
Karen E. Fisher Samantha Becker Michael Crandall
The Information School
University of Washington
Box 352840, Seattle, WA 98195-2840
{fisher, srbecker, mikecran}@uw.edu

Abstract
eGovernment services are delivered in many settings, including public libraries, which have increasingly assumed the role of service provider for users of these services. The U.S. IMPACT Studies are examining use patterns and impacts of eGovernment services (among other uses) in populations using libraries for their primary or secondary means of Internet access. A mixed methods approach—national telephone survey (N≈1130), web survey (N≈45,000), and five field studies (317 interviews)—is providing a comprehensive picture of this activity across the country. Preliminary findings show 22-37% of public access computer or wireless Internet users in public libraries engage in some form of eGovernment use, with evidence that use on behalf of others (LIMB) may extend the impact even further than previously thought. An emergent theme from the case study analysis indicates that a primary use factor may be the trust that users have in the public library setting.

1. Introduction

According to the World Bank: “‘E-Government’ refers to the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions.” [1] 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.” [2].

The heavy use of libraries as an access point for government services came to national attention during the hurricanes of 2004 and 2005 [3], but restrictions in hours and locations of government sponsored access centers were a factor in pushing those who use them toward public libraries [4,5,6]. 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.

To systematically understand the impacts of free access to computers and the Internet at public libraries, the Institute of Museum and Library Services (IMLS) and the Bill & Melinda Gates Foundation, awarded a grant to the University of Washington Information School [7]. To guide the U.S. Impact Studies [8], eight policy domains were defined per the public library mission and people’s use of public access computing (PAC):

- **Civic engagement:** working with others in a community to solve problems or interact with the institutions of representative democracy.
- **eCommerce:** buying and selling goods and/or services using the Internet.
- **eBusiness:** starting or operating a business using technology and/or the Internet
- **Education:** interacting with services related to formal education and pursuit of learning for personal enrichment.
- **eGovernment:** accessing online government and legal services and information.
- **Health:** seeking information or accessing services related to individual or family health care.
Employment: seeking work and gaining job-related skills or other activities related to maintaining employment.

Social inclusion: pursuing personal or socially meaningful ends, including connecting with family and friends, finding support for an issue or problem, and enjoying other online social activities.

This paper focuses on preliminary results in the eGovernment area along with emergent related findings regarding the potential impact of eGovernment use and PAC in public libraries.

2. Background

Since the 1990s, public library provision of PAC has become ubiquitous with over 98% of libraries providing these services in 2006 [9]. PAC services can be vital for individuals who do not have alternative access, who are temporarily disconnected, or seek other benefits from accessing them from libraries. Indeed, in 71.4% of communities the public library is the only free provider of Internet access [10]. Despite widespread use and anecdotal evidence of the importance of PAC to users, past research has tended to focus narrowly on such easily measurable inputs as the number of terminals or speed of Internet connections, or such outputs as the number of patron sessions or the percent of time PAC terminals are in use, and has not provided much data on the types of PAC use and its benefits to individuals and communities. Such research has not generated much data that show value and can help librarians and policy makers—at the local, state and federal levels—allocate funding and other resources to activities and agency partnerships that will maximize value to patrons and the public. Libraries struggle to keep up with ever-increasing demands for more computers, faster connections, and innovation in the face of severe funding challenges.

Weak theory and methods are primary reasons pointing to the dearth of evidence connecting use, practice and public policy. One framework that may prove viable for understanding how organizational programs provide public value is Moore [11] from public policy. Shown in the public value strategic triangle (Figure 1), according to Moore a valuable public resource should:

1. provide substantively valuable services for the public;
2. have sustainable political support; and
3. be administratively and operationally feasible.

A vision of what constitutes a successful public library around PAC and eGovernment (particularly in light of Moore’s framework) is essential to gaining support in the community. Reflecting on this need in the library environment, McClure, Feldman and Ryan observed: “Advocacy and working the political process have to be done in the context of accomplishing specific goals and working toward a vision of what a successfully

![Figure 1: The Strategic Triangle (after Moore, 1995)](image)

networked public library in a particular community would be. But if there is no clear vision of what a successful library should be in a particular community, it will be impossible to reach such a vision” [12].

For the current study, showing the value in the community of library services is the first step in gaining political support, which enables funding to support the operations and administration necessary to effectively continuing services. For eGovernment, demonstrating that libraries are an effective conduit for service delivery to key populations is an intrinsic part of fulfilling the conditions of creating public value, as reflected in the strategic triangle. Our preliminary results provide strong indications that this is the case, offering a starting point for further work.

3. Methodology

The U.S. IMPACT studies employ a concurrent three-part mixed-methods research (MMR) design to document and understand the impact of PAC on people’s lives and to generate indicators that can be used in its measurement and evaluation. The quantitative and qualitative methods were designed to better identify patterns of use and contextual influences than any single method, and were triangulated to validate findings. The nationwide telephone survey (N=1,130) was used to generate population estimates for the prevalence of different types of people using PAC and the ways in which they benefit across the
eight domains. The nationwide online survey administered through public libraries (N=45,000) used the same instrument, supplementing it enabling analysis of user outcomes by library attributes. The five case studies provided contextual influences on PAC outcomes and holistic understanding of how it impacts people’s lives. Table 1 shows the relation of these methods to the main research questions.

3.1. Telephone survey

The telephone survey was fielded between March and August 2009 and comprised 12 sections, including one for each domain. Section one asked about library use (i.e. type, frequency) and qualified respondents as “PAC users” (i.e. used a public access computer or wireless Internet connection in a public library in the past 12 months). In section 2, qualified users were asked about general PAC behavior, including using PAC while traveling, getting help from librarians or library volunteers, and their use of PAC on behalf of friends, family, and others. To streamline the survey, respondents were screened for general domain activity, then led to question series about specific types of activities and outcomes associated with specific domain use. The last section asked about satisfaction and suggestions for improvement. Both qualified PAC users and nonusers were asked demographics.

The goal was to complete interviews with 1,130 users through two sampling frames to produce generalizable results at an estimated +/- 3.5% at the 95% confidence interval. The random digit dial (RDD) sample (n=890) oversampled low income, black, and Hispanic persons. A cell phone sample (n=160) accounted for the increasing number of cell phone-only households [13]. A nonresponse follow-up study (n=80) was conducted from a subsample of the RDD and cell phone sampling frames.

The survey took qualified users 10-20 minutes to complete and was administered in English and Spanish. Since the survey data is currently being weighted, only preliminary unweighted descriptive data are presented in this paper.

3.2. Online survey

While telephone surveys are accepted as sine qua non for gathering generalizable data, the costs of conducting them to reach a relatively small segment of the population is prohibitive for most user-level public library research; especially the sub-population of public library PAC users, the most recent estimate of which was 8.9% of U.S. households [14]. The IMPACT online survey was thus designed to be a cost

### Table 1: Research questions and methods

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Constraint(s)</th>
<th>Method(s)</th>
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<tbody>
<tr>
<td>1) What are the demographics of people who use PAC in PLs?</td>
<td>Difficult to identify target population</td>
<td>Phone Survey</td>
</tr>
<tr>
<td></td>
<td>High eligibility requirements</td>
<td>Online Survey</td>
</tr>
<tr>
<td>2) What information and resources provided by PAC are people using, across the</td>
<td>Confounding—difficult to identify individual user from usage summaries</td>
<td>Phone Survey</td>
</tr>
<tr>
<td>spectrum of on and off-site use?</td>
<td></td>
<td>Online Survey</td>
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<tr>
<td>3) How do individuals, families, communities benefit</td>
<td>Difficult to identify causal mechanism from correlated survey data</td>
<td>Phone Survey</td>
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<td>(with a focus on social, economic, personal, professional well-being) from PAC in</td>
<td></td>
<td>Online Survey</td>
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<tr>
<td>PLs?</td>
<td>requires extended access to broad range of stakeholder groups</td>
<td>Case Study</td>
</tr>
<tr>
<td>4) What reliable indicators can measure the social, economic, personal, professional well-being of individuals, families, &amp; communities that result from access to PAC in PLs?</td>
<td>Low repetition of outcome indicators across previous studies</td>
<td>Phone Survey</td>
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<tr>
<td></td>
<td>Requires development and testing of underlying logic model</td>
<td>Online Survey</td>
</tr>
<tr>
<td>5) What correlations can be made between benefits obtained through access PAC a range of demographic variables?</td>
<td>Requires a large, representative sample stratified by socio-economic, demographic variables</td>
<td>Phone Survey</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Online Survey</td>
</tr>
<tr>
<td>6) What PAC services and resources are lacking at PLs that, if available, could bring about greater benefit?</td>
<td>Requires extended access to broad range of stakeholder groups</td>
<td>Case Study</td>
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<td></td>
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<tr>
<td>7) What indicators of negative impact can be identified where free access to computers and the Internet is weak or absent?</td>
<td>Difficult to identify target population</td>
<td></td>
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<tr>
<td></td>
<td>Difficult to identify root causes</td>
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<td></td>
<td>Requires open-ended questions</td>
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...
effective supplement and to reach populations (e.g., youth, homeless persons) who are frequently missed by telephone surveys. The online survey was essentially the same instrument, with minor variations to optimize the skip patterns for the online platform.

A stratified random sample of 636 library systems out of the country’s 9,208 systems from across all fifty states were asked to link the survey from their websites or public access browsers using a unique URL provided by the team for a designated two-week period. The sample included all 123 library systems that serve populations of 250,000 or greater, and an oversample of the smaller libraries serving 5000 patrons or less.

Libraries were offered a comprehensive report of their system data along with how it related to nationwide and peer system findings as incentive. The Chief Officers of State Library Agencies (COSLA) and state librarians assisted in recruiting and coordinating libraries’ participation. Over 400 libraries participated, resulting in about 45,000 usable completed surveys.

The web survey data is being weighted using Lee and Valliant’s propensity score adjustment method to correct for bias resulting from respondent self-selection [15]. This will blend the telephone and online survey datasets and allow greater flexibility for analysis at the item-level where the telephone survey alone is unlikely to produce robust results. The unique URL assigned to libraries created a data link between respondents and the library where they used PAC; this connection enables hierarchical linear modeling with the *Public Library Survey* [16] to understand relationships between library resources and PAC outcomes.

### 3.3. Case studies

Despite their robustness, the IMPACT studies’ quantitative methods cannot fully account for differences in outcomes or impacts nor can they confirm whether the indicators are relevant to policy makers. To generate explanatory and confirmatory insights, and to identify the contextual factors that influence PAC outcomes, we conducted case studies in five public libraries: the Enoch Pratt Free Library in Baltimore, Maryland (population 632,941); the Blair Public Library in Fayetteville, Arkansas (population 57,491); the Oakland Public Library in California (population 431,634); the Marshalltown Public Library in Iowa (population 30,353); and the Mount Vernon City Library in Washington State (population 26,232), which served as our pilot site in summer 2008 for testing interview guides and developing codebooks.

We spent one week at each site conducting observations, interviews, and focus groups with PAC users ages 14 and up, who each received $20. At each interview’s outset, users created an alias that was used throughout the conversation and to name their respective data files. We also interviewed frontline library staff, administrators, IT staff, and persons from allied organizations, as conducted mini-interviews with people at Internet cafes, tourist offices, and other community focal points. Prior to each site visit, the team prepared in-depth library and community profiles, which supplemented their on-site field notes and observations about the behavior and activities of PAC users. Across the sites, we conducted audio-recorded interviews with 187 users (59 minors), 68 library staff and administrators, 14 library board members, and 48 community providers and government representatives —317 interviews, total.

### 4. Analysis

The three data collection methods yielded large amounts of different data types: quantitative data; short responses from open-ended questions from the surveys; and interview transcripts and researchers’ notes from the case studies. For analysis, we are using a mixed method research (MMR) framework to corroborate validity and deepen interpretation of the findings. A more complete discussion of the analysis framework and its theoretical foundation, as well as the methodology is in Becker, Crandall, and Fisher [17].

#### 4.1. Mixed method research design

The concurrent triangulated MMR design is being used to fully take advantage of the extensive data collection effort, and also because time constraints precluded the possibility of a sequential design. The triangulated approach offers the advantage of offsetting methodological weaknesses and stimulating policy insight by identifying convergences, i.e., extent to which qualitative themes support quantitative results from survey data [18]. Formally, the MMR framework structures an iterative process of forming and testing hypotheses and provides contextual information to help understand areas of convergence or divergence between survey and case study findings and to stimulate further research. Figure 2 shows an example of how each method supports analysis of the conditionalities between the different stages in a traditional logic model applied to PAC use. This logic model also demonstrates the overlap of a library-oriented logic model that starts with inputs external to the organization and locates patron use as an activity, with a patron-oriented logic model which might categorize specific types of patron use as an output.
4.2 Statistical analysis

To validate themes identified qualitatively of user interviews, their codes were transformed and merged with data from the telephone and web surveys ("telecoded", explained below). Thus, the strength of findings can be compared directly and areas of convergence and divergence identified. Contradictory results are also valuable for testing the outcome-sequences and uncovering areas for future research. The triangulation of these data show what user characteristics are significantly associated with PAC use and explain how those factors interact with the many variables extant in the library environment.

4.3. Qualitative analysis

Traditional open-coding for major themes was conducted of the transcripts and field notes with library staff, administrators, policy makers, and other community stakeholders. These data are considered with primary and secondary research on the libraries’ community contexts to provide a richer understanding of the overall environments in which users operate.

For users, transcripts from interviews and focus groups were telecoded, a novel approach to directed coding. Shown in Figure 3, telecodes were derived by creating answer statements from the survey questions and applied to transcript passages that demonstrate that activity or output. The user codebook was supplemented by thematic codes that emerged from the data through constant comparison with the other interview types and field notes—as part of the more traditional naturalistic inquiry method employed by the team (c.f. Strauss and Corbin [19]). Inter-rater reliability testing assured the integrity of the coding scheme and uniform coding practice across analysts.

5. Preliminary Results

Based on partial data analysis, preliminary results are showing strong patterns of use and potential impact in the eGovernment area. Caveats, however, in this discussion include:

- Both survey samples were stratified
- No weighting or adjustments have been applied
- Analysis is descriptive only

Future papers adjust for stratification and weighting, and extend the analysis beyond basic description.

5.1. Usage patterns

Both surveys show that use of PAC for eGovernment purposes is high, with about 22% of telephone respondents and 37% of web respondents responding affirmatively, representing the 4th most frequent domain use in both surveys. However, this impact extends beyond individuals as 35% of telephone respondents and 42% of web respondents who used PAC for eGovernment indicated that they also used it on behalf of others for these same purposes. Still examining the relationship between these two findings, it is clear that eGovernment is a well-used service in library settings. The phenomenon of how lay people seek information on behalf of others, without necessarily being asked prior to or engaging in follow-up to see if the information was used, is based on LIMB (Lay Information Mediary Behavior) theory developed by Abrahamson and Fisher [20,21] and was used to inform our methodology.

5.2. Public’s use of eGovernment at libraries

As shown in Table 2, on both the telephone and web surveys, users were screened by asking whether they had used a library computer for eGovernment purposes within the past twelve months. If the user said “no,” then s/he was prompted about the reason(s) s/he had not. If the response was “yes,” then questions were asked about the nature of their eGovernment use. Due to the expense of conducting surveys, questions were designed to illuminate a broad swath (as opposed
to deep list) around the phenomenon of eGovernment and PAC along with indicative responses to their effect. Respondents had further opportunity to expand on how they may have used PAC for eGovernment purposes via two open questions at the end of the surveys. In both methods, getting government forms and learning about government programs or services represented the most frequent eGovernment use.

In conceptualizing the study, eGovernment was a unique domain; however, analytically it was an orthogonal theme, cross-cutting every domain. This was most evident in the case studies—comprising primarily open-ended questions—where participants recounted their use of PAC for health situations that involved contacting government agencies, completing government forms, etc. Aside from this cross-cutting, pervasive nature of eGovernment information and services, other reasons for its popularity stem, one may hypothesize, from users’ low income and high need situations, and because any life problem creates multiple needs. If a person is unemployed, then s/he need help finding a job, maybe retraining or education, family matters, housing, health, food, transportation to interviews, etc.—possibly all falling under the auspices of eGovernment. During widespread emergency or other felt conditions, the need for eGovernment can extend to all population segments.

5.3. Case study insights

What were just a few of the rich eGovernment examples collected using the MMR approach? By far and quite predictably given the spring 2009 field period, unemployment was a major motivation. Before libraries opened in the mornings, large crowds (mostly young to middle-aged men) would gather and head straight to the computer rooms where they checked the status of unemployment claims and other benefits, searched for jobs and completed applications—on behalf of themselves as well as family and friends. Being spring, filing taxes was popular, particularly because in addition to assistance from staff with locating taxation websites, etc., libraries offered printers, scanners and tax clinics. As a Baltimore IT staff person explained, “at tax time, we see a lot more people. The free guides and forms that the government sends [us] has been sharply reduced. Definitely there’s been a big push to have people do it online.”

The value of the Small Business Administration (SBA) site through the Pratt Library was shared by Joseline, a 51-year-old disabled Black woman who reported zero income. She explained “how the Baltimore city government site showed how to get money for assisted living homes, group homes…stuff like that. And then I don’t know if it was from the state, but they had another class that showed how to get (…) government grants.” She used PAC to write a business plan for a friend’s construction company and relies on the five free print outs per session.

Another frequent eGovernment topic was state Department of Corrections (DoC) numbers for finding and corresponding with inmates. This was mentioned by a range of participants, including youth (at a special rehab school). Oscar the Grouch, a 68-year old, retired white male earned income by connecting carefully screened inmates he identified in a magazine with people he found for them online. Pending his moral judgment of the inmates’ crimes, he connected them if the third party expressed interest. As Internet access is unavailable in state and federal prisons, the service provided by such individuals as Oscar along with the ability to look up DoC numbers of family, etc., to establish offline correspondence can play important roles in connecting and reconnecting individuals.

Other DoC-related PAC activities were looking up criminal records, to learn if someone had been

<table>
<thead>
<tr>
<th>Table 2. Telephone and web survey results for eGov domain</th>
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<tr>
<th>Used PAC:</th>
<th>Phone</th>
<th>Web</th>
</tr>
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<tbody>
<tr>
<td>for gov’t or legal purposes</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>for self only</td>
<td>157</td>
<td>68</td>
</tr>
<tr>
<td>for other only</td>
<td>20</td>
<td>9</td>
</tr>
<tr>
<td>for both self and other</td>
<td>55</td>
<td>24</td>
</tr>
<tr>
<td>to get help from a gov’t official or agency</td>
<td>99</td>
<td>47</td>
</tr>
<tr>
<td>got the help needed</td>
<td>87</td>
<td>47</td>
</tr>
<tr>
<td>to get gov’t forms</td>
<td>113</td>
<td>54</td>
</tr>
<tr>
<td>submitted forms online</td>
<td>52</td>
<td>48</td>
</tr>
<tr>
<td>to learn about laws or regulations</td>
<td>102</td>
<td>48</td>
</tr>
<tr>
<td>to learn about permits or licenses</td>
<td>70</td>
<td>33</td>
</tr>
<tr>
<td>applied for permit or license online</td>
<td>14</td>
<td>20</td>
</tr>
<tr>
<td>to look for advice/assistance w/ a legal question or problem</td>
<td>72</td>
<td>34</td>
</tr>
<tr>
<td>found legal help needed</td>
<td>67</td>
<td>93</td>
</tr>
<tr>
<td>to learn about gov’t programs or services</td>
<td>114</td>
<td>54</td>
</tr>
<tr>
<td>applied for a gov’t program using PAC</td>
<td>38</td>
<td>34</td>
</tr>
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convicted of an offence and to see if your own record was still visible (i.e., what employers can see). As Michael Jordon, a 44-year old, Black unemployed Baltimore resident explained, “If you’re looking for information whether somebody has criminal record, you just Google in the Maryland Court website, and bam, if you know that person’s name…”

eGovernment legal services also pertained to the police and court system, ranging from learning about local laws to paying fines, rebooking court appearances, tracking sex offenders (including for obtaining overdue child support), and filing/carrying out law suits. In Oakland, 54 year-old Tom explained that he is a Sioux from a South Dakota reservation with an 88% unemployment rate—the country’s highest; however, everyone thinks he’s Spanish because he’s dark skinned and he’s lonely because he never hears his language spoken. Earning less than 10K a year and on disability, he’s waiting for a defibrillator and lives with his two young grandkids of whom he has custody. Alcoholism ravaged his family, murdering his father and brother. He uses PAC to check his disability and a court case involving the government and a reservation land conflict with a wealthy casino tribe. Using PAC, his other daughter signed the class action case and his grandkids may now benefit from the case. Through the case website he met Minnesotan relatives and now feels a little less isolated.

Fred, also of Oakland, is White, 50 years-old and homeless. An artist who sells his work on eBay and considers the library his office, he was attacked by a gang prior to our interview (he still bore marks) and left for dead. His aggressors left a flyer with their URL by his body so passers-by could view their video of his beating. Using PAC Fred looked up the site, took the evidence to the local police and media, and continued to track the site as the gang posted content of his beating. Using PAC Fred again with the aid of library computers.

Another empowering example of how PAC has been used to pursue justice came from Derrick in the Midwest—a White, 51-year old former marine corp combat specialist who had seen active duty and trained elite recruits. Yet Derrick had spent the past 10 years or so homeless, moving from one shelter to another, in little contact with his kids. Derrick was now living as caretaker—in exchange for free rent—for an adult woman with severe cognitive and physical disabilities. Because her grandmother had died and the woman lived alone with her young son, she was declared legally incompetent and her son placed in foster care. Used PAC Derrick researched her case, learned how to submit a countersuit, filed the documents online, and had the ruling overturned. Today the woman has supervised visitation rights with her son because of Derrick’s skilled use of PAC for eGovernment.

Joseline (from Baltimore) shared other Lay Information Mediary (LIM) examples regarding Maryland’s laws where she sought information to help senior citizens. In her words: “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, then I go tell them. I [also] wanted to know what the state of Maryland’s policy was on taxes—a gentlemen had died, his significant other owned half of the house and his sister owned the other half and the sister didn’t want to pay her share of the taxes because she doesn’t live there. And everyone was telling the significant other all these different stories. I came to find out if the state of Maryland had any rules and regs on it, and from there we went to the property tax division and were more informed. It just happened to be that I met a lady who spouted exactly what I had read online.”

Examples about using PAC to contact government representatives abounded from Lebron, a 24 year-old, White shelter resident who planned to hitchhike to a larger Midwestern city. He emailed President Clinton (with a reply) about saving the whales in Alaska; and his state and federal representatives about anti-abortion and anti-gay marriage legislation. He used PAC to organize a Young Republicans march and online campaigning for election candidates. He planned to find a job using his church network once he relocated, again with the aid of library computers.

Immigration, another key eGovernment and typically law-related area, is no longer the auspice of large, coastal metropolises. Factors ranging from economics, to escaping such problems in originating countries as freedom from persecution for religious beliefs, to the establishment of social ties and support, and the familiarity of the landscape and a host of other reasons, people have migrated from all over the world across the U.S. As Fisher et al., [22] show, the children of adult non-native speakers of English are often the intermediaries for families, interpreting adult-level problems and dealing with mature stressors at times of tremendous change in their own lives—all because they more quickly adapt to speaking English and navigating American society. In a focus group in a low-income neighborhood, 17 year-old Dan—an illegal immigrant and homeless—shared his e-Government experience: “since my family doesn't actually ask for help I take it upon myself. The information I look up helps my family as a whole because my mom is not used to computers, she is from the Philippines and my dad is from El Salvador but he lives in LA. My mom is not that good at English, and
they came to the US illegally. 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. At Pratt we further learned that Immigration and Naturalization Services directs immigrants to the Pratt branches to apply for visas, etc."

Education, from applying to schools, preparing for tests (e.g., GED, General Educational Development), applying for loans—all fell under eGovernment and were vital to helping people move forward with their lives. Veterans also reported being referred by Veterans Affairs staff to use PAC and receive training. Lighter reasons people sought eGovernment included state lotteries.

Just as recession and mass unemployment draw people to libraries for eGovernment purposes so do other broad societal events such as terrorist attacks and natural disasters. During the 2005 hurricanes on the Gulf Coast, notably Katrina, the Fayetteville Public Library in Arkansas saw increased activity among dislocated people trying to locate services online as well as connect with individuals. In Baltimore, a Pratt Library Trustee explained how “people who found themselves homeless or without their life belongings could come here and get some normalcy, get back on the computers and visit familiar websites, contact their friends and family via email or some kind of connection there. But then also for resumes and job applications to try to get themselves started again, and then access to government reporting, registration of FEMA related things.” Similar stories were reported by libraries throughout the country as Gulf Coast people became part of an unwitting diaspora. During Fayetteville’s January 2009 ice storm the library further showed its centrality by being one of the few public buildings that was open with electricity (due to generators) and where people could obtain government bulletins and other survival information. The Saturday March 21st 2009 fatal shootings of four police officers in Oakland saw a groundswell of local people at the Eastmont Branch. Situated in an old shopping mall now occupied by a few social service agencies, the library was the only community venue open. While East Oakland is known for high levels of violence, the events of that day were numbing for all and the library was where people came together for information, security, and personal connection.

A best example of the breadth and depth of eGovernment available through PAC was expressed by 15-year old Nick, a male Hispanic focus group participant in one of Oakland roughest inner city neighborhoods, where fellow participants described being shot the previous year. Nick enthusiastically exclaimed “my aunt is the government” and explained how his aunt became the matriarch for his 125 member family upon his grandmother’s death. Auntie, however, is information/technology illiterate and Nick therefore is her “info guy”—or LIM in Abrahamson and Fisher’s [23] earlier term. Meeting his family’s eGovernment needs is a primary responsibility he resolves using PAC.

5.4. Trust

An emergent theme per qualitative analysis involving eGovernment and PAC centered on trust and security. This theme is rooted in the long standing perception that U.S. libraries are neutral, open and free institutions staffed by educated, dedicated, helpful staff. That the library has first to be experienced as “a safe place” (i.e., the foundational building block) before its other benefits can be derived was theorized in Fisher, Durrance and Hinton’s [23] work with the Queens Public Library’s services for new immigrants. In context of how libraries broadly and synergistically provide free access to computers and the Internet through hardware, software, training, intermediation, and content with all their other programming, the following categories of trust/security were identified:

1. People gain informational trust from librarians and library-associated content.
2. People gain digital trust in that machines are virus-free and well-maintained, and that sophisticated knowledge about information technology to operate them is unneeded.
3. People trust using the Internet on specific machines because they are filtered or monitored.
4. People gain emotional security to connect with other people online who share the same values, interests, and views.
5. People gain cognitive trust in admitting without fear that they do not understand about technology.
6. People perceive physical security from violence in the home or in the community (e.g., from gangs, children are supervised).
7. People perceive financial security in leaving their belongings untended or with staff.
8. People perceive self-assurance/self-respect because all people, from all backgrounds, are accepted as users with no attached stigma.
9. People gain trust of safety from addictions such as drugs, alcohol, gambling, and pornography.
10. People gain trust of safety from addictions such as drugs, alcohol, gambling, and pornography.
11. People perceive communal trust during and following times of crises, such as natural disaster and violence.
12. People trust that their information use and computing activities not being watched and reported on to the government.
13. People perceive social trust from fellow library users who will provide assistance if asked or needed, including as a witness.
14. People perceive societal trust by assuring for their children’s and grandchildren’s education and future place in society.

This broad finding of trust has implications for the use of eGovernment services in a public setting because it suggests additional forms of use, impact, and hence value derived by people, including muses (in Abrahamson and Fisher’s LIMB theory terms) or those receiving second-order effects. Public libraries—as amplifiers and safeguards of public trust via PAC—reflect strong import considering the 2007 Pew study showing low-access Americans are becoming more distrustful of government, with 65% saying government can be trusted only some of the time, and 56% of all Americans arguing the same thing in a 2003 Pew Internet Project poll [24].

6. Discussion

Considering the varied and complex ways that people use PAC for eGovernment purposes in libraries, the finding that two-thirds of survey users are LIMs (use the computers on behalf of others), and the myriad ways in which people experience trust/security when engaging with library computing, the potential for increasing the capacity and effectiveness of delivering eGovernment through libraries would appear a very smart decision at every level of government.

The use of library computers around eGovernment is emerging clearly in the case study data, which reflects the broad perspectives of varied community stakeholders—in addition to users. Government departments such as the police, social services and elected officials explained how they rely on libraries for the public to access their information, applications, etc. As a detective explained, “Absolutely, the library is a way for the public to interact with us. Each different division has its own webpage whether it be K-9 or investigations or administration or patrol, whatever. You can access all the forms … fill it out, print it out. An example would be a freedom of information act form … or a delayed accident form if somebody scraped your bumper in Wal-Mart and you want to fill it out for your insurance.” The flip side of this coin, of course, is that increased demand on library services may or not be adequately supported by library budgets, particularly with regard to much needed highly trained IT staff support and equipment. For example, access to printers are a primary draw or value added service for a particular user base; yet printers are expensive to maintain, especially at key times of the year (e.g., taxation season) and can result in the needs of other users going unmet. An Oakland staff person explained, “All of our printers are starting to go, I have three requests going in right now but I have no replacement printers. And that’s really hard when people are trying to print out an application, or a resume or a form for a divorce. We have a lot of women coming in and want to fill out forms for protection orders for domestic violence. We’re across the street from the court house and so people come in and they need a form that they don’t have and when our printers are down, that just makes it that much more difficult for us to be effective for our public.”

Equally significant was government staff’s recognition of the public’s need for information literacy training in how to access eGovernment services—a role they viewed the library as the local expert in providing. By helping serve the public’s eGovernment needs—through direct computer access, providing intermediary assistance and information literacy training to empower users (and hence, families, neighborhoods and community via second-order effects), government agency staff also viewed libraries as increasing their own capacity, including the reduction of duplicate services.

7. Conclusion

The U.S. Impact Studies are the most comprehensive examination of U.S. libraries at a pivotal moment in capturing how well government and libraries have come together to promote digital inclusion through the provision of eGovernment services and public access computing. By employing a unique mixed methods design and engaging unprecedented widespread support from the library community and other major stakeholders, these studies are poised to reveal impacts and outcomes that will inform policy and decision making regarding the effective delivery of information and technology services at national, state and local levels across multiple domains. We anticipate the findings will have broad relevance and set an example of how eGovernment and libraries can be an organically derived, highly successful means to ensuring healthy communities across a broad spectrum of domains. Further reports—drawing on Moore’s public value strategic triangle—will discuss how libraries are a major access point for eGovernment, are reducing the load of other agencies, and are helping prepare a better informed, better connected, better educated and more secure society.
8. References


