Unless children and parents have training and access to computers and the power they offer, computers create a barrier for them as they navigate a society that depends on computers for information and occupational advancement. This paper describes a program developed by North Shore Head Start in Beverly, Massachusetts and CAST (Center for Applied Special Technology) in Peabody, Massachusetts. The Salem Family Learning Center provides computer training and access for parents and teachers, training Head Start parents and teachers along with K-3 teachers. This training and access allows parents to use computers in ways that support their children's learning while increasing their own learning, and also forge connections between parents and teachers that ease the transition to school. Along with computer training and drop-in access to computers, the Center offers a range of family support services that include STEP training and AA meetings. After describing the program's history, how it works, and who it serves, the paper discusses plans to expand such sites to form a national network of Family and Community Literacy Centers. Plans include the creation of an accessible computer network to link sites and resources, major program goals, and how the goals will be measured. (EV)
Technology in a Head Start Parent Center

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Do Head Start children and parents need access to computers? The organizations which developed the Family and Community Literacy Project argue yes. They emphasize that computers can help both traditional literacy and the complex set of literacies that parents and their children now need. However, unless children and parents have training and access to computers and the power they offer, computers create a barrier for parents and children as they navigate a society that depends on computers for information and occupational advancement. Parents and their children today need equitable access to electronic literacy in the same way that their counterparts of 30 years ago needed print literacy.

Project History

For the last three years, North Shore Head Start in Beverly, Massachusetts and CAST (Center for Applied Special Technology), a not-for-profit educational research and development organization in Peabody, Massachusetts, have provided computer training and access for parents and teachers. This training and access allows parents to use computers in ways that support their children’s learning while increasing their own learning. The project trains Head Start parents and teachers at the same time as K-3 teachers. These connections with teachers encourage parents to volunteer in classes. Additionally, since both Head Start and K-3 teachers attend sessions, the project supports transitions between Head Start and local elementary schools. This year, money from the Children’s Trust Fund and Hasbro Children’s Foundation funded the Salem Family Learning Center where parents and teachers attend training and have drop-in access to computers. However, computers are just one component of what the Center provides. The Center offers a range of family support services that include STEP training and AA meetings.

This project began as a local collaboration between CAST and North Shore Head Start (NSHS). At this site, 80% of the parents have not completed high school, and most have limited literacy which impacts their ability to nurture their children’s emerging literacy. Sandy Waddell, the director of NSHS estimates, based on her 23 years of experience working with Head Start parents,
that 50% of the parents served by the agency struggled with undiagnosed learning disabilities in their own education. By improving parents’ learning, the project addresses the intergenerational cycles of failure that create poor achievement and high drop out rates among these parents’ children. The project achieves this by:

- Training parents and teachers in computer uses that develop children's literacy skills
- Linking parents and teachers of preschool and K-3 children
- Addressing parents’ learning needs
- Providing computer and other technology resources to children, parents, and teachers who normally would not have access to such tools

**How It Works**

Parents and teachers attend training sessions together. They begin by learning to use pre-literacy and early literacy software, and then they progress to learning word processing. Starting parents with children’s software has three important effects: Since this software is more easily mastered than most other programs, it provides an accessible entrance into learning about computers. Secondly, both parents and teachers find a value in this software since they can use it with children. The third benefit to beginning with literacy software is that it helps parents with low reading skills begin to address those deficiencies. In these ways, parents and teachers collaboratively learn to support children’s reading literacy and computer skills, a combination that helps prepare children for the complex literacies of the 21st Century.

The project has additionally helped parents and teachers forge the school-to-home links that make parents and teachers partners in children’s learning. The project trains preschool parents and teachers at the same time as K-3 teachers and parents. In this way, K-3 teachers develop personal connections with the parents and teachers from feeder preschools, and their interactions reduce the barriers that often keep parents from participating in schools. In the NSHS site, connections established during the training have resulted in parents volunteering in Head Start and elementary classrooms. Additionally, since both Head Start and K-3 teachers attend sessions, the project supports transitions between Head Start and local elementary schools. Teachers and parents develop both informal and formal collaborations through their participation in the project. This link ensures that Head Start’s 30-year successes in supporting parents’ involvement in schools continues as their children progress into participating elementary schools.

Equally important, parents who have not been successful in their own learning find success through the gradual increase in skills that they gain. Over the past four years, parents have used
the project as an entrée into higher education. Parents who have not experienced success with their past formal schooling often have a difficult time returning to vocational courses, community colleges, or adult basic education courses. However, the project's structure has been successful in helping parents address their own learning needs. Parents often begin with a fear of the complexity they perceive in computers. They soon progress into confident, independent use of a tool that they initially fear. This confidence provides an impetus for seeking further success. After they gain initial learning success in the project, parents often enroll in formal education courses (ESL, ABE and community college courses). This success has powerful implications for the work and educational initiatives demanded by the 1996 Welfare Reform Bill. The project provides a successful model for providing back-to-school transitions for people who need assistance before they enter formal courses. Even more importantly, the parents' increased aspirations create higher aspirations in their children. Children who see their parents returning to school now dream of being doctors and engineers. Parents provide their children with a model of success and attainment that these children would not have otherwise had.

In the current year, funding from major foundations (In addition to the Hasbro Children’s Foundation: the John W. Alden Trust, the Helen Benham and Richard Robinson Trust, the Edward A. Taft Trust, the Patrick G., and Shirley W. Ryan Foundation, the GTE Foundation, and the Children’s Trust Fund) helps to support a Family Learning Center in Salem, Massachusetts.

1 Observations on the Pilot Phase's Effectiveness:

Parents
- Training: 26 parents participated in the training during the pilot
- Returning Volunteers: Over the three years, seven parents volunteered in the project as peer tutors and/or bilingual translators after their initial training
- Resumption of Education: Of the first year group, only two of 12 were enrolled in formal education when they began classes. To date, five others have enrolled in adult education or community college classes. One of the five has completed an associate of arts degree in computer applications and is working for a local agency, and another has completed a certification in early childhood education and works for North Shore Head Start.

Teachers
- Training: 50 Head Start and elementary teachers trained over the three year period

Students
- Number impacted: All of the 50 teachers are implementing the tools they developed with 20 to 25 students each year. Over the three year period, that translates into 1,000 to 1,250 students being taught with the methods that teachers learned in training or during consultation with CAST. The 26 children whose parents have participated in the project have received additional benefit from their access to drop-in hours and parents' increased skills.

By providing these parents and their children with the tools and support to access the power of computer technology, the Family and Community Literacy Project gives them a literacy "head start." By creating structures that both sustain this support and create access to other kinds of information and services, the Project also impacts parents' ability to find work and to further their education.
Parents come for classes and then bring their children to the Center and share their learning. Center scheduling encourages parents to bring their children and use the available software together. It is CAST's goal to help local agencies develop the expertise to start and sustain local Centers.

Since its opening in October of 1996, the North Shore Family Center has provided training to 291 adults. Fifty-four of those people attended computer training classes. North Shore Head Start currently has a waiting list of 60 parents and 10 preschool and K-3 teachers who want computer training classes. Also, during scheduled drop-in hours, Center staff members encourage parents to bring their children and work together on computers. Since the Center opened, 70 people have attended drop-in times to use the computers on Monday nights. The demand for drop-in times has required the Community Coordinator to open the Center a second night for the community to have access to the computers.

Who is Served
This project has focused on the needs of disabled, low-income and undereducated families. For example, in NSHS Head Start's constituency, only four of 203 families have incomes of $15,000 or over. Slightly over half (106 of the 203) speak another language (mostly Spanish) besides English as their primary language at home. While their needs are met in Head Start, their needs are often missed when they leave Head Start because they comprise a small percentage of the larger population. In the town of Salem, households where Spanish is the primary language are less than 3% of the population. This project connects parents and schools in ways that the needs of children are met.

Of the 203 children whom NSHS serves, 49 have been diagnosed with disabilities. As with the issue of linguistic isolation, these children comprise a smaller percentage of the general K-3 population. Whether they are linguistically isolated or have disabilities, when the served children move into the public schools their needs are often lost within the demands of the larger population. However, by training the parents and connecting them to the schools that their children attend, these families have a better chance at navigating school systems.

In addition to the technology training that CAST provides at the North Shore Family Center, NSHS provides support services such as ESL courses, alcohol awareness meetings, and parenting workshops. These supports address family learning needs within a broader context than classes alone can offer. Also, NSHS has a community coordinator who contacts additional parents in the...
community who can benefit from the Center. The coordinator also forges links with other agencies to ensure articulation of services for parents who visit the Center. The Center additionally relies on volunteers to provide ongoing staffing and peer training to parents in the community. Current funding has also allowed for preparation and planning of the replication effort in the project. This planning has created a projected goal of four demonstration centers in the project by September, 1997. Using the model developed at the NSHS Family Learning Center, CAST will provide training to the staffs at the demonstration sites so that they can, in turn, train their constituencies. These demonstration sites will refine the model while showing that this project can work without CAST’s direct participation in daily operations.

A National Network

These model sites will become a foundation of a national network of Family and Community Literacy Centers. In addition to the National Indian Head Start Directors’ Association, the National Head Start Association has offered its support. Recently, with an introduction from Hasbro Children’s Fund, CAST has begun discussions with Libraries for the Future which has expressed strong interest in having one of its local members act as a demonstration site. An important criterion for selecting demonstration sites is their connection to such an organization which can participate in the national network. CAST will train the regional and/or national trainers within the national partner’s organization, and the national partner will train at the local level. In this way, the project will leverage resources by using existing structures within national organizations. This training will allow for adaptation to the national agency’s needs and configuration. CAST will provide the national organization with ongoing support through training sessions, on-site consultation, and through a network of electronic resources.

Creating an Accessible Network

All of the sites currently in process or in planning will be linked via an Internet-based network. The network will include Internet conferencing and e-mail, World Wide Web access, downloadable resource materials, and topic-specific electronic discussions (listserv and newsgroups). Current network configurations, however, pose significant barriers for ESL learners, people with learning disabilities, and those who are undereducated. In this project, CAST is developing and will make available, a universally designed format that will make the World Wide Web, listservs, bulletin boards, and e-mail accessible to a wide range of participants.

Network resources will be both static (published information that is available to find) and dynamic (information requested and received from people). The static resources will include descriptions of other projects, training tips, stories for parents and children to read, family histories, research and
policy papers, and readily available connections to appropriate World Wide Web pages. Dynamic resources will include online conversations for children and parents, audio and video conferencing, and topic-specific bulletin boards and discussion groups. The network will provide resources for children, parents, and teachers. In having both static and dynamic resources, this network gives participants access to information and people that will help them with their work.

A universally designed network format will provide an electronic mold into which local agencies can also pour their content. In addition to information which they can share with other Centers, local agencies will use these universally designed structures to create local resources to help their service population. Each Center will offer participating parents and families with information on community housing, education, or employment — the range of resources will come from the needs of the local community. Each Center will offer its constituents the resources they need to be successful advocates for children and families. The structure that CAST creates will be customizable to each location’s needs, and it will be in a format that will readily accessible to a diverse group of people. When completed, the network will extract and reformat text from any Web page to suit individual user preferences. It will also add features such as reading text aloud, pacing the text to the needs of a reader, highlighting, quick navigation to move ahead and behind, and note taking. These are all urgently needed and currently unavailable features that enhance learning and are essential for children and adults with low literacy skills and disabilities.

**Major Program Goals and Process of Measurement**

The project serves local family and community literacy organizations and the populations whom these local agencies serve. The goals of the project are, therefore, best identified within this two-fold service mission to organizations and their constituents:

**Goals for impact on served populations:**

1. To support and sustain children’s and adults’ learning through the use of universally designed technologies

   **Evaluation:** Ongoing quantitative analysis of participants' computer use during training; three-year quantitative analysis of participants' educational and career progress

2. To provide underserved families (e.g., people with disabilities, disadvantaged populations) with equitable access to technologies
Evaluation:  Use of surveys and needs analyses to determine population of training sessions and Center use; ongoing formal qualitative interviews and ethnographic studies of participants' experiences

3. To support parents' active participants in their children's learning by creating and sustaining the school-to-home partnerships

Evaluation:  Quantitative surveys and needs analyses in local communities; ongoing formal qualitative interviews and ethnographic studies of participants' experiences

4. To provide teachers and parents with training in uses of computers and networks for children's learning

Evaluation:  Formal observations and evaluation of training sessions; formal interviews with participants; three-year quantitative analysis of participants' educational and career progress

5. To address parents' educational needs through universally designed technologies

Evaluation:  Formal observations and evaluation of training sessions; formal interviews with participants; three-year quantitative analysis of participants' educational and career progress

Goals for impact on local agencies:

1. To provide resources, training and a medium of communication for local, regional and national organizations

Evaluation:  Ongoing and end-of-project formal interviews with project partners; quarterly and end-of-project reports from project partners

2. To encourage local and regional family and community literacy projects to collaborate on projects and to share resources, expertise, and information

Evaluation:  Analysis of network use logs generated online; quarterly and end-of-project reports from project partners
3. To provide online training and training materials which help local agencies start and sustain local Centers

Evaluation: Ongoing and end-of-project formal interviews with project partners; quarterly and end-of-project reports from project partners

The instruments for these analyses have been created for this project and have been piloted and refined at the NSHS site. A preliminary evaluation of the project will be available in September, 1997. For additional information, contact any of the authors of this article at the contact addresses below:

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