for eight months and is now working on a very big project in the Lake Havasu area. ...We also had a lady who could hardly read or write...She is partially disabled and was only looking for a part-time job to supplement her income. She started out teaching herself how to read. We referred her to the literacy group here in Bullhead City. She would come in on a daily basis, and I would sit with her and walk her through her online applications. She is now successfully employed.”^{vii}

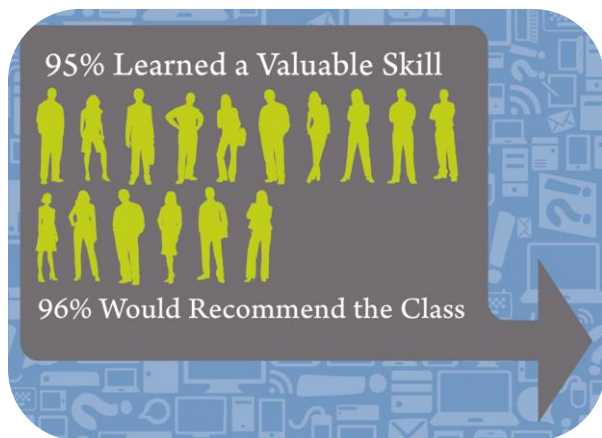
Colorado

The Colorado State Library is creating a culture of technology engagement through its PCC project, “Bridging the Great Digital Divide.” The project is designed to improve lives by providing computers, training, and public awareness campaigns in 81 Colorado communities. In the first three months, Colorado PCCs offered more than 260 training classes to nearly 3,000 people. Local community partners also are working with the libraries to host training topics including workforce skills, business 2.0 development, and new immigrant literacy.

Colorado has exceeded its BTOP plans by delivering more than 1,300 computers (rather than 812) and upgrading broadband connectivity at 29 libraries, even though this was not in its original application. Enhanced broadband services allow citizens in remote parts of the state to stay connected with regional resources, such as workforce centers, small business development offices, and regional agricultural offices. In addition, the State Library staff developed a technology “boot



camp” and curriculum to help library staff and community volunteers become more proficient in technology use and training.^{viii}



Section of Colorado State Library's infographic, "Colorado's Public Computer Centers"

Colorado also created Project Encompass, a series of community meetings focused on digital literacy and broadband adoption. Led by libraries, community stakeholders are invited to participate in solutions-based meetings to identify opportunities to partner more effectively and efficiently to help community members be successful in an increasingly online and mobile business world.^{ix}

In Action: In Milliken, staff from the High Plains Library District are celebrating recent successes for users of their PCC at a local coffee shop. After three months “burning up the hours” on the PCC

computer, John Morris has acquired a new assembler position. Patron Gene Jaramillo’s story was featured in a video produced by the Bill & Melinda Gates Foundation. According to Jaramillo, “The company I worked at, which I thought I would retire from, ended up closing after 18 years. So I was out looking for a job. I needed skills.” Jaramillo booked an appointment with the PCC Supervisor. “I was able to create my resume, fine tune my resume, and send my resume” and “because of skills that she helped me with, now I’ll have a job starting next week.”^x

PCC resources also were used to meet needs of volunteers, evacuees and others after wildfires affected areas of the state. Poudre River Library District BTOP laptops, for instance, were deployed to support High Plains fire victims and volunteers at the evacuation center. They also used the projectors to project news and updates of the fire every day.^{xi}

Delaware

To address the online access needs of economically vulnerable communities in Delaware, the Department of State’s Division of Libraries launched an expansion of a training program at PCCs throughout the state, and provided equipment upgrades for public access computers, assistive technology, videoconferencing capabilities, and wireless networking. The computer centers at four libraries became anchor Job Centers focusing specifically on the needs of the unemployed, with specialized training for resume building, job search, and interview skills. Job Center services are expanding to the remaining 28 libraries statewide. As of September 2012, 78 new workstations and laptops have been deployed for use at the 32 anchor and satellite locations, and all sites have upgraded broadband connections from 10 Mbps to 100 Mbps. In addition, Wi-Fi has been launched at 20 sites that did not previously have wireless capability.^{xii}

In Action: Several state and local dignitaries, including Gov. Jack Markell, U.S. Senators Chris Coons and Tom Carper (D-Del.), and Secretary of State Jeffrey Bullock, were on site for the launch of the Job Center@Delaware Libraries program at the Dover Public Library. The *Dover Post* reported that Senator Carper, a former Delaware governor, pointed to industries such as agriculture, auto and banking for future job growth. “It’s about making sure that those people walking through the door



who may have the wrong set of skills for the jobs that are out get those skills,” Carper said. “In this state, we have a lot of people who want to work, and our job is to make sure they have those opportunities.” Job centers are positioned throughout the state in areas where unemployment is high. Aside from the Dover library, the three other anchor sites are located at the Wilmington Institute Library, the Georgetown Public Library and Seaford Library & Cultural Center. Residents looking for employment will have access to 10 laptops, a videoconferencing unit, email, online courses, resume assistance, GED testing and a variety of exams for college admissions and professional certifications.^{xiii}

District of Columbia

With the deployment of new computers and Wi-Fi, and increased broadband speeds from 10 Mbps to 1 Gbps, the District of Columbia’s Community Computing Resources project (DC-CCR) has made overcrowding and long wait times experienced at many District libraries and recreation centers a fading memory. The project, led by the D.C. Public Library, serves the entire District but focuses on economically vulnerable populations, especially seniors, students, the unemployed, and low-income residents in areas where broadband adoption rates are low. The DC-CCR project provides computer skills, job search, and internet use training via current library staff, outside instructors, and local volunteer experts, while upgrading equipment and improving connectivity for public use at 28 public libraries, recreation centers, and a community college. In one quarter (July-September 2012) over 4,600 people received computer training at the public computer centers (PCCs). As of September 2012, 767 new computers were installed and broadband connectivity was upgraded at all sites. Also, the PCCs were open an additional 117 hours as a result of BTOP funds.^{xiv}

In Action: The West End Neighborhood Library reports that Mandy was a job seeker at the branch for about a year. She would arrive as the building opened and would search for jobs using a public access computer for an hour or two, 3-4 times per week. The librarian introduced her to the Job Seekers Portal on the D.C. Public Library website, and provided moral support. Mandy thanked the librarian for being a resource for her at the library after accepting a position in a law office downtown.

Idaho

The Idaho Commission for Libraries (ICfL) BTOP program is increasing connectivity and computing capacity in Idaho’s 55 least-connected public libraries through a combination of enhanced broadband access and the deployment of new computers to meet increased demand. Upon completion, this will nearly double the computing capacity in 40 percent of the state’s public libraries and internet users are expected to increase by a factor of ten.^{xv} Existing partnerships are being leveraged to use the new capacity to offer digital literacy training, employment, and e-government services to economically vulnerable populations in the state.

In Action: Work has begun with the Idaho Office for Refugees to train refugees to coach their peers one-on-one in digital literacy and computer use in Nepali, Burmese, Arabic, French, Swahili, and several other languages. The Office has reached 1,500 refugees in 15 languages, and 60 percent of this training was delivered in public libraries.^{xvi}

In 2011, the ICfL trained and deployed 20 Idaho Youth Corps in various libraries to serve as coaches. Established by the Department of Labor, the Youth Corps program provides high school and college



students the opportunity to gain practical, hands-on work experience through meaningful projects that will enhance their communities. The Digital Literacy Coaches were responsible for helping patrons with computer basics and internet fundamentals. In 2012, the program expanded to include both BTOP connectivity and non-connectivity libraries, with 29 youth participating in 27 libraries.^{xvii}

Kentucky

Many Kentucky libraries lacked the requisite equipment, instructional capacity, and funding to meet increasing user needs, while existing One-Stop Career Centers in the state are often overcrowded with long wait times for service. In response, the Kentucky Department for Libraries & Archives deployed a major upgrade of computer facilities as part of the Workforce Opportunity Expansion project that would target areas of Kentucky with especially high poverty, disability, and unemployment levels. In these communities, public libraries are for many the only source of online access to employment information, Medicare and other government services, unemployment benefits, and training opportunities.

Project partner, Kentucky Department of Education, is offering GED completion courses, English as a Second Language training, family literacy, workforce education, and corrections/prison education in the enhanced computer centers. The project provides for each library's curriculum to meet local needs and match the resources of the town or county it serves.^{xviii} As of September 2012, 733 new computers were installed, broadband connectivity was upgraded at 46 PCCs, and PCCs were open an additional 649 hours per week as a result of BTOP funding.

In Action: Monthly webinars for participating libraries have created a strong forum for peer learning. Many libraries have been inspired by their peers to “take the show on the road.” Already, nine libraries have conducted classes off site at churches, community centers, the Salvation Army, senior centers, the Housing Authority and more. Many libraries are placing emphasis on partnerships and training and support related to starting and sustaining small businesses and working from home. New partnerships with public schools and universities are emerging with one library training 30 teachers about technology, and another teaching university students how to create a resume. Another library was approached by the County Court System with specific training needs for their employees.^{xix}

Louisiana

As of September 2012, the State Library of Louisiana's BTOP project has provided 4,512 training classes and consulting sessions have been delivered to over 24,625 students of all ages. This exceeds the initial target amount of 2,774 training and consulting sessions identified in the initial BTOP grant award. Online tutoring has continued to flourish with 84,487 tutoring sessions delivered to date. The free classes offered provide workers and job seekers the technology skills needed to succeed in the digital economy, including professional-grade classes in the most widely used business software. Louisianans also can take business skills classes to improve their proficiency on topics like Getting Your Job Search Started, Mastering the Interview, and Business Etiquette. Additional training helps people make maximum use of technology with classes in Computer Foundations, Introduction to Home Wireless Setup, and Home Computer Security. The Louisiana Jobs & Career Center website, www.lajacc.org, which offers career tools and displays searchable job postings for the public, has had over 383,300 visits.



In Action: With the installation of 161 wireless routers, every public library system in the State of Louisiana now has free wireless broadband internet connectivity. In addition, the State Library has deployed 10 internet-ready laptops to each of the 64 parishes, so citizens can borrow them through their local library and connect to any hot spot to get online. The primary goal is to promote broadband use so that citizens may become comfortable and familiar with this technology.^{xx}

Maine

Maine State Library is demonstrating that PCCs are sources of opportunity for state residents, particularly in a weak economy. The state has experienced its highest increase in unemployment in recent years among residents with the least education, and many job seekers do not have the experience or educational prerequisites to enter occupations with the largest share of openings. To help address some of these challenges, Maine State Library's "Information Commons" project is providing free broadband access, career development tools, and job search resources.

As of September 2012, the project delivered 542 new workstations to computer centers at 107 public libraries statewide. The project also established 11 videoconferencing regional hubs and three mobile computer labs to enable training for librarians and patrons in remote areas.^{xxi}

In Action: Maine State Library provides on-site training for job seekers in partnership with the Maine Department of Labor's Rapid Response Team. At the McArthur Public Library in Biddeford, the Team hosted a training session for unemployed workers, including a group recently laid off by a local branch of a home improvement chain. The session gave an overview of the online resources available to job seekers, and covered topics such as interviewing skills, preparing for job fairs, and the use of social media during job searches.^{xxii}

In January 2013, WCSH-TV featured the Volunteer Lawyers Project (VLP), providing free legal help for veterans. "I'm really glad to see people here coming out to get the support they need. The legal community is filled with veterans themselves and helped family members apply for benefits," said VLP representative, Rob Liscord. "I'm thrilled that attorneys are willing to step up and do this work. The need is greater than our capacity right now, so we need to recruit more attorneys."^{xxiii}

Montana

Research indicated that Montana's adoption of broadband services lagged behind the rest of the nation, a problem made more challenging by the state's low population density and expansive geography. In many cases, public libraries are the only feasible source of broadband internet access in remote communities. The Montana State Library turned that around with broadband speed upgrades to 39 (exceeding a goal of 29) local libraries across the state within reach of 86 percent of Montana's population. The state library also teamed with the Montana State Workforce Services Division to increase library staff skills in supporting job seekers and create an online repository of easy-to-use employment and training resources for library staff and patrons.^{xxiv} According to the 2012 Public Library Funding & Technology Study, the national average is 16.4 public workstations per outlet. Montana BTOP libraries report an average of 17.5 public workstations, up from an average of 10 public workstations in January 2011.



In its first two years of the BTOP program, Montana libraries delivered 478 new computers serving over 16,200 users per week, installed ADA-compliant software and peripherals, provided 1,300 hours of digital literacy training to 900 librarians, and over 10,000 hours of digital literacy training to 55,000 patrons. They also launched the W.O.W. (Web on Wheels) bus, which provides internet access and training to rural patrons in Missoula County.^{xxv} It is all part of the State Library's commitment to "Help Montanans tame the wild, wild Web."^{xxvi}

In Action: The oil boom in the Bakken, Montana has strained public services, with thousands of new residents living in camping trailers, and without computers or internet access. Businessman Tom Gilbert came to the area in 2011, and settled in Sidney, one of the most isolated communities in Montana. He likes to end his day at the library, and relies on the Wi-fi and other resources at the Sidney Richland County Library for business support, including staff assistance.^{xxvii}



Rosebud County librarian, Della Haverland, unpacks newly-purchased computers for public use. (via Montana State Library flickr)

Technology classes at the Polson Library provided small business owner Kathy Gilroy with new computer skills to run her home business selling skin care products. "Now I can do my own postcards, calendars and spreadsheets...the computer is the heart of the business, and I can't be afraid anymore....If you want to expand, this is the best opportunity."^{xxviii}

Nebraska

To make broadband service available to low-income, aged, and other underserved or economically at-risk populations in the state, the Nebraska Library Commission has enhanced technological capabilities and support at 147 public libraries statewide, nearly all of which serve communities whose median income is below the national average. In addition to driving broadband adoption, the project has advanced access to distance learning, health information, and e-government services. This includes upgrading broadband access for 85 PCCs and 10 more expected, which is more than double the grant goal. Also, there has been the deployment of over 1,100 new or



Hruska Memorial Public Library in David City, NE (via Nebraska Library Commission flickr)

upgraded public computers statewide, and the placement of ADA-compliant workstations at 70 libraries. As grant partners, community colleges across the state began providing computer-related training at participating libraries for their patrons near the end of the third quarter 2012. Other partners offering training including the Nebraska Department of Labor, the Court Administrator's Office, the Center for Rural Entrepreneurship and the University of Nebraska Medical Center. The partnerships have resulted in a surge in training hours reported by libraries.^{xxix}

In Action: New technology provided the platform for a unique civic engagement project. At the beginning of 2012, Nebraska Public Television and Radio (NET) kicked off their "Campaign Connection 2012: Voter Voices" digital democracy project. The



program was piloted in three grant participating libraries to gather the thoughts, perspectives, and questions of the public this election year. Attendees made use of a library webcam to give voice to the important issues during this campaign season. They could ask questions of the candidates or comment on issues important to them or to their community. Responses were shared with the candidates and the rest of Nebraska, on television, radio, the web and social media. The project also included roundtable discussions at select locations. The content was used regularly in NET News Signature Stories and on the web, with a television program planned for the fall.^{xxx}

Nevada

Nevada saw a 45 percent increase in public library computer usage for job searches and other training opportunities between 2008 and 2010. To meet this growing demand, the Nevada State Library and Archives, a division of the Department of Administration, BTOP project is expanding the training and educational capacity at libraries and other hubs for free computer access in each of the 15 counties throughout the state. The Nevada One Click Away project is upgrading 34 PCCs and creating one new center. The project will enhance existing computer training programs, including computer skills training provided by librarians and volunteers, and adding accessible technology and computer classes in Spanish in the larger participating library branches. Additionally, some libraries are partnering with local Chambers of Commerce to host small business workshops focused on best practices, customer creation and retention, and marketing practices. As of September 2012, 453 new workstations have been installed, and PCC sites were serving nearly 9,100 users per week on average in the third quarter.^{xxxi}

The Nevada State Library also has worked with partner Connected Nation to establish local technology planning teams in rural counties across the state as part of NTIA's State Broadband Initiative. Local teams are comprised of local champions, providers and BTOP/BIP (Broadband Improvement Program) awardees. The teams' mission is to document the county's current broadband assets and challenges and develop solutions. Connection upgrades are in progress at several libraries as a result of relationships build through these teams.

In Action: Both the Carson City Library and the Henderson District Public Libraries have partnered with local agencies and organizations to expand resources for workforce and economic development. The Carson City Library has launched the Business Resource Innovation Center (BRIC), a partnership with the Carson City offices of Business Development, Building, Engineering, Planning, and Business. This program's mission is to create real-time, progress-driven outcomes that help business succeed. The BRIC includes access to librarian services that can guide patrons to everything from business-focused books and materials, to business research databases, counseling, mentoring, seminars, networking, and self-study programs. The BRIC also provides access to public computers, a copy and fax center, and meeting spaces. In Henderson, the library will become one of the Business Resource Centers, a business incubator run by the Chamber of Commerce. It offers a unique opportunity to partner with SCORE, Nevada Microenterprise Initiative (NMI) and other small business support groups.



New Jersey

New Jersey libraries provide job search assistance, employment skills training, workforce development programs, and other online resources at 365 libraries across the state. As of December 31, 2012, more than 9,700 NJ residents enrolled in over 1,000 job-readiness computer skills workshops in public libraries statewide. Also, 845 new computers have been deployed at 124 public libraries, and broadband connectivity upgraded at 91 libraries. A new website, NJworks.org, is a popular statewide resource. It is estimated that more than 5 million New Jersey residents will be served through this initiative over the three years of the grant project.^{xxxii} NJSL also provides resources to foster entrepreneurship, and help existing businesses make lasting and substantial improvements in their performance. At the libraries, community residents can access online business and marketing tools and in-depth market research reports.^{xxxiii}

In Action: Local librarians have seen many of their patrons acquire jobs after taking career building and digital literacy courses. A computer course at the Garfield Public Library gave a patron the skills she needed to obtain a part-time position as a product demonstrator. A Basking Ridge resident shared her story: “I am pleased to tell you that I will be starting a new position on 01/02/12. I was able to attend the classes offered during the summer which helped me be better prepared to start a temporary job in September. The position was for six weeks which turned into four months. This week I was offered the position which I gladly accepted...Thank you for providing the classes at the library. The teachers were excellent, and I was able to update some of my computer skills. Finding myself unemployed after working for the last 35 years was quite an adjustment, having these classes at no cost was a considerable gift.” Libraries across the state are seeing similar successes of how broadband can improve a person’s economic situation.^{xxxiv} Through December 2012, over 10,000 New Jersey residents have accessed the online career resources at public libraries. This includes over 9,400 resumes created, and over 183,000 job searches conducted.^{xxxv}



BTOP computer class in Salem with instructor, James E. Hunt (via New Jersey State Library flickr)

New Mexico

The New Mexico State Library’s “Fast Forward New Mexico” Sustainable Broadband Adoption (SBA) project created and deployed digital literacy and small business development training sessions at 17 of its public and tribal libraries throughout the state. Training includes building basic computer and internet skills, teaching participants how to become successful online students, as well as helping cultural entrepreneurs (e.g., musicians, jewelers, and writers) and other small businesses through the use of online tools. Since many small businesses in rural New Mexico do not have websites, these classes are important because they teach participants how to set up an online presence, develop a larger strategy for reaching out to the online community, and increase revenue through e-commerce. Fast Forward also tailors some of the classes to meet the needs of the local unserved



and underserved communities. For example, Fast Forward offered classes with a Navajo translator at two libraries close to the Navajo Reservation and classes in Spanish were offered in Columbus, Albuquerque, and Las Cruces due to the large Spanish-speaking population. As of September 2012, 5,522 people had participated in Fast Forward New Mexico training sessions.^{xxxvi}

In Action: Jonathan Helf, of Vanderwagen, had developed a website for his home-based company, High Mountain Furniture, when he found out about the Fast Forward New Mexico's computer training at the Octavia Fellin Public Library in Gallup. "I thought I knew how to use the internet," Helf said. Since completing all four marketing classes, Helf has been on the internet trying to discover how to "hit" his target market. The class not only helped Helf with internet use, but the instructor also assisted him in developing a good market base and a business plan. "Fast Forward New Mexico opened my eyes to a whole new world that I didn't know was out there."^{xxxvii}

New York

The New York State Computer Centers project (Broadbandexpress@yourlibrary) is deploying hundreds of computers in 30 libraries and five mobile training centers (e-Mobiles) across 41 economically distressed Upstate New York counties. The project is designed to address unemployment, a lack of affordable broadband services, education, training, and technical support, and to increase access to essential e-government and other online resources necessary to facilitate work, health care, education, and citizenship. As of September 2012, the state had exceeded its baseline plan by installing 675 new computers, and 12 sites have been provided with upgraded broadband connectivity. PCCs and e-Mobiles continue to add computer tablets to their available resources, and all e-Mobiles have purchases wireless capacity for use in remote locations.^{xxxviii}



BTOP Express at Lewiston Public Library (via BTOP Express flickr)

In the second quarter of 2012, 29 of 30 the PCCs had operational teleconferencing capabilities which have been used for a variety of activities from remote job interviews to job-related training to general informational programming. Seventeen PCCs are providing additional off-site training to accommodate the continued high demand.^{xxxix}

Community-level partnerships also have been key to New York's ability to reach more and new users – now and in the future. Having provided training to nearly nearly 5,000 residents, the Albany Public Library reports it is now recognized as a partner for workforce development and digital literacy services throughout the city. This success is due in part to the level of programming developed and maintained during the grant project, including with the School of Education and the School of Social Welfare at the University at Albany. By working with the university, Albany Public Library's digital literacy classes now include classes conducted by students, increasing availability without unreasonable expenditures for staff. In a typical week, the Southern Tier Library System e-Mobile visits about a dozen libraries and/or community organizations, travelling 900+ miles, and providing about 25 hours of instruction. One of the important aspects of continuing this workforce development and digital literacy program has been the creation and maintenance of relationships



with the Workforce Development Office in Elmira and ProAction in Bath. These relationships are mutually beneficial because the Southern Tier e-Mobile has the materials and instructor and these sites have an abundance of people needing instruction and support.

In Action: The Nioga Library System residents can now access computer and technology training from an e-Mobile unit that is making its way through Genesee, Orleans and Niagara counties. The new Nioga mobile unit, named BTOP Express—Better Technology, Onsite & Personal—has a computer lab with 15 laptops, a portable smart board and wireless printers. The grant also pays for a coordinator and trainer. "We were continually asked by the local population for computer training," said Mary Zangerle, the unit's coordinator and the former director of the Lee-Whedon Memorial Library in Medina. "While libraries have computers with public internet access, those computers are almost always occupied and there aren't enough of them." The computer lab can quickly be set up in libraries, town halls, church basements and other public meeting spaces. Or, Zangerle said, the computers could probably be set up on picnic tables at a park.^{xi}

"Working with our community partners was one of the most beneficial parts of our program.... As budgets continue to shrink nationally and locally, our very core social services are becoming more and more strapped. The expectation has become do way more with much less. Our program was able to partner and supplement services....Meeting the needs of our partners and of our community was one in the same."

– Anna Ezzolo, Director of the Southern Tier Library System E-Mobile services

Oklahoma

Given the sparse, remote nature of many of Oklahoma's rural counties, high-bandwidth applications like videoconferencing are an essential component to developing the state's economy, enhancing public safety efforts, and improving educational opportunities in tribal and economically distressed areas. With "Get Connected @ Oklahoma Libraries," the Oklahoma Department of Libraries (ODL) will upgrade PCCs at 45 libraries in 44 counties across the state, establish 36 library-based videoconferencing systems, deploy 339 new workstations, and upgrade broadband connections for 42 sites. The ODL expects the project to serve as many as 8,500 additional users per week and provide training to as many as 296,000 residents, utilizing more than 1.1 million teacher hours over the life of the project. As of September 2012, 230 new computers have been installed, and broadband connectivity has been upgraded at 33 PCCs.^{xi}

In Action: During the second quarter of 2012, a customer visited the Purcell Public Library to research a pharmaceutical company that supplied a drug for a life-threatening disease that was not covered by her insurance. With the librarians assistance she found the latest information and a coupon for her to print to take to the pharmacy. She stated that no one had been able to help her with this until she came to the library. At the Tahlequah Public Library, a man who had very limited experience with computers came to the library to fill out an online application. Two staff members



helped him get it completed. Later he came in and told them that he has already received a call about a job interview.^{xiii}

The public library in Pryor is offering a Public Administration degree for Education in partnership with a local university using the new videoconferencing equipment in the OkConnect project. Thirteen students from throughout the county attend class at the Pryor public library two nights a week. This is a time and money saver for these students as driving to the class at the nearest university would involve approximately 53 minutes driving time and 44 miles each direction. The course is providing training for future principals and school superintendents.

Rhode Island

As of September 2012, the Beacon 2.0 Library Computer Centers project deployed 727 new computer stations in 72 libraries and established mobile computer centers.^{xliii} OSHEAN (Ocean State Higher Education Economic Development and Administrative Network) and Ocean State Libraries increased the number of mobile labs to 12 after receiving a high level of interest from local libraries. Two multilingual trainers are currently working with libraries to determine how to best address the needs of local communities, including Spanish and Portuguese speaking populations. Library staff will then teach classes on a wide range of topics from how to set up an e-mail account to how to use Microsoft Office products and how to apply for a job online. The mobile labs will enable libraries to hold training classes without interfering with other visitors' access to the libraries' main computer stations.

Library computer centers across the state will be further enhanced through the development of the Beacon 2.0 Network, which will greatly improve broadband speeds at schools, libraries, and other community anchor institutions statewide.^{xliii}

In Action: Luke Esser knows he wants to work outdoors when he graduates with a major in Land Surveyor Technology. He started his job search by checking the Yellow Pages and sent letters to 50 surveyors. No luck. The next stop on his job hunt? The Foster Public Library, where library director Kristen Chin and Foster Director of Human Services Karen Mauro were conducting a program to help residents of the rural western Rhode Island town find jobs. Libraries all across Rhode Island were gearing up to provide more job hunting assistance, taking on a role created in part because the Department of Labor and Training had announced in June 2012 plans to lay off as many as 70 of its own employees.

Esser already was using the library three or four times a week, for books and because he has no internet connection at home. Chin and Mauro took Esser through the EmployRI website (<https://www.employri.org/>). Navigating deeper into the website, Chin and Mauro showed tips on resume writing, self-assessment, identifying education program and analyzing the local job market. Esser says he'll continue coming to the library and checking the website, looking for the connection to get his career up and running.^{xliii}

Tennessee

Many of Tennessee's libraries that serve economically vulnerable populations were increasingly unable to meet the bandwidth needs of their constituents. The Tennessee State Library & Archives expanded 29 PCCs as part of its Bridging the Gap project, which leverages the support of local community organizations to stimulate participation among patrons in the community. As of September 2012, libraries have added 325 new computers and increased broadband connectivity to support the educational and career goals of Tennessee's most disadvantaged citizens, including



those with high levels of poverty, unemployment, or disability, as well as senior citizens and youth. In addition, libraries were open an additional 541 hours per week as a result of BTOP funds.^{xlvi}

In Action: The Chattanooga Public Library has partnered with Chattanooga Re-Start and the Chattanooga Department of Education Arts & Culture for use of their computers in GED and Senior computer training.^{xlvii}

Texas

Known as the Technology Expertise, Access and Learning for all Texans (TEAL) project, this initiative is providing computer access and training opportunities for the state's most underserved populations across 38 partnering library systems. TEAL is using approximately \$8 million in BTOP funds and \$3.7 million in non-Federal matching funds to provide 2,200 new workstations in 155 new or upgraded PCCs and directly create more than 100 full- and part-time jobs. As of September 2012, 1,192 new workstations have been installed, broadband connectivity has been upgraded at 54 PCCs, and Wi-Fi was installed at 45 PCCs that did not previously have a wireless connection.^{xlviii}

TEAL also offers professional development webinars for library staff. These webinars provide librarians with tools and techniques to manage and promote computer resources, enabling libraries to better meet patrons' technology needs, and improve their understanding of technology to boost sustainable broadband adoption. TEAL offers webinars on a variety of topics including a series on how to promote and teach computer technology with seniors and people with disabilities. TEAL also partnered with the Texas Workforce Commission to create a series of workforce skills webinars, teaching librarians how to help library patrons with their job searches and career development.

In Action: TEAL participant Houston Public Library has 100,000 computer users a month and hosts 2,000 digital literacy classes during the year. One student, Ernestine Coleman, received a computer from her daughter for her 85th birthday. After the computer sat unused on her desk for a year, she decided to start classes at the library. Ernestine is pleased to report that "At least I know I'm not going to destroy the computer!"^{xlix}

Vermont

The Vermont Department of Libraries (VDL) is one of seven partner organization brought together under the direction of the Vermont Council on Rural Development to increase broadband access and digital literacy skills in small, mostly rural communities. Through the e-Vermont Community Broadband Program, Vermont libraries in 25 communities have been able to increase access with new public workstations and laptops, expand online resources, and provide new training opportunities for new computer users, and workforce and business development. The e-Vermont project website (<http://e4vt.org>) provides extensive resources for communities that want to make better use of broadband tools in a variety of sectors, and the partners believe that many of the concepts will be relevant to other states as well.



In Action: Prior to the e-Vermont project, the Poultney Public Library was bursting at the seams fitting in all the people coming to use the library Wi-Fi. The BTOP grant has allowed the library

wireless hot spot to expand into an internet zone for the downtown district, providing access regardless of library hours and physical limitations. This was supported by two businesses that agreed to install repeaters on site. Library staff helped lead the development of a portal for entry to the free network (<http://www.PoultneyWi-Fi.com>) that highlights local events, businesses, services, and community organizations. The response to the project has been overwhelmingly positive, and downtown businesses are making plans to purchase laptops for customers to use.

The VDL and the Vermont State Colleges partnered to create the Internet Interns program, which provides student interns for one-on-one assistance for patrons, as well as collaborating with librarians to design special technology projects. The program allowed public libraries to expand their digital literacy offerings and the interns gained valuable experience as instructors. On the project website, one intern reported, "I recently had a session with a gentleman who is 81! He told me that he had decided he would no longer make excuses about not knowing how to use a computer and was determined to finally learn how to use the internet despite the carpal tunnel which made it painful for him. I was so inspired by his drive to learn something new despite the excuses available to him!" Another intern said "I love that something that seems so simple and easy to me can be so meaningful and life-changing for someone else. I've had comments like "Thank you, I think you just saved my marriage" that help me to see what a huge obstacle internet-literacy can be for some people!"¹

Conclusion

Libraries are playing key roles in improving the economic opportunities for people in communities across the country – urban and rural – through these BTOP investments. This includes supporting national broadband adoption efforts by providing no-fee access to computers and the internet, digital literacy training and relevant digital content. New and expanded partnerships also are extending libraries' reach and scope.

As the nation moves toward economic improvement, however, many state and local libraries have yet to experience fiscal health. Despite some promise of budgetary relief, the extraordinary demands for service continues to outpace available funding needed to respond to these demands. The 2012 Public Library Funding & Technology Access Study found that:

- 74 percent of libraries report increased use of Wi-Fi.
- 60 percent of libraries report increased use of public access computers.
- 36 percent of libraries report increased use of training services.
- A majority of public libraries (56.7 percent) report flat or decreased operating budgets.

While an estimated 20 percent of U.S. public libraries have benefitted from BTOP awards, millions of Americans are still outside of the sphere of these expanded opportunities. This is especially significant considering that more than 62 percent of libraries report that they are the only provider of no-fee public access to computers and the internet in their communities. According to a 2012 Pew Internet Project report, roughly one-third of U.S. households do not have high-speed internet service.¹¹ A significant gap continues to exist among different demographics, as well. Seventy percent of whites and roughly half of African Americans (54%) and Hispanics (51%) have high-speed internet access at home.



With strategic vision and careful management, libraries are building digitally inclusive communities that connect millions of Americans to the digital skills required in today's competitive global marketplace. However, unless strategic investments in U.S. public libraries are broadened and secured, libraries will not be able to provide the innovative and critical services their communities need and demand.

The final version of this document will be available by April 2013 at <http://www.districtdispatch.org>.

ⁱ The total number of BTOP awards announced by September 30, 2010, was 233. As of November 30, 2012, this number was 224. http://www.ntia.doc.gov/files/ntia/publications/btop_15th_quarterly_report.pdf

ⁱⁱ Hoffman, Judy, John Carlo Bertot, and Denise M. Davis. Libraries Connect Communities: Public Library Funding & Technology Access Study 2011-2012. Digital supplement of American Libraries magazine, June 2012. Available at www.ala.org/plinternetfunding

ⁱⁱⁱ Communication with New York state library staff

^{iv} http://www2.ntia.doc.gov/files/grantees/02-42-b10560_apr2011_q4.pdf

^v <https://www.youtube.com/watch?v=G4kyFhZe2so>

^{vi} <http://www2.ntia.doc.gov/arizona>

^{vii} <http://gsxnews.com/pages/1209/jobs.html>

^{viii} <http://www2.ntia.doc.gov/grantee/colorado-board-of-education>

^{ix} <http://coloradovirtuallibrary.org/btop/content/project-encompass>

^x http://www.irs.org/documents/fastfacts/313_Workforce_Efforts_Partnership.pdf

^{xi} http://www2.ntia.doc.gov/files/grantees/08-42-b10596_colorado_board_of_education_ppr2012_q3.pdf

^{xii} <http://www2.ntia.doc.gov/grantee/delaware-department-of-state>

^{xiii} Extracted/edited from: <http://www.doverpost.com/article/20111016/NEWS/310169999#art-tit>

^{xiv} http://www2.ntia.doc.gov/files/grantees/11-41-b10518_district_of_columbia_government_of_ppr2012_q3.pdf

^{xv} <http://libraries.idaho.gov/files/BTOPOverviewSummer2011.pdf>

^{xvi} <http://libraries.idaho.gov/page/whats-new>, Fall 2012 update, and http://www2.ntia.doc.gov/files/grantees/16-42-b10556_idaho_commission_for_libraries_ppr2012_q3.pdf

^{xvii} Ibid.

^{xviii} <http://www2.ntia.doc.gov/grantee/kentucky-arts-education-humanities-cabinet>

^{xix} http://www2.ntia.doc.gov/files/grantees/21-42-b10535_kentucky_arts_education_humanities_cabinet_ppr2012_q3.pdf

^{xx} <http://www2.ntia.doc.gov/grantees/StateLibraryofLA>

^{xxi} http://www2.ntia.doc.gov/files/grantees/23-41-b10524_maine_state_library_ppr2012_q3.pdf

^{xxii} <http://www2.ntia.doc.gov/grantee/maine-state-library>

^{xxiii} <http://kennebecvalley.wcsh6.com/news/news/185006-veterans-get-legal-assistance-volunteer-lawyers>

^{xxiv} <http://www2.ntia.doc.gov/grantee/montana-state-library>

^{xxv} http://www.vp-mi.com/news/article_12aa80de-6658-11e2-b1d3-001a4bcf887a.html

^{xxvi} <http://www.mtlibrarynext.org>

^{xxvii} <http://www.youtube.com/watch?v=eCtM6z6Gtno>

^{xxviii} <http://www.youtube.com/watch?v=oCngmQtgCR0>

^{xxix} http://www2.ntia.doc.gov/files/grantees/31-42-b10530_nebraska_state_of_ppr2012_q3.pdf

^{xxx} http://www2.ntia.doc.gov/files/grantees/31-42-b10530_nebraska_state_of_ppr2012_q1.pdf

^{xxxi} http://www2.ntia.doc.gov/files/grantees/32-41-b10528_cultural_affairs_nevada_department_of_ppr2012_q3.pdf

^{xxxii} <http://njworks.org/about>

^{xxxiii} <http://www2.ntia.doc.gov/grantee/thomas-edison-state-college>

^{xxxiv} Ibid and <http://www2.ntia.doc.gov/files/grantees/montanastatelibraryq3pr2010.pdf>

^{xxxv} http://www2.ntia.doc.gov/files/grantees/34-41-b10520_thomas_edison_state_college_ppr2012_q3.pdf, p. 13

^{xxxvi} http://www2.ntia.doc.gov/files/grantees/35-43-b10002_new_mexico_state_library_ppr2012_q3.pdf



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- xxxvii http://www.fastforwardnm.org/sites/default/files/SuccessStoryJHelf_0.pdf
- xxxviii http://www2.ntia.doc.gov/grantees/NY_StateEdDepartment
- xxxix http://www2.ntia.doc.gov/files/grantees/36-42-b10016_new_york_state_education_department_ppr2012_q2.pdf, p. 14
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- xlii http://www2.ntia.doc.gov/files/grantees/40-41-b10519_libraries_oklahoma_department_of_ppr2012_q2.pdf
- xliiii http://www2.ntia.doc.gov/files/grantees/44-42-b10011_oshean_inc_ppr2012_q3.pdf
- xliv <http://www2.ntia.doc.gov/grantees/OSHEAN>
- xlv <http://www.rhodeislandlibraryreport.org/1/post/2012/06/libraries-gear-up-to-help-ri-job-hunters.html>
- xlvi http://www2.ntia.doc.gov/files/grantees/47-41-b10527_state_library_archives_tennessee_ppr2012_q3.pdf
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- xliv <https://www.youtube.com/watch?v=7cwsrgMOcLA>
- i <http://e4vt.org>
- ii <http://pewinternet.org/Commentary/2012/May/Pew-Internet-Broadband.aspx>

