

Chapter 7

LESSONS LEARNED AND CHALLENGES FACED

INTRODUCTION

The community technology field is diverse and growing, making it difficult to synthesize what is happening in the field. The cities and organizations studied for this project continue to grow and change, and they may be at different places by the time this report is printed. The evolution of the field is likely to continue for the foreseeable future. Although the field is dynamic, the oldest community technology providers have existed for five to ten years, making this a good time to step back and collect what we know. We did hear similar things from many of the people we interviewed, suggesting that there are some common lessons and challenges that exist across organizations. The purpose of this chapter is to present these common experiences.

LESSONS

As more cities begin to support community technology efforts, it is important that all parties involved—city governments, grassroots organizations that are providing access to IT, and funders who provide support—learn from those who have already traveled up the learning curve rather than trying to reinvent the wheel. In this section we present lessons for community technology organizations and funders. We present policy recommendations in the following chapter.

The Organization’s Mission and Technology Program must be Linked

Given the popularity of technology programs, it would be tempting for existing community-based programs to initiate them without a clear understanding of the role technology might play. It is essential, however, for community organizations and funders to realize that technology is merely a tool to help organizations achieve larger goals; technology is means to an end, not an end in itself. Community-based organizations must move beyond technology itself and focus instead on how technology can be used to help fulfill organizational missions. Organizations should adopt technology initiatives after they have a specific plan in place to do so. Those efforts that are created around an IT-based mission should also be specific about how IT should be used, making it clear whether the effort exists to provide access, training, content, or some combination of these three.

Both the Austin Free Net (AFN) and Technology Access Foundation (TAF) are highly successful community technology organizations that were created around an IT-based mission. AFN’s mission supports a wide array of programs for a broad audience; TAF takes a structured approach to reach very specific goals.

AFN’s primary goal is to provide access to IT for the city’s low-income populations. To fulfill this goal, AFN departed very early on from the traditional free-net model by moving beyond dial-up access and focusing on the establishment of community

computing centers in low-income neighborhoods. Chapman (1999), referring to his work with Rhodes in Austin, asserts that “In our experience, people in low-income communities need a reason to use this kind of technology, and that reason is one that they usually discover themselves or that they bring themselves, rather than being something that’s imposed on them by the people that are trying to make the project work.”

TAF’s programs have very specific goals and cater to a specific population—youth of color. The TTIP program, for instance, uses a structured curriculum to prepare minority youth for technology professions. Although Trish Millines (1999) realizes the importance of access, she feels that access is not enough: “Just because I might be on the Web and I’m an African American doesn’t mean that there’s a lot of stuff that’s relevant to me.” In the TTIP program, participants become more than users of technology, they become providers of content.

Technology Should Match Program Needs

Staff at community technology programs might believe that they should purchase the most advanced computers they can with the money they have. However, depending on how the machines will be used, it might not be necessary to own the fastest, biggest computers. In Pittsburgh, for example, a senior center planned to build a computer lab. The initial idea was to purchase as many top-of-the-line machines as they could afford. Given the center’s budget constraints they could afford only four top-end computers. The student partner (a member of the Carnegie Mellon course discussed in chapter 5) had discussions with the seniors about the tasks they wanted to perform on the computers. Next, the student researched the hardware and software requirements to support these activities. The student recommended that, instead of getting the top-end machines, the center buy less expensive computers that were more appropriate to the tasks the seniors wanted to undertake. As a result, the senior center was equipped with six machines instead of four.

Sharon Strover (1999) of the University of Texas, Austin, also offers this caution:

I think there’s a conspiracy to get all of us to own more information technology. I mean the vendors are just pushing it out, and they make us feel insecure if we don’t have stuff, if we don’t know how to use it, if we haven’t looked at the latest site, if we don’t have the best authoring tools or whatever.

More technology is not always the answer. The most important thing is to define clear goals and then to implement a program—using appropriate technology—to achieve those goals (Schuler 1996).

Successful CT Programs Require Technical Leadership in the Organization

Although not every staff member in an organization needs to be fluent in technical language, it helps if the organizational culture supports technological literacy within the organization. According to Joseph Mertz of Carnegie Mellon University, “Leadership is a strong predictor of how well an organization can adapt technology to its programs.

Technology can't be ghettoized into a single program or under a single program director. If it is going to take hold and be sustainable the leadership must have some literacy and appreciation for what technology can offer the organization." The leadership of the organization should ensure that staff understand the positive potential of access to IT.

Computers Are Not One-Time Purchases

The hardware component of IT programs tends to get the most attention, especially when programs are first implemented. However, computers, printers, and monitors make up only one part of the IT picture. Community technology programs require not only hardware but also compatible software, technical support, upgrades and maintenance. One interviewee recounted a case in which an organization received a \$50,000 grant for a management information system. This organization spent the entire grant on computers and a network, leaving no reserve for technical support, the development of a management information system or upgrades, and maintenance of the existing equipment. The organization mistakenly believed that the computers and the network constituted a complete management information system.

Start with a Soft Opening

Several staffers at community technology programs told us that getting their centers up and running was a process, not a one-time event. It is impossible to foresee all of the potential technical problems and user demands that will arise after the initiation of a program. The primary staff person at one Seattle center told us that her center began with a "soft opening," limited to a relatively small number of area residents. This soft opening allowed the center to work out problems before it could be besieged.

Put the Computers Where the People Are

Community technology centers seem to attract the most traffic when they are located in places that community members already use. We visited centers located in recreational facilities, housing projects, senior citizens' centers, and multiuse office buildings. The location chosen should be convenient to the target population. Computers are already intimidating to many people who have limited access to them. Programs that place computers in surroundings familiar to residents increase the likelihood that a broad range of users will be attracted. Residents of the target community—the potential users—can be helpful in providing information on appropriate locations.

Outreach Efforts Must Be Creative

Even a great location will not guarantee success. Although some CTC staffers told stories of being inundated with traffic immediately upon opening their doors, other centers had problems in their efforts to attract people. We heard many stories about creative outreach efforts that often relied upon community members to spread the word about the programs. For example, the Austin Learning Academy's adult literacy programs

help to advertise the programs geared toward youth. Many of the participants in ALA's CARE program learned about the program because their parents were taking GED or ESL classes there. The youth then get their friends involved, and the program grows through word of mouth.

Project Compute in Seattle has implemented innovative outreach techniques as well. For example, every Friday evening, they offer an open-lab family night to interest parents in technology and to facilitate intergenerational learning. In their Life-Web Journalist Project, Project Compute loaned 25 handheld computers to program participants. As Anthony Williams (1999) notes, the program was Project Compute's first attempt to spark interest in technology by releasing the technology into the community.

We said, you know, everyone's not going to walk through those doors and register for a class, so how can we begin to introduce the use of technology on a daily basis? The vision was . . . if a kid had this device at home or at a friend or relative's house and was using it in some way, that would create an interest for other people they came in contact with. That worked fairly well.

Be Sure to Get Community Buy-In

Community technology efforts have a better chance of succeeding if community members have input throughout the process, from planning to implementation to programming. Lillie (1999, 1) hypothesizes that "it is doubtful that access projects can succeed without employing methodologies for achieving effective resident participation." Rather than take a cookie-cutter approach to community technology, Goslee (1998: 21) maintains that "efforts to encourage the spread of information technologies in low-income communities" must be "firmly rooted in the communities' own sense of their goals and needs." Jim Liddell (1999) of Connect in Seattle asserts:

It is really important to have the community feel vested [in a project] before they're ever going to make the commitment by ultimately taking ownership of the community asset that's created. . . I never want to think that you can create a complete [technology program] and provide it as a package and give somebody a key. That doesn't create the commitment and ownership. . . it doesn't require any community investment.

We visited CTCs that encourage community participation every step of the way and others that look for community "buy-in" after the program is implemented. It is important for those who plan programs to talk to community members about what they want and need.

The Archdiocesan Housing Authority has taken the community-participation approach with its computer learning centers in the Seattle region (see chapter 6). Each AHA center offers programs tailored to the specific needs of residents. AHA has reached out to the community to identify these needs. In some instances, planners may have to do some basic education about IT and why access might be useful and important to community members. Programs that are simply initiated without reaching out to the

community are likely either to suffer from lack of users or to fail to attract those who are most cut off from IT resources.

Community Technology Efforts Require Champions

Like many community-based programs that provide access to resources, a community technology program requires initiative and determination. According to Gene Crick (1999), “You need people who are so immoderately wed to the notion of making it happen. I mean, it’s got to be an unreasonable and often unreasoning commitment to some project like that, because otherwise, like so much in public service, you’ll fall among the pressures of time and good intentions.” The many champions we interviewed in our case study cities told us of a range of challenges—from inconsistent technical support to lack of funding—that had to be surmounted in order for the programs to continue.

Community Technology Efforts Must Work within the Context in Which They Operate

As with any community-based program, it is critical that program planners have a deep understanding of the context in which they hope to initiate the program. With respect to low-income communities, Chapman and Rhodes (1997, 2) maintain that “the concept of geographic community is often much stronger and more tangible in low-income areas than in more affluent locales. Poor people spend more time in their own neighborhoods because they are less mobile, and the economic boundaries of such places are often their most distinctive feature.” The Internet best serves to cement bonds that already exist.

It is also important to recognize that not all low-income communities have the same needs. A program in East Austin, where residents speak either Spanish or English, will be different from one in South Seattle, where residents in one public housing facility speak 22 different languages. According to Gene Crick (1999), “It’s all fine and good to put public access terminals where people are computer literate in most of their homes. It’s quite another thing where that’s not the case—where they have economic or language or cultural challenges to overcome before they can even begin to make use of it. However, just because the challenge is large and we’re not going to level the playing field doesn’t mean that we can ignore it and do nothing, you know?” Some of the community technology activists with whom we spoke argue that low-income people are not very far down the learning curve; rather, they simply lack access. At the same time, it is always critical to consider the context within which a program operates.

The Funding Community Must Be Educated about IT

It is difficult to obtain funding for technology in poor communities from a potential funder who does not use and value IT and thus does not understand its potential. A community technology activist affiliated with the Seattle Community Network recalled these difficulties:

We did try to get funding, especially early on [in 1992 to 1993], from Microsoft and from Boeing and both of [them] rejected us. I think part of the problem for Boeing at least is because they were not used to community-based technology projects. . . . They said, “are you health and human services?” Well, you know, kind of sort of. . . . “Are you arts?” Well, [we’re] sort of there too. . . . We can help just about any organization because what we’re doing is providing an infrastructure, an on-line service. And they told me frankly, “We don’t think you are a very good candidate for funding because we can’t put you in any category that we traditionally fund.”

Although the funding community has, overall, become more active in the community technology arena, according to Mertz (1999), “A lot of foundations are slow to adapt technology. To understand what you’re funding and really make leadership judgments, you’ve got to at least use your e-mail regularly and surf the Web occasionally, know what these things are about. Not that you have to be experts in these things but know what they’re about so that you can make decisions about them.” In Pittsburgh, community technology activists created a presentation for potential local funders both to demonstrate the importance of funding CT efforts and to educate funders about the characteristics of a solid CT program.

The success of Seattle’s Technology Matching Fund is partially attributable to the fact that those who evaluated the matching fund applications are knowledgeable about technology. As Aki Namioka (1999b) notes, “A lot of us [involved with the evaluation] knew something about technology or running technology projects, we could make some kind of judgment about the budgets that were being submitted.”

Fund Programs, Not Technology

Funding agencies also need to understand that technology itself is not a goal for most CT programs; rather, technology serves as a tool to help programs achieve their missions. Some funders believe that if they simply fund hardware, the program is funded. Therefore, it is important that funders understand the role that technology will play in the overall program and that hardware is only one component of what organizations need to run effective programs. Many funders in our case study cities have learned from past mistakes and have begun to fund programs in a more holistic way. This lesson will be particularly important for those cities in which programs are newer.

CHALLENGES

Although the field of community technology continues to grow and expand at a rapid rate, a range of challenges continues to confront program staff and other community technology activists. In this section, we discuss the most common of these challenges.

Keeping Programs Funded Is a Constant Struggle

As with most community-based organizations, long-run sustainability is a key problem facing community technology centers and networks. Ann Beamish (1995) emphasizes the importance of stable funding. Securing funds remains an issue even for organizations with an established track record. Staff at the Austin Learning Academy claim that the demand for services has reached a level that is twice the amount for which they have funding. ALA won a TIAP grant a few years ago, but it now suffers from lack of funding. Asked about funding, Toni Williams (1999) replied, “We pray that we have enough money to do it. And right now, our prayers aren’t being answered.” Connie Seibert (1999) agrees:

We have the recipe and it’s working. We’re reaching 150 to 200 families; we could just as easily if we had the money reach twice or three or four times that. . . . Hey, you’re bitching and moaning that you don’t have enough skilled workers for these positions that are opening up. Give us the cash and we’ll train them. We’re doing it right now for nothing.

Roxanne Epperson (1999), director of NBLC in Pittsburgh explains: “Every year you’re trying to figure out sources of funding and it’s very stressful, it’s very stressful. . . . I submitted two grants. . . . If we don’t get them, then what are we supposed to do, are we going to close down in December?”

The AHA’s Computer Learning Centers in the Seattle region are facing similar challenges. As Greg McDonald (1999) notes:

I’m really kind of nervous. In the future, we want to continue to offer free classes, free access to low-income residents. How are we going to continue to do that? It seems like we need to come up with a real innovative way to bring in some other revenue. . . . It’s something we’re brainstorming right now. . . . A few years down the road, unless we get some incredible individual donors that want to help us out, how are we going to keep this place going?

Just as CTCs are learning as the community technology movement matures, so too is the funding community. Epperson (1999) welcomes some of these changes:

One thing I’ve noticed, and I just found this out because of the last proposal I submitted, [foundations are] changing their focus and they’re starting to give operating costs now where they wouldn’t have before. So that is a blessing. . . . I went to meet with the funder, he gave me a whole list of about five or six other foundations for me to target and they all give operating costs. I’m like, “oh thank you,” because that’s critical. How the heck did we run the center without a staff? And we are short-staffed, you know, so we do rely heavily on volunteers.

CTCs have also turned to other revenue sources. NBLC, for instance, has been designated as a community college satellite site. Not only will NBLC’s designation make community college courses more accessible to the community, but it will also act as an income generator, bringing in small, yet significant, amounts of money to the center each

semester. AHA is planning to contact Seattle University and the University of Washington about conducting a feasibility study for a marketing plan that would generate more earned income. CTC program staff will likely need to continue to educate funders about how access to IT connects to a range of other funding targets such as education, economic development, and social welfare.

It Is Difficult to Measure the Results and Outcomes of Community Technology Efforts

Thus far, what we know about CT programs is largely anecdotal. According to our survey, although 84 percent of programs collect data on their users, far fewer track those who use their programs and most acknowledge that they do not do enough. When asked what they see happening in the programs in which they work, staff members are likely to tell stories rather than to produce numbers. These stories are about connecting people who previously did not know each other; helping people stay in touch with faraway friends and relatives; watching people learn how to use new technology and create things with it. Ana Sisnett (1999) of the Austin FreeNet has observed the following:

Age groups working together that did not work together before. For awhile antagonistically—looking at each other suspiciously, but then over time they get familiar with each other and they're able to collaborate and help each other out, even if it's something as simple as helping to reload a page, you know? And I've seen people find out as they talk about what their interests are, as they do searches. For example, in a class—"oh, I didn't know that"—and then they might end up walking out of the class talking to each other about something.

Sue Beckwith (1999), the first director of the AFN, notes that in the libraries in Austin, people "have started talking to each other, and now a bunch of people come into libraries that didn't really come into libraries before." Roxanne Epperson (1999) from NBLC points to other evidence of success:

Kids won't leave. At 5:30 when it's time for them to go, you have to make sure there's none hidden in the basement. They hide under the desks. . . . I don't know how their little bodies can fold up, but down in the library there's an opening under one of the shelves, they're all up under there. So that tells me we're doing something right, you know.

The kinds of outcomes described by Sisnett, Beckwith, and Epperson are linked to the concept of social capital—creating linkages between people and institutions that did not previously exist. Research in a wide range of fields demonstrates that social capital helps communities to cope with issues and problems. According to Goslee (1998, 6), "Communities without access to communications networks may find it more difficult to sustain the civic engagement that can lead to these improved outcomes."

In addition, many of the organizations that responded to our survey have added technology to what they already do. They do much more than simply broker access to IT.

According to Michael Roberts of the United Neighborhood Houses of New York, “The big question is not simply ‘how do you weave technology into existing programs, but once you have, how do you assess if it’s working?’” (Roberts quoted in Goslee 1998, 26).

A further obstacle to measuring the effectiveness of community technology initiatives is the cost of evaluations. CTCs often lack the staff and the skills to carry out evaluations of their programs. As one CTC director explained, “We can’t afford \$10,000 or whatever it is to pay someone to evaluate us.” To help reconcile this problem, researchers with CTCNet are currently working on an evaluation toolkit to guide its affiliates through self-evaluations.

Seattle is moving ahead on measuring the impact of IT and community technology programs on the regional front. As noted in chapter 6, CTTAB is working with other community technology activists, educators, and industry representatives to develop a working definition of basic technology literacy and a set of technology impact indicators to measure the impact of information technology on the health and vitality of the Seattle region over time. The first of their kind, CTTAB’s technology impact indicators stand to be a national model.

Support for Technical Assistance Is Difficult to Find

One of the largest problems facing CTCs throughout the country is how to support technical assistance. CTCs face an array of technical problems ranging from the simple—fixing paper jams, setting up printer configurations, and re-creating icons deleted from the window—to the more complex—managing disk space and access, configuring a network, disaster recovery of a server, or controlling viruses.

CTCs provide particularly challenging technical environments. CTCs tend to be understaffed and face high rates of turnover, making in-house technical assistance difficult. They often lack the funding resources to contract for expensive, “expert” technical assistance. Moreover, CTCs generally have a variety of equipment, which is a challenge to manage and support technically, and their computers are used for many activities by many different persons, which raises configuration and security issues (Schroerlucke 1997).

Community technology advocates in Pittsburgh have made a number of attempts to help CTC staff and volunteers develop a more self-supporting relationship with technology. The Carnegie Mellon course is one case in which CTC staff members have been empowered to perform more of their own problem solving. While the course has proved invaluable, it is not a long-term solution. CTCs need to create an organizational structure through which expertise can be transferred from one person into an infrastructure that serves to support the CTC over time, even through staff changes (Schroerlucke 1997).

Many CTCs Cannot Meet the Demand for Services

Just as doing the right kind of outreach is a lesson that programs need to learn, meeting the demand for access is a challenge programs need to face. Staff at nearly all of the organizations studied in our case study research discussed the challenge of serving all

of those who lack access. Many staffers claim that their centers and classes are full, even without doing much outreach. Over eleven percent of survey respondents also list this issue when asked about the main challenges they currently face. For example, the Technology Access Foundation would like to expand its TTIP program to bring in 100 new participants a year. They do not, however, have the capacity to serve more participants than they currently serve. They need a larger center, and they also need to determine the amount of interns the Seattle labor market can bear. A shortage of instructors and lack of a well-developed curriculum and computers hinder the capacity of other CTCs. As the Internet becomes even more mainstream, and as familiarity with IT becomes a requirement for an even broader range of jobs, demand for services, such as those provided by the CTCs will undoubtedly increase. The challenge to meet this demand is clearly linked to the funding challenge discussed above. Doing so will require a strong will and a consistent effort on the part of nonprofit organizations, policymakers, and corporations.

CT Efforts Would Benefit from Greater Integration

Technology provides new mechanisms through which partnerships and collaboration can develop and information can be shared. Community technology programs connect to an extremely wide array of other issues and areas, including education, economic development, civic participation, literacy, and equity. The natural relationship between access to IT and these other issues would seem to point to a great deal of collaboration between community technology efforts and other CBOs, government, and the private sector. Some technology advocates believe, however, that collaborative efforts sometimes get “muscle-bound” by the involvement of public, private, and nonprofit elites, making it difficult for community groups or newcomers to enter into partnerships on equal footing. A number of individuals interviewed for this research spoke of the need for individuals at the neighborhood level to drive the partnerships.

As Schroerlucke (1999) notes, “[the Pittsburgh area] is one of the most resource rich areas I’ve been in—but they’re not connected and people don’t know how to use them. There’s no coordinated effort, so everybody’s reinventing the wheel, everybody’s doing the same research, everybody’s doing the same digging trying to figure out what to do.” Gerry Balbier (1999), a program officer at the Heinz Endowments, echoes Schroerlucke’s frustration and calls for greater integration among community technology initiatives:

We’re all craving information about how other groups are doing it because we’re realizing that we have something to offer as far as our own experience, but we know that other groups are doing things that we haven’t thought of or haven’t experienced. How do you connect all those sources of knowledge? We’ve got to get a network going somehow.

Some of Pittsburgh’s community technology centers have submitted a proposal to the U.S. Department of Education for grant funding for a project that would help create a

regional community technology collaborative to address some of the issues raised by Schroerlucke and Balbier.

The project would bring together a number of major institutional players, including the Carnegie Institute, the Electric Information Network (EIN), the Three Rivers Free-Net, and the Heinz Endowments. The collaborative would help coordinate community technology initiatives and make it easier for people to network, get the resources they need, and put some training and support staff and programs in place. The collaborative would also include a mini-grant pool from which centers could obtain small amounts of money.

In Austin, where the relatively small size and the character of the city have fostered significant collaboration and cooperation, community technology efforts are still somewhat fragmented. Staff of existing organizations believe that the City could do more to broker relationships of existing organizations and to help find resources for existing organizations. Of our three case study cities, Seattle is probably furthest along in this area. By creating the position of community technology planner, Seattle began to institutionalize the importance of community technology.

CONCLUSION

The common lessons learned and the challenges faced by community technology efforts demonstrate that a great deal of learning has taken place in the field and that these common themes must be widely shared and discussed if the potential of this movement is to be realized. Conferences, such as those sponsored by CTCNet and AFCN, promote this kind of learning and information sharing. However, much research remains to be done, both about the inner workings of these organizations and the outcomes they produce for the people who use them.