

CCN Case Study Analysis

October 2007

Community Technology Centers

Introduction

The specific objective of this study was to identify and collect data demonstrating the needs and benefits of community technology (CT) programs. To accomplish this, a team of researchers from the Information School of the University of Washington conducted field studies at seven community technology centers (CTCs) in Washington State with a focus on the following broad outcomes:

- Employment/economic
- Academic skills and literacy
- Social inclusion and personal growth
- Independence
- Access to information and resources
- Communication

Employing the Communities Connect Network (CCN) logic model developed previously by the research team as a foundational framework, outcomes were examined for their applicability to individuals, families and communities at large.

To gain a broader picture of community technology's impact, this study investigated organizations that targeted such populations as immigrants, youth and residents of low income housing centers. Furthermore, agencies were selected for their diverse locations such as Seattle and Tacoma (metropolitan areas), Jefferson County (Olympic Peninsula) and Yakima (Eastern Washington).

Methodology

To better understand how CTCs impacted users, interviews and focus groups were conducted with both CTC staff and users during July and August 2007. The staff interview protocol was comprised of 17 primarily open questions, while the user interview guide consisted of 24 mostly open questions. Eighteen staff and 33 users were interviewed. To ensure compliance with the University of Washington's Human subject requirements, youth participated in focus groups rather than one to one interviews. Demographic data were not collected from staff, however, they did indicate the length of time they had worked at their centers. Of the 18 staff interviewed, 39% reported that they were employed for less than one year, 11% for 1-2 years, 22% for 3-5 years and 28% of staff members had worked for 6-10 years. Forty-seven percent of staff identified their role at the CTC as administrators or managers and 47% reported that their role was as staff, for example, cook/cleaner, monitor of the CT lab, or docent. Only 7% of staff members self-identified as a teacher.

We asked staff members to identify who the users were that used their centers. Youth and immigrants were identified most frequently, with residents, staff, low income and adult users also listed. This report mirrors findings from the CTC telephone survey as youth, and immigrants were frequent users of those centers.

Findings

CTC Use

When asked how users found out about their CTC, the most commonly recognized sources were friends or acquaintances, family members or outreach from CTC staff. Less common were newspaper ads, another agency or that the CTC was part of a larger multipurpose agency. To learn about CTC usage, participants were asked how long they have been going to the center and how frequent their visits were. Approximately one third had been coming to the center for one year or less, just over 36% attended for 2 years, and 27% had used the center for 3 or more years. Additionally, the majority of users (62%) stated that the average amount of time spent at the center ranged from less than hour per week up to 6 hours per week, while 24% indicated that they used the center 7 or more hours per week. It is noteworthy that 14% of participants could not determine weekly use due to the irregular nature of their attendance. For some, this was attributable to work-related interference or summer versus school year programming. Supplementing user responses, staff reported that the average length of time users visited the center was typically 2-3 times per week (54%) with 39% presenting 4 or more times and 8% coming at least one time per week.

Research team members also explored the reasons people came to community technology centers. To begin, we wanted to know if users had access to computers and the Internet in places other than the CTC. When asked, 75% said they did, which included the library, school, and home. Participants with computer and Internet access from home noted that they had slower, dial-up connections or they lacked desired software on home equipment. Going beyond the issue of access, we asked staff what information was sought most often. The most common responses were job or business-related information and information pertaining to center classes. Although sought less frequently, information about English was also wanted, as was material on housing, entertainment, computer literacy, special interests such as music, and homework help. Similarly, users were asked what they had tried at their CTCs. Typically, more than one response was given with English classes and digital technology undertaken most often, followed by GED prep classes, presentation fundamentals and email. Research, website design, basic computer classes, word processing classes and business-related classes were attempted less frequently. Oddly, two users remarked that they had tried no classes or activities at the center.

When compared to the CTC telephone survey results, in which participants were asked for the top two reasons people used their centers, answers showed that learning new technologies or new skills and learning skills for independence were the most frequent reasons for using the centers. These findings correspond with the case study's as seeking information about English speaks to attaining skills for independence, while using digital technology or inquiring about center classes are comparable to surveys learning new technology skills. Also, learning new job skills, a survey attribute, is similar to the case study's finding that seeking job-related information was significant to users.

To determine the value of CTCs, users were asked why centers were important to them. Responses were coded based on the six outcome categories listed above. Of the 126 responses, almost 22% related to the **Academic skills and literacy** outcome where participants indicated that the CTCs were important for developing English skills, improving school performance, learning basic computer skills as well as advanced technology skills. Under the **Access to information and resources** outcome, access to technology as well as to the information and resources via the Internet were important also 22% of the time. For the **Employment/Economic** outcome, 15% of response revealed that the centers were significant for learning resume writing, learning software or technologies for job skill development, obtaining business and management skills and for getting a job. Acknowledging the importance of job skill development, 14-year old Student X¹ who is a member of the Jefferson County 4-H Network News, had this to say, "The future is working with computers and technology. This is the age of computers and you need to know about computers"

Almost 17% of answers showed that **Social inclusion and personal growth** were important to users for providing positive role models, developing public speaking and leadership skills and for the ability to build confidence in one's abilities, for example, going to college or attaining a GED. Illustrating this point, a staff member who has worked at La Casa Hogar for five years, described how Latino women gained confidence for passing the driving test as a result of using resources at her center.

When they take driving class. Before the computer, they have [only] writing and listen. They don't pass the [driving] test. But when they practice on the computer, when they go to take the driving test, it is easier for them. More pass the test because they can practice on the computer.

Empowered to do things for oneself (8%) such as filling out forms online was ascribed to the **Independence** outcome. Finally, 17% of responses were assigned to **Other** outcome. Of these, more than 76% listed having a comfortable and safe place to learn as an important feature of the CTCs. Subject Y, who has been with Reel Grrls for almost two years, echoed sentiments expressed by other participants. "It's safe working with girls. I can say anything. At school, you can't say what you like. If you make a mistake, they judge and you can't work with them positively again." Located in Seattle, Washington, Reel Grrls is a nonprofit agency that seeks to provide teenaged girls, age 13-19 years, with the opportunity to gain media technology training in its after school program. Its goal is to empower girls with skills in video, audio and web production. Additionally, Reel Grrls teaches girls how to critically evaluate media and then go on to produce their own movies. By learning media literacy, it is believed that these girls will be equipped with the necessary tools to become influential members of both our local and global societies.

Benefits from CTCs

In this section, codes will be examined in terms of the CCN logic model, which was created for effective demonstrations of outcomes of the community technology programming. This includes a discussion of individual, family and community benefits engendered by use of CTCs. Furthermore, coding will again be viewed through the outcome lenses previously referred to.

¹ Names have been changed to protect participants' privacy.

Individual User Benefits from CTCs

Notably, we sought to identify the benefits accrued by individuals who utilized CTCs. Both center users and staff pointed to numerous impacts that were subsumed by the broader outcome categories. By far, the greatest number of outcomes was observed at the individual level.

When asked how users benefited by their associations with the CTCs, approximately 12% of the 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. Subject A, who is both a user and a staff member at Yakima's La Casa Hogar, has benefited greatly from using this CTC.

I lived 27 years in the US. Over 20 years in Los Angeles. I came here; my daughter was sick. She asked for help. When I came here [Yakima, WA], I couldn't speak or understand English. [At La Casa Hogar] I start at English level 1. Now I am at level 5. When I finish level 5, I'd like to go to college. I like to be a nurse. Soon I take my GED. I have 4 kids. I worked for my kids. Now is time for me.

Almost 23% of responses were favorable of the **Employment/Economic** outcome. In this category, participants specified that users developed job skills that prepared them for getting a job, empowered them to obtain additional technical skills and helped them to gain employment. Speaking about job skill development, a Washington CASH employee, explained that her center offers a

business training course that covers such issues as developing a business plan, planning finances, and determining whether a business idea is feasible. Classes include an introduction to Computers, and various Business Classes that integrate computer skills. For example, users can learn Word and develop a business plan, learn Excel to complete cash flow projections, or learn Web design and make a website for their business.

Washington CASH is an organization that provides loans to people with low incomes so that they may establish successful businesses of their own.

By far, the greatest individual impact was noted for the **Social inclusion and personal growth** outcome (36%). An assortment of characteristics such as relationship building/friendship, staying out of trouble, developing or expanding interests, tangible skill development (e.g. leadership, public speaking) and providing connections to community leaders were significant benefits for users. However the building confidence and elevating expectations attribute was most significant. A staff member who has worked for the Delridge Neighborhoods Development Association (DNDA) in West Seattle for four years, underscored this point.

The CTC has helped a lot of people who thought they didn't know how to do anything, for example, one woman wanted to have a bake sale. Using the CTC, she was able to learn to use *Publisher* and market the sale to other residents.

DNDA is a nonprofit organization that works with businesses, residents and other institutions to create a flourishing community. As part of their purpose, DNDA built a CTC in an environmentally friendly housing complex.

Affirming the outlook proffered by the DNDA staff member, the administrator for the Jefferson County 4-H Network News told of the impact his organization has had on the youth who have participated in club activities. Jefferson County is located on the Olympic Peninsula. It is in a community that was heavily reliant on the logging industry for employment. However, the industry has gone into steep decline due to environmental issues and other factors. He described the community as being very rural, with 60% of school aged children living in poverty. "Abuse levels are way out there. When you scrunch an economy there are consequences. Lots of alcoholism." He goes on to tell how kids are filled with doubt; that they do not think that they can go on to college. Nonetheless, through their digital media efforts with the 4-H club, for example, *Network News*, the CTC has provided these kids with tremendous skills. The club took them "to a camp at WSU [Washington State University] called Cougar Quest and they found out that they know more than the other [more privileged] kids and [they] received encouragement from this," which suggests that CTCs are integral to developing optimism and forward thinking for their users.

Access to information and resources outcome represented just over 10% of responses as users benefited from access to technology and used Internet resources to pursue interests or look for work. Similarly, the **Independence** outcome registered just under 10% of replies for developing the ability to communicate in English, to fill out and submit government or other agencies' forms online, and to gain the ability to drive oneself. The **Other** outcome embodied just over 10% with the benefit of a safe and comfortable environment presenting as the greatest factor. Having free or low cost access to the CTC was less significant.

Family benefits from CTCs

Looking more broadly, we explored how users' families benefited from their association with CTCs. Again, data were coded using previously discussed outcome indicators.

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. For one family member, a child helped his father order items online. For another, a mother helped to explain computer-related things to her adult son. Perhaps the most compelling connecting of families to technology was articulated by the administrator for 4-H Network News. Children who have participated in club media programs have their work posted online.

Families often don't know anything about the Internet. Families wanted to see their kids and asked for CDs or recordings, but our staff member refuses, forcing them to get onto the Internet, and as they start going to their kids, it begins a conversation about the Internet among the family. Also, a lot of the students have grandparents as guardians, so the generation gap is large. Grandparents have started using the center to start interest groups in learning how to use these technologies.

An equally important but less frequent response was having the ability to help school aged children. As parents, adult users found that it was beneficial to use the CTC to assist their kids with homework and research projects.

Under the **Social inclusion and personal** outcome, 22% of answers applied to improving family relationships and keeping kids safe by checking their online activities. Referring to the improved family relations aspect, a Reel Grrls program manager highlighted one girl's story.

There are two white girls who look like success if you see them walking down the street. One girl's mother died when she was young. Her dad was in and out of jail. She did this documentary about her dad's relationship. It made an impact. Now, she has a relationship with her dad and it came out of her Reel Grrls experience.

Regarding online safety, users revealed that their children often know more about their home computers than the parents. Parents learned how to use computers so that they could track kids online activities, for example, checking to see if kids were looking for information on guns, satanic worship or pornography.

CTCs also benefited families by keeping them connected, as evidenced 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. From La Casa Hogar, a staff member spoke about how "One woman studied ESL. She went to school for cosmetology and then got a job." This appeared particularly significant for seasonal laborers who wished to move beyond working in the fields. Landing a job as a cashier as a result of basic computer training was viewed as a success by La Casa Hogar staff. Lastly, 8% of responses applied to the **Other** outcome for such benefits as obtaining more affordable housing for the family as a consequence of filling out and submitting application forms online.

Community Benefits from CTCs

In this section, we explore benefits accrued by the community at large as a result of people's interactions with CTCs.

Of the 76 responses, 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. In reference to the skilled workforce attribute, one woman, who volunteered as a grant writer for La Casa Hogar, pointed out that "all staff were former students who have moved into leadership positions" as a consequence of CTC training. Addressing both the skilled workforce and better educated population aspects, the founder and coordinator of the Tacoma Intel Computer Clubhouse, indicated that "at least 50% of the youth have gone on to college, 10-15% work in technical fields, and the rest are still around working in technical environments. We have 13 kids working in internships and contract status this summer." The Computer Club house provides technology training for 10-18 year olds. According to her, they "learn innovative software that goes beyond basic skills...and apply it to creating things that are meaningful to themselves and community." What makes this program notable is that the youth come from the Hill Top area of Tacoma, Washington, an area known for its gangs and violence. They are a mixed group with diverse backgrounds. Some have structure in their lives while other do not. Fifty percent are transient, 25% are homeless and all live below the poverty line. Community benefits were similarly evident in the case of Subject E, a 38-year old migrant worker with a 6th grade education. She revealed that "in English, I learned basic words, and this

helps. In the GED class, it helps me a lot on mathematics, and to be able to read better [in Spanish]." Improving literacy in any language benefits the community.

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. The clubhouse founder described how this applied to the Intel Computer Clubhouse.

They [the clubhouse] supports them during their time there. The kids often come back to volunteer and/or give back to community. They operate under a model of service. They teach the idea of "Sankofa"- an African term for going back to get someone as you climb.

DNDA's administrator confirmed this view. "People share skills. We have families who don't have any exposure to technology and they learn through other residents." Similarly, a staff member of La Casa Hogar made an elegant case for community building.

It is a big part of the community. It is a stepping stone between home life and public life. It bridges these two spaces of the women's lives. Culturally they aren't always comfortable with the public sphere, this bridges it. Those who know more teach those who know less. They help others.

Referring to the importance of future leaders, a staff member from 4-H Network News said this of the program. We "challenge kids to see themselves as active players, not just cogs in the wheel of bureaucracy." Concerning the women at La Casa Hogar, a staff member detailed how they took action in their community. "They go back to the neighborhoods. They feel empowered and valued in their neighborhoods. Some of the women are forming some kind of coalition in their neighborhood." Of greater importance to immigrants than other users, the ability to speak and be understood without the need for a translator goes to the **Independence** outcome. Subject F, who has been in the United States for less than a year understood this attribute. "Women have the benefit when they go to hospital. They don't need a translator. When we first come, we know nothing and need a translator." Such independence lessens the demands on community resources as necessary translation requirements are reduced.

Organizational Benefits of CTCs

Although not present in the logic model, organizational benefits can be viewed as tangential to community benefits. When asked, all CTCs indicated that they worked in some capacity with other organizations. Researchers were interested to see how such partnerships benefited these outside agencies. The characteristics identified in the study fall under the **Social inclusion and personal growth** outcome. They include the CTC providing technology-related products for the organization, for example, promotional videos, the organization sends referrals to the CTC and the CTC provides activities for the organizations clients.

Challenges, Hindrances, and Needs

Although we were interested in the impact of CTCs on individuals, families and communities, we believed that it was also important to learn about the problems encountered with center use and program development. To accomplish this, we asked about the challenges users faced using

either centers or technologies. We inquired about problems hindering CTC development and we asked what was needed for future improvement.

Challenges to using CTCs or Technology

Of the 55 responses addressing challenges to using either the CTC or its technologies, almost 22% dealt with insufficient space, computers or technologies. With the exception of assistive technologies or software to address different immigrant languages, the overwhelming concern was the lack space and computers. Referring to this problem Subject G, an unemployed 43-year old immigrant living Yakima, stated simply “Once I wanted to study the computers, but there wasn’t room,” which required that she try again the next time class was offered. Other center users were required to wait until a computer became available. One 13-year old user from Yesler Terrace expressed his frustration over this, “The old man is on there 4 hours a day. It’s not fair.”

Independent of the center, school or work demands interfere with using CTCs. The director from 4-H Network News, illustrated this point, “They tend to be active with other extracurricular activities, so it’s a challenge getting them to make time for it.” Addressing the work aspect, Subject H, a 42-year old fruit picker and mother of three, had this to say. “It’s difficult when I want to come, and work. I lose time when I’m not working and am here, and that means I lose money. Sometimes I can’t come.” Less common, but important dilemmas faced by users is transportation to the center, lack of training or basic skills to actually use the center, insufficient levels of staffing, lack of time, language barriers, lack of computer and Internet access away from the CTC, the intimidation of technology and childcare issues.

When the examining the ascribed barriers to CTC use from the telephone survey, respondents indicated that transportation and childcare were the most pressing concerns to users. Capacity issues and limited resources were cited as problems following that of funding. Clearly, data from the case studies and the survey reveal that CTCs share commonalities when considering the challenges users encounter using their centers.

Hindrances to CTCs Future Development

When asked about problems regarding future program development at CTCs, 24% of responses were directed to inadequate staffing or teachers and 24% targeted funding issues. A staff member who has worked for DNDA for two months, explained. There is “not enough staffing. Kids must be supervised in the CTC but there are not enough people to monitor kids and give them computer access. Sometimes she’s the only one there and can’t supervise them in the CTC, so they can’t go down there.” Funding concerns affect many aspects of the CTC. The founder of Reel Grrls expressed her dissatisfaction with funding choices. “We have purposely invested in high end technology. In schools, inferior technology is used. It is easier to get technology funding than staff funding.” According to a Washington CASH employee, the organization currently lacks the requisite money to replace their aging desktop and laptop computers, and the administrator of La Casa Hogar indicated that money is a chronic issue for them, which required the center to continually apply for grants. Lack of resources, such as computer hardware or software, was another problem for center development. The administrator from La Casa Hogar described a situation that embodied both a lack of resources and insufficient staffing.

Struggle, because we didn't have resources for computer teacher, and then with YVC [Yakima Valley College computer teachers] we have to have 15 students minimum. At that time, we had 8 computers, and began with 15 students. Students had to share, and some of them didn't like that so they dropped. Then the teacher can't stay because less than 15 students. So then started with volunteers for teachers, sometimes no students. Then students would come, no volunteer. Mixed up.

Additionally, participants pointed to lack of space, insufficient time or hours, and users' unfamiliarity with hardware or software as hindrances to CTCs future development.

Needed for CTCs Future Improvement

It was believed that CTCs needed to move forward to keep centers relevant to their users. When asked about future direction and improvements, participants indicated an assortment of needs were required. Of the 99 responses, the greatest need pertained to increased training, classes and programming. For some, expanded classes in ESL training would be the direction, for others, more in depth classes needed to be offered. The Technology Center Director at Yesler Terrace would like to see more "workforce training. Most people know basic but want to learn advanced." On the other hand, expanding the program beyond one center is deemed important to the future of a number of CTCs. The administrator at Intel Computer Clubhouse seeks to expand into a series of campuses where each program would have its own designated space. Washington CASH is limited to Kitsap, Pierce and King Counties, but would like to be a presence in other counties, as well. Similarly, the Executive Director from Reel Grrls would like to take the program on the road. Around the State of Washington would be good, but nationally would be better.

Echoing the challenges users faced and hindrances experienced by CTCs, future improvement requires the addition of more staff, more and better resources, more space and increased funding. The Executive Director of Reel Grrls asserted that they need more staff, "We have a huge program and only 4 staff. We'd like to reach 200 girls per year. Now it is only 100 per year." Additional staff would permit CTCs to remain open as someone would be present to monitor the space, or permit more classes to provide opportunities for users. More and better resources for Washington CASH would mean faster computers and software that would allow online tutorials for various applications. More space would allow larger classrooms which could be equipped with additional computers. This would obviate the need for doubling up or turning users away for lack of space. Increased funding could address a host of issues facing CTCs. With it, concern over sustainability would be reduced and the problems centered on the issues of space, classes, resources and staff would be decreased. To a lesser degree, more outreach, increased hours of operation, additional community partnerships, childcare and other factors were also considered important for future improvement.

Conclusion

Findings indicate that CTCs are significant to individuals, families and communities. Supporting this premise is the users' willingness to return to the center. When asked, 88% percent of users indicated that they will continue to use the CTCs. Furthermore, the value users find in the centers was reflected in their recommendations to others. Almost 69% of CTC recommendations were directed toward friends or acquaintances, 19% went to family and 13% percent referred to others such as a hairdresser.