

# Communities Connect Network: Advancing e-Inclusion in Washington State through Community Technology

Michael Crandall  
University of Washington  
Box 352840  
Seattle, WA 98195-2840  
206-897-1798

mikecran@u.washington.edu

Karen E. Fisher  
University of Washington  
Box 352840  
Seattle, WA 98195-2840  
206-543-6238

fisher@u.washington.edu

Carol Landry  
University of Washington  
Box 352840  
Seattle, WA 98195-2840  
206-543-0242

cflandry@u.washington.edu

## ABSTRACT

Community Technology Centers (CTCs) are community-based organizations providing public access to computer-based training, content, and services (including the Internet) for a target population, usually underserved. We describe our study of a two-year effort by a consortium of organizations in Washington State to document, describe, and communicate the impact of CTCs on the lives of the individuals, families, and communities engaged in using their services.

The findings and results directly address the conference theme of e-inclusion in the iSociety: addressing under represented groups among iDesigners as well as iConsumers (e.g., women, children and youth, the aging, people with disabilities, racial and ethnic minorities, immigrant communities, non-Western cultures). The study represents a concrete example of “digital inclusion” and provides a strong model for other efforts of this nature in the future.

As discussed by Crandall and Fisher [1] and in the seminal “Falling through the Net: Toward digital inclusion” NTIA report [5], digital inclusion goes beyond access to include technology literacy and relevant content and services as the cornerstones of full engagement in the iSociety. The Communities Connect Network adopted this framework in their work to develop a statewide network of CTCs over the past two years, through targeted training activities for CT providers, development of an online community network for the providers, and advocacy efforts in which the providers were engaged to present a common voice to the state legislature.

As a member of CCN, the aim of our research was to gauge how people of Washington State were (a) using and (b) benefitting from CT services. Two primary methods were used to collect data: 1) a telephone survey with staff from the 211 CTCs in the state (identified through combining existing directories and lists available at the time of the study), and 2) case studies of 7 organizations to explore user and staff perceptions of the benefits obtained from using the CTCs. Dervin’s Sense-Making approach [c.f., 7], Durrance and Fisher’s outcomes-based toolkit [2], and Fisher, Marcoux, Miller, Sanchez and Cunningham’s work [3] informed the study, specifically the structuring of the data collection and early analytic tools.

Regarding the survey, 47 of the 211 responding agencies provided self-reported data, including: the frequency and volume of service use, the demographics, and barriers and enablers to delivery of services. Key characteristics of the CTCs

were also documented in this survey to provide a broad picture of the nature of services offered, staffing characteristics, and longevity.

For the CTCs responding to the survey, three quarters of the programs had been in existence for more than 5 years, indicating both the community need and the success that most of the programs had in meeting that need for an extended period of time. Slightly less than two thirds of the centers (64%) had less than 5 staff members, with another 19% having between 5 and 10 people on staff. The small size of most of these centers reflects the budgetary constraints and localized nature of their services. Almost all of the centers are non-profits, and self-identify as neighborhood community or service centers of some type.

Using the combined results from the survey and previous data collected from grantees in the Bill & Melinda Gates foundation’s Community Access to Technology program, equal to about half of the known community technology providers in the state (total of 103 CTCs), we found that these agencies serve a minimum of 99,467 unique users per year. Weekly counts show that on average, a user visits 14 times during the year, resulting in an estimated total of 1,392,538 visits per year.

These descriptive statistics were combined with findings from the in-depth field studies, conducted through on-site interviews and focus groups with CTC staff and users (ages 14 and older), and field observation. The transcripts and field notes were analyzed to discover the emergent themes among staff and users of the centers, using standard qualitative methods [e.g., 4], and used in conjunction with the descriptive statistics to present an in-depth picture of the impacts of CTCs in the state.

Analysis of the case study interviews revealed that users had varied reasons for using the CTCs. Learning new social and technical skills, preparing for jobs, connecting with others, and education were some of the more important reasons voiced by both staff and users. Significant outcomes identified clustered in 6 areas: employment/economic, academic skills and literacy, social inclusion and personal growth, independence, access to information and resources, and communication.

When asked how users benefited by their associations with the CTCs, approximately 12% of 235 responses alluded to the Academic skills and literacy outcome such as providing references and/or resumes for college or jobs, academic improvement like raising math scores one letter grade, and

preparing users to obtain a GED or go to college. With regard to fiscal concerns, 23% pointed to the Employment/Economic outcome where users developed job skills that prepared them for getting a job, empowered them to obtain additional technical skills and helped them to gain employment. By far, however, the greatest individual impact was noted for the Social inclusion and personal growth outcome (36%). An assortment of characteristics such as relationship building and friendship, staying out of trouble, developing or expanding interests, tangible skill development (e.g. leadership, public speaking) and providing connections to community leaders were identified as benefits for users in this area. The building confidence and elevating expectations attribute was most mentioned by users.

The most common response for family benefits applied to the Academic Skills and literacy outcome (40%), and of these, 85% referred to the Connecting families to technology attribute. Under the Social inclusion and personal outcome, 22% of answers applied to improving family relationships and keeping kids safe by checking their online activities. CTCs also benefited families by keeping them connected, shown by the 18% of responses attributed to the Communication outcome. Many users are immigrants and CTCs allow them to stay in touch with family members, for example, in Mexico where there are many cybercafés. In terms of the Employment/economic outcome, 12% of answers credited CTCs for helping users to get a better paying job, and higher income employment benefited families by making it easier to meet daily living expenses.

Of the 76 responses pertaining to community impact, participants indicated that the Employment/Economic outcome was the most significant to users' communities, as 42% were ascribed to a more skilled work force and to a better educated population. CTC impact was soundly represented in the Social inclusion and personal growth outcome. Just over 42% of responses revealed that the community benefited from CTCs as they helped to develop future leaders, users were motivated to take action in their communities and, most notably, by the community building that it engendered. Lastly, the Independence outcome associated with community is the ability to speak and be understood without the need for a translator. Although more important to immigrants than other CTC users, such independence lessens the demands on community resources as fewer translators are required for medical appointments or government and law enforcement interactions.

These types of activities are often the ones called out in major policy initiatives targeted at underserved populations, yet CTCs are rarely included in those discussions when policy is being made. The challenge, then, is how to bring the voice of these programs to the table when decisions are being made on policy and funding issues. To frame this discussion, a situated logic model was developed to provide a linkage between the policy arena and the CTC impact areas on individuals, families and communities [6].

Figure 1 shows how we related the program outcomes identified in the study to the larger policy model for workforce related issues.

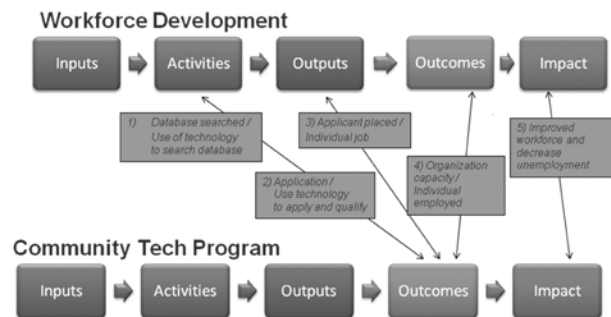


Figure 1: Situated Logic Model for Workforce Development

In November 2007, Communities Connect Network organized training events for CTC providers in conjunction with legislative hearings, and arranged for the providers and the researchers to present their results to the legislators. As a direct result of the testimony and research, a bill was passed and signed into law [8], defining Community Technology in the state of Washington and allocating \$500,000 for support of innovative programs serving underrepresented populations.

## REFERENCES

- [1] Crandall, M., and Fisher, K. E. Forthcoming. Digital Inclusion: Communicating Impact through Practice and Research. Medford, NJ: Information Today.
- [2] Durrance, J. C., and Fisher, K. E. 2005. How Libraries and Librarians Help: A Guide to Identifying User-Centered Outcomes. Chicago: American Library Association.
- [3] Fisher, K. E., Marcoux, E., Miller, L. S., Sanchez, A., and E. R. Cunningham. 2004. Information Behavior of Migrant Hispanic Farm Workers and Their Families in the Pacific Northwest. *Information Research*, 10.1, paper 199 <http://InformationR.net/ir/10-1/paper199.html>
- [4] Glaser, B. G., and A.L. Strauss. 1967. The Discovery of Grounded Theory: Strategies for Qualitative Research. New York: Aldine Publishing.
- [5] National Telecommunications and Information Administration (NTIA). 2000. Falling through the Nnet: Toward Digital Inclusion. Washington, DC. <http://www.ntia.doc.gov/ntiahome/ftn00/contents00.html>
- [6] Naumer, C. Forthcoming. Situated Logic Model: Using the Model in the Real World. In Digital inclusion: Communicating Impact through Practice and Research. M. Crandall and K.E. Fisher, Editors). Information Today, Medford, N.J.
- [7] Naumer, C. M., Fisher, K. E., and B. Dervin. 2008. Sense-Making: A Methodological Perspective. *Sensemaking Workshop @ CHI 2008*. ACM SIG CHI Conference, Florence, Italy, April 6, 2008. <http://dmrussell.googlepages.com/sensemakingworkshoppapers>
- [8] S.B. 6438, 60th Leg., 2008 Reg. Sess. (Wash. 2008).