

If You Build It – Will They Come?

Understanding the Information Needs of Users of BTOP funded Broadband Internet
Public Computer Centers

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Running Head: INFORMATION NEEDS OF BTOP PCC USERS

ABSTRACT

This study on the users of three public computer centers (PCCs) operating in a city in the Midwest region of the US attempts to further understand the localized value of broadband Internet access for members of low-income communities. These PCCs primarily serve low-income members of the African American community and offer free access to laptop computers, broadband Internet, and computer skills training. The study analyzes usage access data collected by the PCCs in which actual usage patterns of users in real time is presented, on site visits to the computer centers and observation of the activities taking place in them, and interviews conducted with users of the PCCs as well as with the staff operating them and the planners of the project. The interview protocol is based on the concept of “information use environments.” Interviews focused on how PCC users resolve their information needs taking into account the impacts of access and the ability to effectively use information technology. Findings revealed diverse needs of users; a disparity between reported use and actual use; intended and unintended consequences, as well as externalities, all of which need to be taken into account when designing future policy; the attractiveness of the PCCs as a place providing free access; the factors that may contribute to determining the “haves,” “have-nots” and “have-less,” among the inner city poor, and a general sense that the PCCs, while utilized according to users’ individual needs, are a vital component of an access policy.

Keywords: broadband, digital divide, information use environments, public computer centers

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Introduction

Much of the literature focusing on what is known as the “digital divide,” the disparity in full membership in the growing information society, developed either from viewing the “divide” as an access issue or from attributing it to “online skills” (e.g., Hargittai, 2003). Policies that have emanated from this limited view focused on either providing physical access to information and communication technologies (ICTs), through subsidies or through the enactment of community computer centers, or on providing the less connected with “online skills,” mostly uniform skills tied to basic uses of computer and Internet applications: webmail and word processing applications. Indeed, these approaches are limited, as they are rooted within the prevailing market-dominated approach to the development of communication and information policies, which promote physical access and uniform skill sets in order to reach aggregate and average levels of “connectivity” good for quantitative comparisons, but lacking much depth of analysis. However, this currently accepted paradigm has been increasingly challenged in recent years (e.g., Barzilai-Nahon, 2006; Davidson, Santorelli, & Kamber, 2009/10; Yu, 2011).

Criticism of the status-quo approach to the “digital divide” and of official efforts to address that divide include a call for the identification of social and cultural indicators as measures for the development of the “information society” (Pruulman-Vengerfeldt, 2006). These indicators are needed to complement the technological and economic indicators used so far, which have had only limited success in helping overcome

information inequality affecting the most disadvantaged groups in society. One innovative way to overcome these deeply inherent disparities differentiates between, and suggests combining, a vertical analysis of information gaps (based mostly on gaps rooted in socio-economic differences) and a horizontal analysis (that takes into account gaps between members of the same socio-economic group that have different individual needs) in order to understand differential individual needs and usage characteristics within a socio-economic group (Lievrouw & Farb, 2005).

This study looks at the demand side of the equation, and employs a bottom-up analysis of information need as articulated by the needy themselves. The need to develop a proper theoretical framework for providing ICT access to unique population groups with unique needs is at the basis of this study, which is informed by a desire to step out of the massive “connectivity” paradigm and magnify the structure of society in order to identify the unique attributes of population “pockets” that general policy cannot necessarily identify and therefore serve.

In 2009, the U.S. Congress allocated \$4.7 billion in stimulus funding to create the Broadband Telecommunications Opportunities Program (BTOP) to support development of broadband infrastructure and to develop and enhance broadband capabilities at public computer centers (PCCs) in un-served and underserved areas in the United States (NTIA, 2011). Funded through BTOP, PCCs are defined as “projects to establish new public computer facilities or upgrade existing ones that provide broadband access to the general public or to specific vulnerable populations, such as low-income individuals, the unemployed, senior citizens, children, minorities, tribal communities and people with disabilities” (NTIA, 2011, p. 5). These funds were primarily spent developing broadband

access in “anchor institutions” (i.e., schools, hospitals, and government buildings); however, developing PCCs at non-profit, local, community service institutions has increased in an attempt to further expand access to the wider community and to create synergies between PCCs and social service institutions (Jayakar, 2011).

While research has found that broadband Internet access at PCCs can aid socio-economic development within low-income communities, localized value of broadband Internet access for members of low-income communities is still not fully understood. Thus, this study seeks to aid broadband policy initiatives by revealing how inclusion of local social and cultural capital is integral in enabling effective use of broadband Internet. In order to achieve this research objective, four PCCs operating in a city in the Midwest of the United States were studied. These PCCs primarily serve low-income members of the African American community and offer free access to laptop computers, wireless broadband Internet, and computer skills training in employment, education, and health and wellness. Analyses of data collected by the PCCs in which users’ online usage patterns are recorded in real time, site visits and observations of the PCCs, and on interviews conducted with users, staff and planners of the PCCs helped further understanding of localized opportunities and barriers to utilize broadband to resolve information needs.

Studying the digital divide

Research pertaining to the “digital divide” has tended to focus on issues of *access* to information technologies— those who “have” and those who “have not”— and has recently transitioned into studying the more nuanced diversity of utilization of ICTs and the Internet to fulfill information needs (Cooper, 2010). Scholars (Davidson, Santorelli,

& Kamber, 2009/10; Qiu, 2009) have taken issue with a generalized classification of social groups and feel that specific impacts of ICTs vary widely between and among social groups. Qiu (2009) defines the “digital divide” as stratification of access and use dependent on the needs of the user and not as an access dichotomy. Moving beyond “haves” and “have-nots”, Qiu identified the “have-less”—populations defined by similar “ICT access, ownership, knowledge, and skills, as well as associated ICT behaviors and attitudes” (2009, p. 4) that are typically low-income and utilize ICTs in distinct ways from the upper class “haves” (ibid.).

Broadband adoption and use in low-income communities

Research on broadband adoption and use in low-income communities has identified that these communities view broadband access as integral to socio-economic inclusion but that access is difficult due to financial constraints and lack of computer/Internet skills (Dailey et al., 2010). Introduction to the Internet through engagement with social networking sites, gaming sites and online shopping has been found to aid development of new Internet users’ computer skill sets (ibid.). However, low-income communities are also driven by the need to search for and apply for employment. Increasingly, employment announcements and applications are being offered solely online which means that these communities must learn word processing software and have adequate Internet skill in order to search for and apply for employment through online platforms.

Scholars (Mehra, Merkel and Bishop, 2004; Nardi & O’Day, 1999) have stressed the importance of taking into account the perceptions and understanding of what constitutes an informational need by a community. The system of relations between

members of the group including common social practices, access to technologies and values/norms that affect group information-seeking behaviors should be understood (Nardi & O'Day, 1999). Agada (1999) applied such a framework to understand the information attainment tactics of inner city African Americans. Findings revealed that information needs focused on finance and housing needs and that individuals relied heavily on interpersonal in-group sources rather than on mediated or official sources (ibid.).

Information-seeking behavior

Taylor (1991) calls attention to the need to understand how an individual's information needs are dependent on the characteristics of the community within which the individual operates. The characteristics of the community, including the typical problems encountered and environmental factors such as access to technology, affect members' information needs and information attainment tactics. Taylor further calls attention to the need to allow individuals to self-define resolution to their information problems.

Taylor classifies groups of people based on their information needs, access, and use in what he refers to as "information use environments" (1991, p. 218). Information use environments (IUEs) are characterized by "the set of elements that (a) affect the flow and use of information messages into, within, and out of any definable entity; and (b) determine the criteria by which the value of information messages will be judged" (p. 218). According to Taylor, individuals who share similar information needs and seeking behaviors are likely to exhibit similar conceptions of what information is valuable to appropriately resolve a problem. Individuals within the same IUE are likely to share

similar social networks that influence attitudes toward technology, media use, risk taking and innovation (ibid.). Taylor's model was initially designed to characterize the information needs and attainment tactics of different types of professionals. However, research has been conducted extending this model to understand the IUEs of "disconnected" communities (i.e., Hersberger et al., 2006 who studied abused and neglected children and Agada, 1999 who studied inner city African Americans).

While Taylor notes that information-seeking behavior "may be more individually idiosyncratic than collective," (p. 224) he applies his model to evaluate aggregate groups of people. Hargittai and Hinnant (2006) extend the IUE framework to capture the influence of social characteristics (i.e., gender, age, race, ethnicity, income, and education) to understand how individual social attributes affect information-seeking behavior. According to Hargittai and Hinnant (2006) the information-seeking literature in the information science field has seldom taken into account the influence of an individual's social attributes on information-seeking behaviors.

In order to better understand information-seeking behavior, Hargittai and Hinnant (2006) emphasize the need to contextualize information-seeking behavior into three categories: autonomy, social support, and goals and purposes. Autonomy refers to an individual's ability to utilize information technology to seek information freely and at their convenience. Allowing for greater freedom of exploration facilitates exploratory learning and open information seeking (Van Dijk, 2005). Scholars differentiate between accessing online environments from home and from PCCs where technological barriers may restrict ability to utilize certain applications and websites. In addition, the level of privacy within PCCs will also dictate how extensively users explore the medium. PCCS

that allow individuals to use computers in privacy may encourage greater exploration with the medium (Hargittai & Hinnant, 2006).

Social support is contextualized at two levels—within the organization itself and external personal social networks. Since this study is investigating the utility of PCCs within community development-based projects, understanding how the staff addresses users' information needs and interests is of importance to understand. Further, external social and cultural capital affects an individual's information-seeking behavior. The level of computer skills found within an individual's community directly affects that individual's use/skill level (Hargittai, 2003).

Goals and purposes underpinning information-seeking behaviors should also be considered. While Hargittai and Hinnant (2006) emphasize understanding all goals and purposes of seeking information “from the seemingly mundane tasks of getting weather or sports information to the extremely serious actions of researching immediate health concerns” (p. 61) there is a distinction between information-seeking behaviors that are geared toward enhancing socio-economic factors (e.g., seeking e-government services, employment or education) and those that are geared toward recreation and socialization (e.g., playing online games or socializing through social media platforms) (ibid.).

Tying Taylor's (1991) information use environments framework to Hargittai and Hinnant's (2006) explication of information-seeking behavior, this study attempts to construct a holistic understanding of the information needs and resolution tactics of a particular community—urban, low-income individuals who utilize PCCs. The study moves beyond a simplified digital divide understanding of adoption or non-adoption of broadband Internet to answer two research questions:

1. What are the information needs of members of a low-income urban community?
and
2. How do they reach resolution of their information needs?

Methodology

To gain first-hand knowledge of the information needs of the target community, in-depth interviews in which qualitative data can be gathered were perceived as the appropriate methodology. Interviews have been the methodology of choice in studies on the use of information by marginalized and weakened communities in recent years. Hersberger (2003) utilized interviews to study the “information capital” needs of a community of homeless in the United States; Newman et al. (2010) used qualitative methods to study disenfranchised communities in Australia; and Mignone and Henley (2009) used interviews to study information uses among First Nations, Inuit, and Métis communities in Canada.

Sampling for the interviews was convenience non-random sampling. Given the relatively large homogeneity of this group – with respect to such characteristics as socio-economic status, living conditions, availability of ICTs, language, culture – it seems reasonable to assume that data collected as described will constitute satisfactory estimates. Purposeful sampling was used to interview informants with knowledge of the PCCs. Interviews combined the narrative interviewing technique, which takes the form of a conversation in which participants relate personal experiences and bring up topics they consider relevant (Bates, 2004), with structured and semi-structured interviews. The narrative interviewing technique was chosen because it allows the interviewees to relay their experiences in their own language while providing their subjective meaning to the

experience (Jovchelovitch & Bauer 2000), an important element in understanding the subjective information needs of the studied population.

The narrative interview began with asking the interviewee to describe their own experience involving “something they needed to know” and how and whether they were able to obtain that knowledge. In this manner, the “problem,” the “setting” and the “resolution” were to be described in the interviewees’ own words. The structured element of the interviews was used “to ensure that all interviewees hear roughly the same questions in the same order” (Lindlof and Taylor, 2002, p. 194). The data was analyzed using a qualitative analysis method sometimes described as the constant comparative method (Glaser & Strauss, 1967; McCracken, 1988) and sometimes as analytic induction. The interviews were read through multiple times, and notes on “categories, relationships and assumptions” (McCracken, 1988) that are evident in the respondents’ answers were taken. This process of open coding results in analytic descriptions of the recurrent patterns and themes evident in the transcripts (Warren & Karner, 2005).

In addition to the interviews, staff at the PCCs provided us with 23 anonymous logins of 23 random users of the PCCs. These users were not the same ones being interviewed. The PCCs collect anonymous demographic data from the users and follows their online behavior. We were provided with that information, which was again, like the interviews, analyzed by seeking commonalities, categories and patterns. A total number of five days of online use were analyzed, representing the actual online behavior of the 23 random PCC visitors.

Findings

According to data provided by the PCCs, there are 6,961 individuals who have registered to use the computers at the PCCs. The average age of these users is 39. Out of the individuals who reported their level of education (n=976), nearly half, 37%, had received either a high school diploma or a general equivalency degree (GED) and 31% did not graduate from high school. Seventeen percent were college graduates and 15% had obtained “some level of college.”

Login data

Out of the 23 users whose online behavior and demographic characteristics were captured in this study, 5 were women and 17 were men—one participant did not indicate their gender. Users were primarily African American (n=18)—the other five users were Caucasian. The average age of users was 36 and average annual income was below \$11,000. Each PCC had an average of 5 Internet users per day and the computers were used for a total average of 7.5 hours per day—indicating that the PCCs tend to be continually in use throughout the day.

Each user spent an average of 1 hour and 45 minutes online. The data revealed that users primarily accessed social media websites. Twenty-one users accessed Facebook and 14 users accessed YouTube—spending the majority of their time online at these sites. Nine users accessed pornographic websites and five users did online shopping at ebay.com and oodle.com.

Although two of the PCCs share their space with an employment agency and primarily serve low-income community members, only three users searched for employment opportunities. These users searched monster.com, linkedin.com,

careerbuilder.com, jobs-to-careers.com, indeed.com, and simplyhired.com. Use of the PCCs to seek out health information and social services was rare. Only one individual researched health information and one user researched unemployment benefits administered by the state.

Interview data

While the login data were random findings describing the use by random users, on a given day, the interviews took place with a different set of users who were present in different hours of the day on different occasions in the spring of 2012. Interviews were conducted with 21 visitors in three of the four PCCs funded by the specific BTOP grant in this study, and at a class conducted through this BTOP grant at a local public library. The interviewees were both female and male and their ages ranged from 19 to mid-70s.

People

So how did this group of people come about? The people we defined as the subject of this study were the occupants of the BTOP-funded PCCs. As such, their identity as members of the group is derived from their information use. Joining the group however was far from a uniform process and its haphazardness is striking. Interviews with the people directing the program revealed that there was active recruitment using leaflets in mailboxes and other “low-tech” methods such as handouts, notices on bulletin boards, etc., notifying the residents of the neighborhoods in which the PCCs were located of their existence. Of the people interviewed only a fraction learned of the PCCs through this activity, and even if they did the recruitment left a small impression on them.

A 26-year-old female, when asked how she had heard of the PCC said, “I think I walked by...No, I think I got a letter in the mail” and a 30-year-old male remembered “a

flyer... that somebody went and pointed it out and said, 'Check this place out.'" A 40-year-old female participating in an unidentified municipal program recalled that "someone came to our program and talked to us and told us and gave us information on this so like basically I'm the only one that come up here. But, that's 'cause I love computers and I really want to learn more." Most other respondents either learned about it from friends, neighbors and acquaintances, or "just happened to be near and see the signs," as a 20-year-old male said.

The PCCs, though, are located in strategic locations that contribute to the makeup of their users: two of them share a space with an employment agency and one is adjacent to a women's shelter. A 43-year-old female testified that "Actually I was staying at the shelter across the street from here and they said that I could come over ... and get a free membership because I was staying there and I um... came over one day and decided to uh... check out the computer and that's how I started coming everyday mostly... mostly everyday." A 19-year-old female at another PCC described how "I had to find a job through here and so I was getting jobs through here and when I didn't get a job I would come here (to the computer center)."

Their reasons for becoming consumers of the information accessible in the PCCs may have been diverse, yet one main reason repeatedly mentioned for returning to these centers was that the access was free. A female in her 30s stated she started coming to the PCC because "my friend ... she basically said there's this computer place where you can look up information you don't have to pay," and a female in her late 50s added that "the reason why I use the [computer center] is because they're available and they're free." Indeed, the free access is what gives preference to the PCCs over places for which there

is a charge as the incentive to come is her desire “to be on top of things and I really want to be able to interact with people and work with people on the computer and interact with people to get my different sources of information,” which otherwise would not be fulfilled. Access is not only free, but also unlimited, which served as another motivator for visitors. “[At] the library they have a time restriction which isn't so good for me, said a 21-year-old interviewee, “I can come in and do whatever I need to do and they don't worry about how long I am here.”

Information/Communication Circles

While membership in the PCC group itself may be coincidental, arising out of a combination of a need for information and the geographical location of the PCCs, the consumption of information it entails, creates for the participants' social groups—or “information/communication circles”. These “information/communication circles” can be characterized along different lines. We characterized two as “information groups” and one as a “communication group.” First, there are groups created on these computer-assisted networks, whose goal is the acquisition of information (“information acquisition groups”). As a female in her 40s testified, “I didn't know much about computers. You know what I started asking questions on Yahoo! Answers. That's where I started because I had a computer. I didn't know what to do so I always ask questions. And then a whole lot of people answer your questions, you know?” Second, there is a position of “informed person” some users acquire among their friends as a result of the information they can access using the computers. A 26-year-old female said in her interview that when her friends need information they now address her “because I come here all the time.” The third group, the “communication group” was less apparent in the interviews yet dominant

in the analysis of the actual activity online, as stated before. While only a small number of interviewees “admitted” that they go online in order to use social networking applications – mostly Facebook – and although social networking could be used, as some interviewees said, in order to obtain specific information, the nature of that access can be predominantly for the sake of social interaction (which makes it a “communication circle”). A 20-year-old male said he goes online to access “live mixtapes and YouTube and sometimes Facebook but I usually don't go on there” while a 35-year-old female stated, “I get on Facebook. That’s what I get on. [To get information] from my friends and family and planning events on there... if I'll be having a party, birthday party or somethin'.”

Information seeking in itself takes place in circles as well, which in themselves are social and reflect a social need and a basic trust in direct contact with other humans, which are oftentimes more trusted than technology. A 19-year-old female said she knows “where to go to get information... Here [the computer center] or my family [first I go] to my family.” A 36-year-old male testified about himself that “I am a people person and I like technology but I do not like the computer and the automated...so I will tend to discover a resource but then go to the resource in person to speak to the people... I think when the human factor is in play you get a better understanding... you lose things in translation whether it is a computer or a telephone.” A 67-year-old said “I talk to other people and I explain my problem and then they might give me a hint as to where [to get the information].”

A 30-year-old male explained that, “when I deal with personal issues I go to somebody who has experienced it. A person, I ask somebody if they have experienced

it... I know a lot of people who have been through a lot of life-changing situations, I just put it out there and I ask for someone's experience to, not their opinion, their experience” and a female in her 30s stated that, “If I don't know what I'm looking for I ask ... anybody that I think knows information.” The same sentiment was apparent in the words of a male in his 70s: “word of mouth ... 2 inquire different... I ask somebody that I'm thinking subject that I'm thinking has knowledge.” A 67-year-old male described his “normal sources of information are pretty much by phone... by phoning people and talking to people... I talk to other people and I explain my problem and then they might give me a hint as to where [to find the information].” A female in her late 50s gave a more detailed description of the way she seeks information. “I'll use computer, people, organizations... you know different resources it's just where I think I can get my problem solved or someone can help me... um... I am not shameful or shy about asking... I'm looking for a car... so I am speaking to different people and if I see somebody walking down the street I know we conversate... you know I'm lookin' for a car... do you know anybody who's selling that's reasonable. So, I talk to the people or I go on the computer, look in a magazine, papers, newspapers... pretty much that's where I go to.... Maybe I couldn't find it right away it took me longer but somebody knew somebody who knew somebody... you know what I mean and maybe when I was looking for a certain thing I didn't know exactly how to say what the thing was or maybe I asked about something in the wrong way and somebody corrected me and then I got that information.”

For a 19-year-old, the “people-first” phenomenon was justified through a “third person” justification: “we all resolve problems in different ways [but] I think everybody goes to their family first.” Indeed the “third-person-effect” (Davison, 1983) as articulated

by some of the interviewees, is often described as a justification for their information seeking behavior. A 35-year-old female stated that “my friend...he works... and if he would need ... I think my friend would come here.” A 40-year-old female said about her acquaintances “I don't think they mess with computers... some people are scared of change. You know and that it just gets bad because you need the computer for everything.”

Problem

The information needs that bring the patrons to the PCCs are diverse. Naturally, since two of the PCCs are located in adjacency to employment centers, many of the interviewees were there because they were looking for work; however, that is far from their exclusive use of the computers. A female in her 40s said, “I was just diagnosed with type 2 diabetes and um... I just went on the Internet and wrote it and now like... and now everyday I get like an email on how to deal with it. And what to do and how other people felt when they were diagnosed with it ... all I do is basically to ask on the computer and put my name on there and now daily I get um... e-mails on what to eat, what's healthy for me, what to eat most the time and um... just a lot of different things that are like... so you don't feel alone.”

A 67-year-old male said he needs the PCC to “use the computer to see how much I have been paid and how the breakdown of the pay goes because we don't get paper statements anymore. We get you know... e-statements.” For a 43-year-old female the PCC serves to establish a position of knowledge with her daughter. “I guess I have like some things me and my daughter discuss and I won't be able to remember um... like say we're having a conversation and she asks me about something and I really can't remember

at that time and so I just like the next day I'll look it up on the computer..." The PCC also has for her the advantage of maintaining her anonymity while searching for information "like I don't know if this is a good example like... I uh... at home I used to watch um... the um... forensic files and so I love to use the computer and went on the Internet to uh... search out serial killers to read about them so... I don't know if that's an example... but, I didn't before like... know how to like... um... I wouldn't go to the library or anything like that because it is kind of embarrassing... not embarrassing but like when you go to the library... people... you take out a book and they think you are weird or you want to learn how to kill somebody for some reason... I don't know. So, it was just better for me to look on the Internet."

But having the PCCs themselves is not enough. A few of the interviewees, while at the PCC, had no knowledge of how to utilize them. A male user at a PCC adjacent to an employment office described how "the biggest difficulty is the information itself... just knowing what question to ask, just how to ask it. Sometimes you just sit back and think you know you can figure out the perfect way to ask the question sometimes you'll... you know think right away like pre-planning this go on a whim you know mmmm you might just get like a one dimensional but if you ask the question right you know like what makes a [inaudible] or just a better way to ask a question you add a dimension, like a two or three dimension and not only one. That probably be the biggest difficulty... so much stuff out there." Indeed, others expressed information overload and the need for sophisticated search skills as well. A 35-year-old female described her difficulty in simpler terms; "it would be hard for me to find [information] because I am computer illiterate," she said. A 21-year-old male stated that the only situation he sees himself in

which he could not find information he was looking for was “when I have not had access to the Internet.”

Setting

An important aspect of an information use environment (IUE) is the setting, the physical context in which information is sought. The settings of the patrons of the PCCs are diverse; however, some characteristics are common. The interviewees overwhelmingly had television sets at home and a mobile phone, usually with Internet access, and have overwhelmingly given up on a landline phone (“I only use a landline telephone when my cell phone's dead,” said a 19-year-old female) and reading the paper version of a newspaper. The definition of “radio”, if at all, was more often than not synonymous with music websites such as YouTube. The picture becomes subtler with regard to possession, ownership and access to computers.

The PCCs offer laptops. The laptops were all brand new, in mint condition. For some users the PCCs are the only place they could access a computer. A male in his 70s stated that, “I do not have [a computer]... That's why I am in the class.” A 35-year-old mother of two, who doesn't have a computer at home, spends two hours everyday at the library so that she can go on Facebook when her children are at school.

The length of stay in the PCC varies among the users; however, length of time may be correlated to their ability to access a computer elsewhere. A 21-year-old homeless male testified to being at the PCC every day (but Sunday) from open to close; an unemployed 37-year-old male spends every day at the PCC as well. Both do not use the computers for the entirety of their time at the PCC. The length of stay can be tied to the specific need on a specific day. A 37-year-old male who testified to coming to the PCC

“almost every day,” doesn’t necessarily need the computers there at all. “Today,” he said, “I just used my phone and because I only needed to text people and um... check email, whatever... and so I did it all from my phone but I use the Wi-Fi here.” At the same time others, who have computers at home still spend 2-3 times a week for 2-3 hours a day at the PCCs.

Indeed, for some of the users the computers at the PCCs are a supplement to a computer for which they have limited access, which could be a result of a number of reasons. In some cases, the users have a computer at home, but cannot access it at will. A 20-year-old male said he could only use the computer when his brother was home “because he has a password and he be locking me out. If he is not home I cannot use it.” A male in his 30s stated that, “I have [a computer] at the house... I rarely use it because I can barely get on it... Because everybody else wants to get on it. You know we only have one. You have to pick your time when you can use it.” In other cases, they have limited access to computers elsewhere. A 35-year-old female described how “usually I go to my mom's house and get on her computer and she'll help me.” A 36-year-old male described the PCC as “convenient” because “it is close by and I don’t like lugging and my computer dies quick. It is not just my personal computer but... my parents... everyone uses it... more like the family computer.”

In some cases ignorance with regards to computer usage serves as a barrier to full exploitation of an available device. “You've got to be careful about what you download,” said a 40-year-old female. “I downloaded everything on my computer and it was so slow. So, like I decided to come here. I don't have the money to keep getting computers.” “I am not fluent enough I guess to use the computer,” said a 67-year-old male. The setting, thus,

is a combination of the opportunity for physical access, and an opportunity to utilize knowledge of usage; however, the type of knowledge sought extends beyond establishing email accounts and acquiring word-processing skills.

Resolution

There is a general sense of reaching resolution among the interviewees. The interviewees did not report that in general their information needs weren't resolved. Outstanding was the man in his 70s who took part in a computer class at the public library. "Sometimes and sometimes no," he said when asked whether his information needs were being addressed. "Maybe later on sometime in the future when I was not expecting [resolution] would come up."

It was not simple to describe what the interviewees meant by "resolution." "When I stop searching basically when you know when you got the information," said a 40-year-old female. "It used to take me hours before but now I just...just like type it up and I choose." For those who are computer literate enough to be able to use search engines, the mere ability to access the computer is seen as the resolution for the quest for information. "Google is the fountain of all knowledge," declared a 21-year-old male. Many users, who simply responded by the word "Google" to questions about their information seeking activity, echoed his sentiment. As another 21-year-old male stated, "I just use Google." Google was mentioned as a site for information, as a site for job searching (though not always successful) and as a site for reading the news— both national and local.

Beyond the Link – What Having Some Connectivity Means

Thousands of residents of this mid-Western hub have seen a change in their Internet connectivity as a result of the BTOP project herein described. It is the intricate

detail of that change and its evaluation that we sought when conducting this study. We learned that the PCCs were accessible to a diverse population within the socio-economic group that constitutes these inner city neighborhoods, diverse in age, diverse in their levels of access to technology, diverse in education but across the board low in their level of income. Users spent a significant amount of time at these PCCs, and accessed a variety of online services ranging from social networks to job searching web sites to pornographic sites. Indeed, every policy has intended consequences, unintended consequences and externalities, all which need to be taken into account when evaluating it.

There was a need for these PCCs, as demonstrated by the large number of people who visited them; however, the data reveals that the recruitment of the participants was not necessarily the reason for their showing up at the PCCs. One could paraphrase the immortal lines of *Field of Dreams*, and say that, “if you build it, they will come.” The fact that access to the PCCs was both free and unlimited was clearly one of the main attractions.

Technology does not replace human contact. While the PCCs allowed the creation of certain human circles of information consumption and communication sharing, they did not replace human contact or change the importance these particular individuals gave to human contact. Humans continue to serve as information resources for the “have-less” in this urban setting.

As diverse as the people are, so are their information needs. Some responses may have been shaped by the fact that the questions pertaining to “information needs” were asked at a PCC and in most cases at one adjacent to an employment center. However, the

diversity of responses shows that the effect of the physical location on answers was limited. Interviewees mentioned information needs pertaining to health problems, financial information they were seeking, social and familial needs that had to be addressed and even the need for online privacy, which could not be obtained at other settings. At the same time, having the PCC was not enough, and users expressed their frustration at their inability at times to fully utilize these PCCs as a result of limited know-how.

Contemporary inner-city dwellers rarely have a wireline phone, rarely read a newspaper (on paper) and rarely listen to the radio. They consume entertainment products primarily online and on television. Many that have broadband connectivity do not have enough of it. They may not be “have-nots,” but neither are they “haves.” This status of “have less” can be a result of time restrictions on media use, of the quality of the devices they use or of the speed of their connectivity. Yet, our interviewees do not feel that their quests do not get resolved, and the BTOP centers seem to play a role in the satisfaction of their information needs.

In building their IUEs, the low-income population of this mid-Western hub that have gathered at the PCCS not necessarily through the direct encouragement campaign that tried to lure them in, have also described their problems, defined their setting, and expressed their sense of resolution in a manner that may have not originally been identified by the architects of the BTOP effort. While the BTOP project was launched in order to “bridge the digital divide, improve access to education and healthcare services, and boost economic development for communities held back by limited or no access to broadband – communities that would otherwise be left behind,”(NTIA, 2012) our

findings suggest the development of the PCCs (which constitute only one-third of the program – the other two goals being comprehensive community broadband infrastructure and sustainable broadband adoption) may also contribute to far more personal and modest “micro-goals” that may be as important. While they may have not been the impetus for the program, which sought to reach the abovementioned ambitious goals, their effect on individual users may be great.

Indeed, the “digital divide” is more of a “stratified digital difference” and attempting to define it as resolved by declaring “connected” on a neighborhood or a person is far from enough. For example, some users equate mobile phone access with computer access. This may be true for some functionalities, but not for many other more powerful ones. Indeed, social networking, which has become the buzz activity generating media consumption worldwide, is central at the BTOP centers as well (even if the users themselves don’t admit to it in person)—supporting the prior findings of Dailey et al. (2010) that low-income users tend to use social networking sites, gaming, and online shopping as an entry point for online capacity building. Social networking, however, as important as it may be fulfills only a fraction of the social benefit users may accrue at the PCCs. Both the centrality of mobile phone surfing and of social networking indicates that while the BTOP centers have contributed to the narrowing of the digital divide, their main success may have been in moving “have-nots” to a “have-less” position, and some “have-less” (for example, those who have limited connectivity or old computers at home) to a reduced degree of need, but not to bridging the divide in full. Critiques of government intervention may point to this limited bridging power of the program as a

weakness, but at the same time it can be seen as its strength and as an indicator regarding the directions the program can be taken.

The individual benefits to users were distinct and cannot necessarily be aggregated, however, that does not alleviate from or lessen their importance. The PCCs allowed users more access than they had before and provided individuals with more confidence in resolving their problems. For some it had repositioned them among acquaintances and family members as people with access to information and raised both their importance and the importance of information in the eyes of their family and friends.

Indeed, the establishment of these institutions has bettered the life of many, it was built and they came, however it is clear that a more focused intervention can and could further and enhance their social capital.

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