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Tutor-Facilitated Digital Literacy Acquisition in
Hard-to-Serve Populations: A Research Project

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Community Connections: Digital Literacy Acquisition Policy Brief

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Community Connections Digital Literacy Acquisition Policy Brief



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Program Overview

These findings are from an Institute of Museum and Library Services funded research project that interviewed more than 100 participants within a multi-state Broadband Technology Opportunities Program (BTOP) Sustainable Broadband Adoption (SBA) project. The BTOP project included six lead partners who developed local networks of community organizations to provide adults with an opportunity to learn to use computers and the Internet.

While these networks created a variety of implementation strategies and ways to serve learners' needs, they shared these key features:

- *curriculum on the Learner Web, an online platform designed specifically for adult learners, which included digital literacy material in English and Spanish*
- *in-person tutor support*
- *the opportunity for learners to work at their own pace and identify their own goals*

Acknowledgements & Further Information

These research efforts were informed and supported by a National Advisory Committee and a Research Applications Committee made up of professionals who support adult learners. All names have been replaced with pseudonyms for participant protection in accordance with research protocols.

More information about the project, research findings, publications, and project data can be found in PDX Scholar at: http://pdxscholar.library.pdx.edu/digital_literacy_acquisition/

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Introduction

In this policy brief, we explore interconnectedness across programs and organizations that provided support for digital literacy acquisition. We focus on a program run out of a workforce center located in a small town in the midwest. We chose to turn our attention to this context because it exemplified **interconnectedness**-- a form of collaboration that was identified and echoed across several successful programs.

We define **interconnectedness** as an association formed across organizations working together to forge a mutually beneficial relationship that facilitated sharing of human, material, intellectual, and financial resources.

Though not a new concept, the ways interconnectedness was manifested in the location described in this piece was noteworthy and illustrative of fruitful program collaboration.

We also examine the role that resource allocation (across interconnected programs) plays in the acquisition of digital literacy skills among vulnerable adult learners participating in a tutor-facilitated, self-paced learning environment. We present this brief as an illustration of how interconnectedness occurred, the conditions that gave rise to it, and what it looked like; however, it is important to recognize that this research finding may not be widely generalizable as each community and each program is different and operates in response to its own local needs. That said, we offer an examination of interconnectedness to prompt policy makers to think about funding priorities in a strategic way and to encourage the allocation of funding to both support and promote interconnectedness across programs and program areas.

Implications stemming from this work suggest there are distinct benefits for programs that are integrated and embedded within a web of services provided to individuals across different learning contexts. While program coordinators are often charged with seeking out the sorts of partnerships that lead to program interconnectedness, the policy implications in this brief suggests directing funding toward programs that actively work toward maximizing their resources and integrating services across different areas.



Background and Context

This research effort was part of a larger study that focused on digital literacy acquisition implemented in libraries and community based organizations located in six national locations. Across the implementation sites, vulnerable adult learners took part in a self-paced, tutor-facilitated learning model designed for teaching basic digital literacy skills. Within the online platform, digital literacy content was organized into curricular units called learning plans.

Content addressed included: (a) Computer and Internet skills, which teaches mousing and keyboarding, finding information online, using email, Internet security, social networks, and using Google maps and popular online sites such as Skype, Ebay, and YouTube; (b) Broadband Consumer Education, which helps learners become savvy consumers of computer hardware and broadband subscription services; and (c) Introduction to Career Paths, which orients learners to basic career path concepts and connects them with local career path programs. Career paths learning materials were included in part to help learners examine what new job possibilities might exist for them once they had gained computer and digital literacy skills.

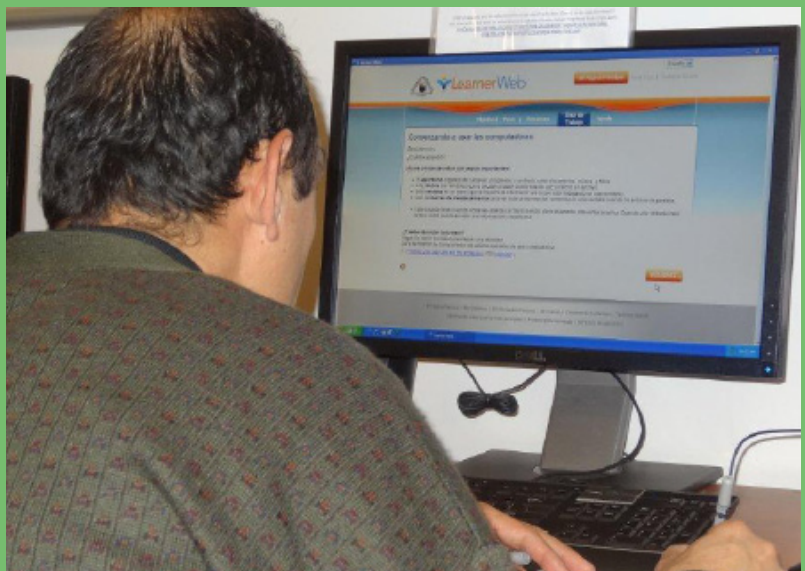
Learners who took part came to the program voluntarily and were able to choose the goals they were interested in pursuing. They moved forward with learning at their own pace during times when labs were open and staffed with tutors who helped guide their learning and answer their questions. Additionally, the program administrators could customize content in the online platform to make learning materials more relevant to the learners in their communities.

Online Materials

The digital literacy learning materials were provided through Learner Web, an online learning platform designed specifically for adults. The Learner Web system kept track of the content a learner had completed; this allowed learners to re-enter the system at the point where they left off without needing to repeat previously learned content. Learners were also able to review completed material as frequently as desired.

The Learner Web offered learners the option of accessing content in English or Spanish. The online material included video, reading, and interactive practice activities curated from sites across the Internet. Resources were selected to help achieve specific learner-centered goals.

The learning platform also provided a series of self-check quizzes to help learners reflect on the content they learned.



Tutor-support



The learning materials were designed to be delivered in conjunction with in-person tutor support. Program tutors most often volunteered their time and were trained by a paid lab coordinator or program administrator. Tutors and learners came together in open-access computer labs, at local libraries, or in classrooms where learners worked at their own pace. Tutors would step in to assist the learners when asked, when it appeared the learners were experiencing problems, or to supplement the online material with practical and real-life application. The tutors were volunteers recruited from the community and spent approximately 3-5 hours a week helping learners. The volunteers were supported by a paid lab coordinator who provided tutor support, scheduled open lab time, tutoring sessions, and who also tutored learners.

Tutors served a vital role helping learners set goals, learn the skills in the program, and apply them in their own lives. The learners worked with the tutors to establish an email account, which was required for access to the online materials. Once the email account was created, tutors would help learners establish a login for the Learner Web and identify learning goals.

Learners were then able to move through the various lessons at their own pace. Tutors, lab coordinators, and program administrators had access to reports that allowed them to track learner progress, which became helpful to guide learners in meeting the self-identified goals.

How was Self-paced Instruction Organized?

The tutors in the workforce lab described in this policy brief used an approach that was described by the lab coordinator as a triad tutoring model. In this set-up, one tutor would sit between two learners and would switch off providing supportive guidance to the learner on each side of her according to each learner's individual needs.

At times, when common goals aligned and working together was efficient, the trio would discuss the same content but practice concepts individually. This and other tutoring models were developed out of the needs of the learners, the community values, and also reflected the resources that were available.



How was Interconnectedness Examined?

We did not set out conducting this research with a concept of interconnectedness in mind. Instead, we identified interconnectedness as a theme in our data using a grounded theory analysis that consisted of examining data sources that included semi-structured, in-depth interviews with key-stakeholders, tutors, and learners. This process provided insights into the digital literacy learning process within each community involved in this study. The grounded theory approach allowed us to analyze the data in an unbiased way without preconceived notions as to themes or trends. As a result, we remained open to whatever it was the study participants were telling us.

Members of the research team read through the transcribed interview data multiple times and applied codes that named the experiences of the learners and tutors. We also examined the notes we took while in the field to gain a better sense of how the programs were implemented and functioned within the larger community. We then examined the codes to develop an understanding of the relationship of these codes to one another.

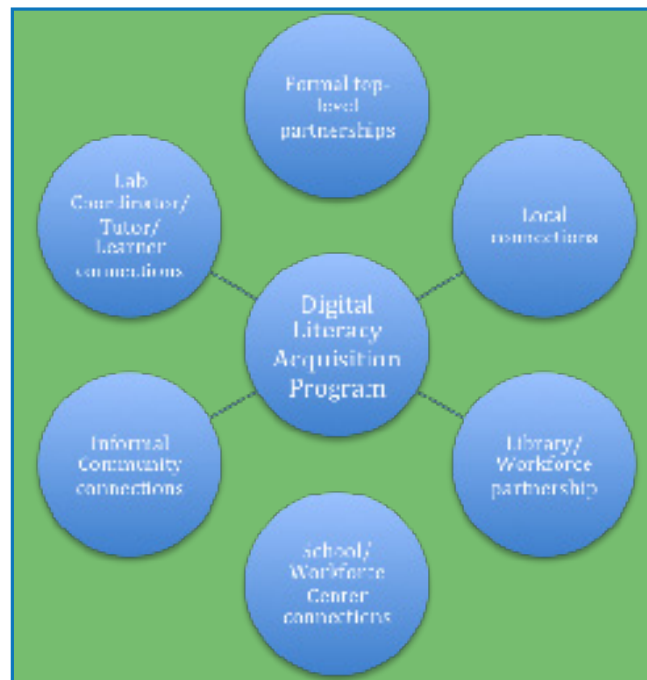


Figure 1. Relationships between codes

One overarching theme that ran across our data suggested that successful programs operated within a network of connected community resources, and it was this interconnectedness that gave way to collaboration that benefited the organization but also benefited the individuals working within the organization such as program coordinators, tutors, and learners.

Formal Top-level Partnerships

The workforce center was part of the larger statewide literacy initiative. The program administrator noted that most of their programs are funded through the State Department of Education and that they had a close working relationship with the State Department of Employment and Economic Development. The administrator made a deliberate effort to partner workforce centers with the state literacy council to design and implement the digital literacy program.

He also noted that the Adult Basic Education system and the Department of Employment work closely on workforce development, and were thus able to bring key individuals together who supported partnering with workforce centers. The literacy council also played a central role. The literacy council provided training for tutors and a program manager for the lab coordinators. One of the program level consultants for the literacy council noted that this partnership was especially important for supporting the tutors with training, and she credited that support with sustaining the persistence of the tutors.

This was a novel partnership with new features. The program administrator indicated that the organization that runs the workforce centers is a large agency with many rules and set ways of doing business. As such, it was forging new territory to bring the digital literacy project into the workforce centers and to involve volunteer tutors rather than paid staff. However, the literacy council was successful at forming the relationship and gaining the consent of the agency to use volunteers. He counted this as a critical step in developing the program. The program administrator explained that connecting the workforce centers to digital literacy educational efforts was important because:

"The workforce centers have what are called resource rooms-- which are basically computer labs where they have all kinds of resources that people can access. And what they were finding is that they have significant number of people who are not able to use the resource rooms because they don't have the skills to use the computers. So, those are the people that then get referred into our program."

~ Program Administrator



However, because the resources are funded by various agencies, the program administrator found there were sometimes problems with logistics. He said,

"There are federal and there are state resources, and there are computers that are federally funded and that are state funded, and they're owned or controlled by different people. And they're in the same lab. So we're only allowed to use one set of computers... And getting software installed on these computers, you've gotta move heaven and earth because they have such strong controls. I just said to the coordinator, 'Go ahead, download it, install it. If anyone says anything refer them to me and I'll take the fall.'"

In some cases the control of our environment is very upsetting and difficult. In other cases we have a really great environment. But you know, ideally we want a clean comfortable computer lab that's under the control of the coordinator for the digital literacy program."

~ Program Administrator

In sum, the workforce center described in this case study was part of a statewide initiative. Formal partnerships were established between different agencies, and through the persistence of key individuals, logistical problems were worked through and lab coordinators were hired and volunteer tutors were recruited to work at the local sites.

Building Local Connections

The digital literacy program took place primarily at the workforce center, but it was also connected to the school district, the local educational support services for GED, and the library. Some connections were made through formal agreements, such as the employment agreement with the school district to partially fund the digital literacy lab coordinator's job. Other formal agreements were the sharing agreements for the GED program and digital literacy classes that were run out of the workforce center. However, many other agreements were less formal and executed by individuals who knew each other from faith-based organizations, farming, community businesses, and social networks. Figure 2 shows the local, social, and institutional connections between the organizations involved in recruiting and educating the participating individuals (program coordinator, tutor, and learners).



The major interconnected components were the workforce center, the digital literacy program (Learner Web), educational support services for GED, the library, and the school district. These programs were also interconnected informally through the overlapping connections provided by individuals within faith-based organizations, farms, community businesses, and social networks.

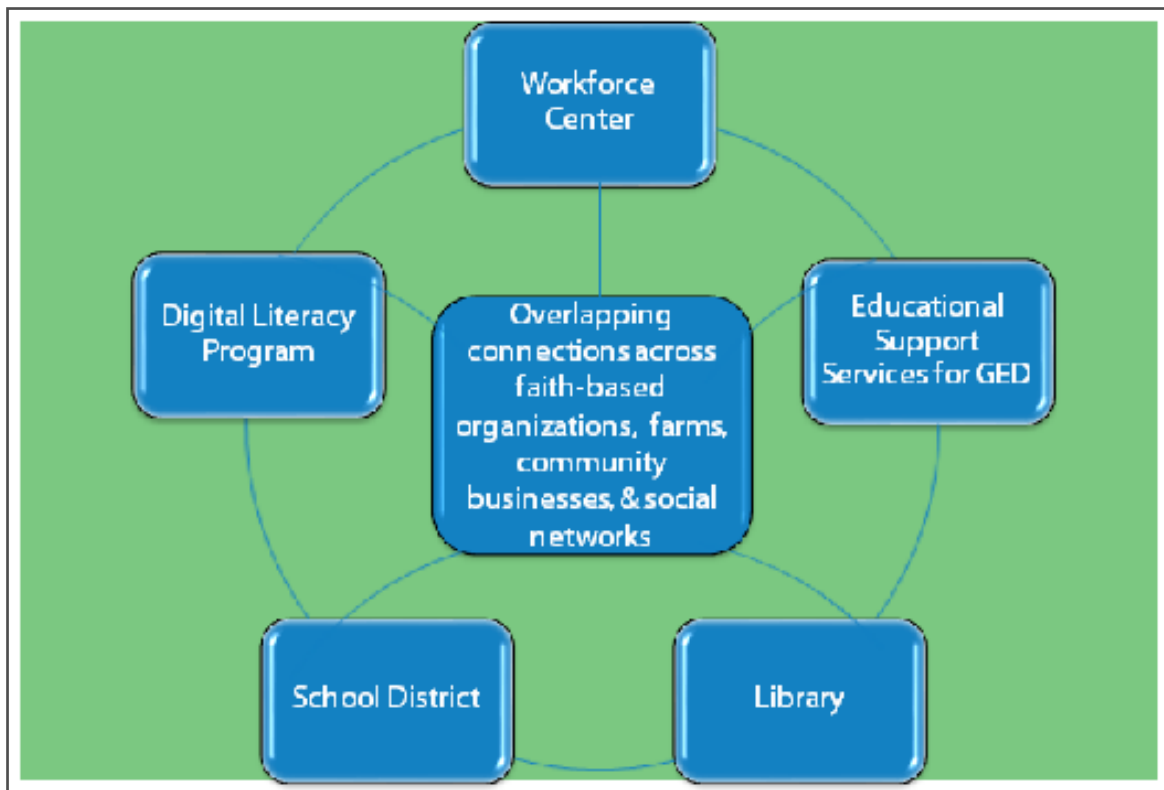


Figure 2. An overview of local resources and collaborations

Library/Workforce Center Partnership

Nancy

Collaborations between the workforce center, the library, and the school district were vital partnerships. Nancy was employed by the school district part-to operate computer classes at the workforce center. These classes included GED preparation and more structured, classroom-based computer classes for adult learners.

In addition to these responsibilities, Nancy was employed by the state literacy council part-time to coordinate the self-paced, tutor facilitated computer learning program. In this capacity, she trained and recruited the tutors, organized the self-paced program, managed the program's activities, and actively tutored learners herself. She was also self-employed part time as a farmer, operated her own Community Supported Agriculture preparing boxes of her farm grown produce, and wrote a blog about seasonal vegetables and fruits including recipes.



Nancy came from a large family and was born and raised in the same town where she worked. She was an active part of a local church, teaching Sunday school and participating in other church outreach efforts. Nancy grew up in the community and was well known through her work with the church and position at the workforce center as well as her other endeavors. She often brought handmade crafts and homemade treats from the farm to individuals who attended the workforce center program, offering them to tutors and learners to create a warm and inviting learning environment.

Nancy chatted socially with participants of all ages and walks of life and was a positive, encouraging, and well-liked person. Tutors reported that they continued volunteering with the program because Nancy was well organized and ran an efficient program. Nancy, as a visible and known member of the community, was essential in building and extending partnerships. The library was selected as a partner because the workforce center was open only during the day on weekdays. She said,

"I thought the library would be a great organization to partner with for evening and night time tutoring. We have tutoring there anytime from 4:30 to 9:00 at night."

~ Nancy, Digital Literacy Program Coordinator

Nancy explained that she built the relationship with the library by meeting with the library assistant, who then shared the information about the digital literacy tutoring sessions with the library's employees. Nancy made sure that tutors who tutored at the library came with their own resources, such as headphones the learners could use, and anything else needed to support learners. The library agreed to have two timeslots available for tutoring. Nancy agreed that if the computers were in demand by patrons, the tutors would limited computer time to one hour sessions. By being cognizant of the needs of the library patrons, Nancy was able to build a successful relationship that also benefited the library.

Carol



Carol volunteered as a tutor at the workforce center. She was recruited by Nancy and had logged 92 volunteer tutoring hours in the workforce lab when we interviewed her. Carol became involved in tutoring because she liked helping people. She was also employed at the library. Nancy and Carol, by working together, had extended the tutoring support offered to learners beyond the workforce center and into the library. While the workforce center was only open during business hours, the library was open in the evenings and on weekends. This second location for the self-paced program provided more flexibility to learners. As Carol noted,

"I have been working at libraries for five years, so I know we get computer questions all the time. Unfortunately, we just don't have the staff or the facilities to have basic computer classes. So it's great that we're able to [build this partnership]. We have tutoring at the workforce center and then at the library, too. We can answer questions for people and get them started and we can sit down and spend more time with them at the library if they need it."

The library/workforce center partnership was built through the personal investment and connections made by the lab coordinator and a tutor who worked at the library, but it was also sustained by being mutually beneficial for both organizations, which in turn benefited the learners who were able to have access to tutors and the online digital literacy materials at times that lied outside the limited hours the workforce center was open. Although Carol did not formally tutor at the library herself, she did make it clear to all learners at the workforce center that she was there to provide ongoing support as needed. She said,

"I've had several learners complete the program, and when they say [they're] done, I give them my contact information. They know I work at the library and that they can just stop in at any time for more help."

~ Carol, tutor and librarian

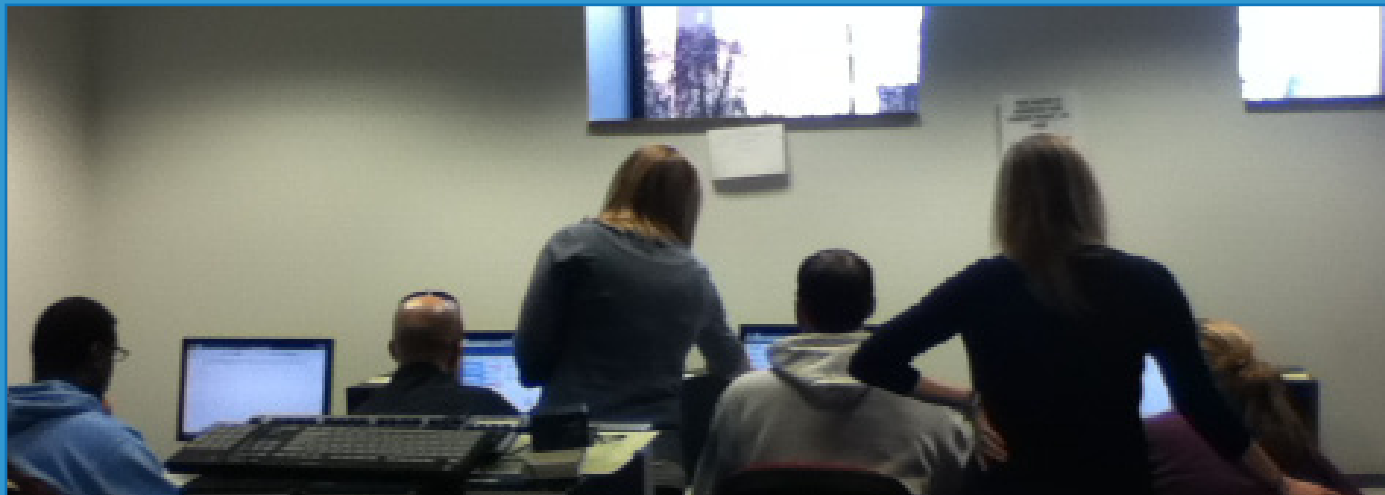
Thus, learning was not restricted to the workforce center or official tutoring times, but became part of the personal relationships built through the tutoring experience.

School/Workforce Center Connections

The main connection between the workforce center and the school district was forged because Nancy was employed by the school district to run a complementary digital literacy program at the workforce center. However, she also noted that she and her family had all attended a local parochial school, which gave her access to the computer lab there. Thus, Nancy acted as a bridge between the different educational agencies within the community in order to provide needed services at different schools.

Informal Community Connections

Nancy also capitalized on her knowledge of the community to recruit learners for the digital literacy program. When we asked her for advice on how to attract learners, Nancy described how she taps into different aspects of the community to make her program visible. She shared:



"Ask that tutor, well how did you find out about the program? Where did you see the flyer or get the news? Did you find it in the newspaper? And using what learners said, I would just brainstorm and ask what works. I thought, 'What is the culture of the community? Does it work to put flyers out? Does it work to get on the radio? Where are your free resources and free spots in the community?' I always go to free first. For me, flyers work really well, especially downtown where people are walking. I put a lot of flyers in the store windows. And getting on the radio, the radio is huge. We have a huge elderly population and they spread the word that way. I was on our local radio station on a live broadcast and my classes filled up for three months."

~Nancy, Digital Literacy Program Coordinator



Nancy was able to pull together many of the resources the community had to offer in order to reach potential learners. She also demonstrated knowledge of her community and the demographics in her discussion of the "free spots" that are available as well as working through the reach of the radio network. Knowledge of the community was also evident in her selection of when to schedule classes. Especially salient is her comment about knowing how people in the community relate to certain programs. With all this knowledge, Nancy was able to determine how to best market the digital literacy program within the community of learners who needed it. Nancy, in many respects, had become a liaison or mediator between the digital literacy program and the community.

Marjory

Marjory, a learner in the program, was a retired teacher who had lived in the community for more than two decades. She was active in her church, and she had a wide extended family that was geographically spread out in different areas of the United States. Marjory attended the same church as Nancy and was also affiliated with the same Christian high school that Nancy attended. Marjory was tutored by Nancy and Carol, and Carol's teenaged son tutored Marjory at the public library. Marjory corroborated Nancy's perspective when she described her involvement as a learner. She said:



"I found the ad [a description of the computer class] in the publication we get with our paper that tells about adult ed. classes. I just called, and it was Nancy, and she said it was available and there were other classes in there that you had to pay for. My sister kinda said, 'I don't know if you want to do that, they're going to teach you things that you don't really want or need to know, and it may confuse you. I said, 'It just can't hurt to try.' Actually she came with me a few times even, my sister did. But it just launched me between the nieces and nephew. My sister and her husband are good on the computer, they've been helpful – if I need help, I can always find it somewhere. And I can call Nancy anytime. And then Nancy arranged for me to have this mentor, he was a high school senior, come to the library because it's Wi-Fi equipped. He would work with sometimes two of us, but he would give as much help as I could possibly use."

Through the multiple connections within the community, Nancy the lab coordinator was able to get the word out about the program and Marjory was able to find help when she needed it. Learning and tutoring within the digital literacy program was a community effort that exemplifies principles of interconnectedness.

Lab Coordinator/Tutor/Learner Connections

Nancy also built personal connections with the learners, which strengthened the program. Tutors ran sessions in a professional way in order to maximize the use of the time they had with learners. As learning took shape, personal connections were made.



These personal connections also revealed the interconnected nature of the community. For example, Joan, another learner, indicated that Nancy's willingness to share aspects of her life as a farmer was an important part of her learning as was Nancy's effort to use the technology for fun while helping the learners build skills.

"I just get a bang out of Nancy when she comes in, tells of her life on the farm and, it's just so fun, she's just hilarious. And then it was around Christmas time and it was so snowy. She sent everybody a picture on their email, and you click on this program and it brings up all these different flowers. That was the most fun email going. It just made the winter seem shorter. So that felt really good when she sent everybody that email. And she even showed us how to send it on to people on our email list."

Nancy knew her community well and expressed that insider knowledge skillfully and thoughtfully. She thought of creative ways to thank her tutors, and used the symbolic meaning of token gifts to encourage volunteers.. She knew which coffee shops they frequented and bought gift cards as a way to say thank you.

"I want to keep [tutors] informed and keep them in the loop. And I want to show them that they're really appreciated. I could probably do some more treats or some more gift cards if there's any funding. That would be something nice. Even like a five dollar to [business name] for example. I think all of my tutors go there for a cup of coffee.

~ Nancy, Digital Literacy Program Coordinator

The relationship between Nancy and the tutors was affirmed by Carol who shared her answer to the question 'what keeps you coming back as a volunteer' in a very thoughtful and articulate way:

It's Nancy. She's great. She's so flexible and I couldn't do this without the flexibility because I have a full time job. So she's the reason, the main reason I come back. But I love the learners, too. They kind of come and go, but Nancy's always here.

~ Carol, tutor and librarian

The constancy of Nancy as a lab coordinator, a person who was deeply embedded within the community, served to keep the tutors engaged and motivated in their volunteer work. Nancy clearly emerged as a central figure in the implementation and sustainability of the digital literacy program within the workforce center. As someone living in a small community, she was sensitive to the fact that there were limited resources available. She worked creatively to stretch and use optimally all that was available to her. Her diligence was not a single-handed effort, she was supported by many organizations and individuals within the community, aptly illustrating the power of interconnectedness.



Conclusions & Implications for Policy and Practice

The findings we discuss in this brief are not intended to be generalized nor to be used to identify best practices. We realize that all locations and learning contexts have their own complexity and personality shaped by local conditions. Thus, what is described here is a depiction of digital literacy program operating in one community that worked collaboratively in partnership to maximize resources. These interactions and program design features may be a useful guide for other programs and partnerships.

The analysis of the site revealed multiple forms of interconnectedness:

- **Organizational synergy:** Opportunities for groups or organizations to meet common goals. Outcomes involving achieving aims not possible without shared resources. This occurred at the state level through formal partnerships between agencies as well as at the local level through the partnership with the library and connections to the public and parochial schools.
- **Community support:** Opportunities for entities not previously engaged in collaborations to work together in ways that benefit the community (e.g. getting individuals ready for the workforce, or helping individuals meet personal goals). Nancy, as lab coordinator, tapped into multiple community resources to build and sustain the program. She drew on her position within the community to make connections and to see opportunities.
- **Personal relationships:** Opportunities for individuals to extend their networks as they engage together toward to meet goals. Outcomes include a sense of purpose and fulfillment that is shared by all parties. This involves building overlapping connections between people who previously knew each other as well as those who did not.

Programs designed to support adult learners typically struggle for resources, and keeping programs going requires creativity on the part of program administrators.

Our data indicate that the way a program is embedded within a community and interconnected with other organizations and institutions served to stretch limited and under-funded community resources so they could be shared.

In the case of this site, pooling these resources supported the creation of a vibrant program that could be sustained due to implementation among a shared set of individuals working across multiple locations. Personal relationships supported investment in program and personal goals. Tutors and learners working together appeared to develop a common set of seemingly shared goals that became the driving force for program momentum. The fact that individuals could count on each other and the organization could informally share resources may have helped build trust and investment in program and individual outcomes.

The digital literacy acquisition programs we examined across this research project were implemented in different ways in each community. Our data indicate that community connections were an important aspect of successful implementation; how the connections occurred and what they looked like differed according to the community and the organizational structures created to support the implementation of the programs. We suggest that policymakers and other key stakeholders in digital literacy acquisition programs may benefit from recognizing and building on the ways program administrators, lab coordinators, community tutors, and learners marshal formal and informal resources in order to create strong programs for vulnerable adult learners.

As we consider implications, it is beneficial to consider how seemingly diverse programs with different aims can become interlinked within a community, sharing personnel, volunteers, and participants. Supporting and nurturing these connections will look different in different communities, but recognizing the potential for interconnectivity is an important means of sustainability, especially for programs dependent on sparse funds and material resources.

Digital Literacy Acquisition Case Studies

- Corrections and Reentry
- Volunteers in an Adult Literacy Library Program
- Job Seeking Learners

Digital Literacy Acquisition Policy Brief

- Community Connections