INTRODUCTION

The Providence Family Support Center (PFSC) is a not-for-profit organization aimed at providing various forms of support to single mothers and their children. The organization's staff of thirteen provides social services -- such as child daycare, life-skills education, and in-house drug and alcohol rehabilitation.

PFSC is one of four Pittsburgh's "at-risk" community centers known collectively as Providence Connection Incorporated. PFSC and its associate centers are mainly funded by the Divine Providence Foundation. Additional funds for various programs and equipment are also acquired via grants and outside funding. In total, the approximate annual budget of PFSC is two hundred twenty thousand dollars. Major expenses include staff salaries, office rental, utilities, supplies, and programming expenses. At this time, PFSC does not allocate money for computer hardware and computer software expenses. Most funding for equipment is either obtained via grants or donations.

Since August 1998, PFSC has been located in a former three-story church rectory on the corner of Brighton St. and Shimmer St. in the Northside of Pittsburgh. The facility contains six offices, a kitchen, a counseling area, and a general programming area. On the third floor of an adjacent building, PFSC also runs a full-time daycare center. Thirteen employees operate PFSC.

Carnegie Mellon University, in conjunction with various nonprofit organizations around Pittsburgh, offers CMU undergraduates the opportunity to gain real life consulting experience in exchange for providing nonprofit organizations with personal technical guidance. Each student is paired with a community partner. In a series of bi-weekly two-hour sessions, the community partner and the student consultant work together to improve the organization's technical capacity.

Deb Dunton, the community partner for PFSC, is the Director of the Center. With a Masters degree in Special Education, Deb oversees the center's activities, staff and finances.

For many months, Deb had a desire to introduce and improve the computer environment of PFSC. In January 1999, she decided to actively pursue this goal and participated in the previously mentioned CMU course. Deb's primary objectives included:

- improve computer literacy among PFSC staff
- develop a more professional appearance for the PFSC newsletter
- acquire more computers
- introduce electronic mail and gain access to the Internet

In the last several months, significant progress has been made on achieving these goals and will be described in the following paper.
SITUATIONAL ANALYSIS

PFSC councils and teaches parenting skills to "at-risk" single mothers. Most of the staff's work deals with the clients on a person-to-person basis and includes teaching, counseling, listening -- thus, making computer literacy an afterthought. However, the rapidly growing importance of the computer as a tool and resource for information has motivated Deb to introduce technology into the management activities of the center. The following is an overview of the initial technical capacity of the center both in terms of staff and hardware.

As of January 1999, PFSC owns one Windows-based personal computer. The computer is primarily used to create mailing labels, calendars, and simple monthly newsletters. However, elementary functions such as "cut-and-paste" and other built in macros were not utilized -- thus, severely limiting the effectiveness of the computer. In addition, basic computer terminology such as megahertz, megabyte, operating system, memory, hard drive, or floppy drive were unknown to any of the staff members. Overall, the computer literacy of PFSC was significantly low.

In the past fifteen years, computers have evolved from overgrown calculators to a versatile tool that extends itself into almost all aspects of life. Those who have not followed this evolution closely are finding themselves in the wake of continually advancing technology. As in the case of PFSC staff members, those in this "wake" view computers as a tool for the experts when in fact it is much to the contrary.

Upon arrival to the center, it became obvious that fear was the limiting factor in the integration of computers into PFSC. For example, in one of the first sessions at PFSC, Deb explored Microsoft Excel. "Wow, this is so easy!" was her reaction when creating a chart via the MS Excel chart wizard. It also became obvious that fear was a contributing factor in the way the staff members sarcastically referred to themselves as "computer dummies" or other similar names. For PFSC staff, their major obstacle was to overcome their insecurities about learning new technology and to realize that computers today are extremely user-oriented. Building confidence by experience was the only way to remedy this problem.

As previously mentioned, PFSC owns only one MS Window-based computer with a limited variety of software. MS Works, a simplified all-in-one publishing application, was the primary application that was used. We met multiple challenges in helping the staff overcome their fears. First, with only computer for thirteen staff members it was extremely difficult to teach and foster a growing technological environment. Without access to a computer, it is impossible to learn about computers. However, even aside from that problem, the lack of software also distorted the true capabilities of their computer. Before, the computer was mostly used to create calendars, mailing labels, and to produce typed letters -- something that could be done with a fancy typewriter. Creating charts and tables via spreadsheets, the Internet, multi-application publishing, financial book keeping, and endless other possible applications were thought to be out of their reach, when in fact the potential laid in front of them untouched.

Time and money are the two most commonly scarce resources of not-for-profit organizations. In PFSC's case, Deb had begun to find creative ways to meet these demands by establishing a technological foundation for the center. PFSC received a twenty-five hundred-dollar grant to purchase new computers in late January by F.I.S.A (Federation of Independent School Alumni). Deb also participates in a local university class that teaches undergraduate computer-related major consulting topics in nonprofit organizations. In exchange for providing a work experience in a not-for-profit organization, Deb and PFSC receives free technical advice to, in Deb's words, "find the onramp to the information superhighway." Deb and the PFSC staff were highly motivated to learn more about computers. Their enthusiasm coupled with better guidance positioned PFSC to finally find that onramp.
PROBLEMS AND POSSIBILITIES

Fear of computers overcome via a newsletter 'make over'

The monthly PFSC newsletter serves as the main method of alerting the community of the events and progress of the center. Participants, community leaders, and prospective volunteers are the main audience for the newsletter. Therefore, it is imperative that the newsletter is presented in a professional and understandable format. Enhancing the newsletter's format and design via current publishing software has been one of Deb's main priorities.

PFSC staff submits articles on topics such as women's issues, center events, and parenting advice. Barbara and Joanie, Assistant Director of Women's Programming and PFSC staff secretary respectively, are responsible for the formatting and illustration of the newsletter. In previous issues, Barbara and Joanie have relied on MS Works 95 to do general text formatting. By hand, they cut and pasted the illustrations. This process was very limiting, cumbersome, and time-consuming. With the introduction of more current and more powerful publishing software, Barbara and Joanie were able to fully utilize the computer's potential.

In general, the PFSC staff has a very basic computer literacy. Therefore, the first step in tapping the PFSC/computer's potential was familiarization. For example, illustrations in the previous newsletters were cut and placed (with scissors and tape) on printouts of the text newsletter and then photocopied. This manual process can be mimicked in a more efficient manner by using the "cut-and-paste" feature found in most software program menus. Using macro-ed processes such as "cut-and-paste" along with other basics will be the first step in bringing PFSC's newsletter into today's technological publishing standards.

PFSC has recently acquired a licensed copy of MS Office 97. The MS Office suite includes such programs as MS Word 97, MS Excel 97, and MS Publisher 97. Previously, the center primarily relied on MS Works 95 to format the newsletter as well as memos, letters, and various notices. Although MS Works is suitable for these tasks, the introduction of more powerful and specialized software will enable the staff members to complete their tasks in a more efficient and complete manner. Training is needed, and Joanie, the staff secretary, has shown great interest in learning these new applications. Joanie's depth of knowledge is still limited but her enthusiasm and her rapid rate of learning will ensure that the PFSC staff will have a resource for computer-related questions and problems.

The newsletter has benefited enormously from the acquisition of MS Office 97. MS Publisher, an easy-to-use publication tool, comes with special templates that range from fax coversheets to resumes to web pages. The newsletter templates have proved to be extremely useful. MS Publisher provides an easy-to-follow 'wizard' that sets up the general format of a newsletter via a couple simple questions. (E.g., How many columns wanted? How many pages? Do you want the newsletter title displayed horizontally or vertically?) As with most software wizards, MS Publisher's wizard exchanges ease of use for control over document. However, considering the staff's current depth of knowledge, the template minimizes the amount of understanding needed to complete a substantial part of the newsletter. The template also provides a median to experiment with the software's features. Overall, MS Publisher encourages experimentation as well as providing a simplistic interface that allows novice users to accomplish desired tasks.

The development of the newsletter via computers will have both direct and indirect effects on PFSC. An improved format and look may increase interest in the center's activities which in turn may lead to increased participation, increased volunteering, and more publicity in general. However, the greatest impact lies with the staff. The creation of the newsletter involves the incorporation of several software applications. With spell checking and grammar checking, MS Word is used to edit the individual articles. MS Excel graphs and charts are developed to convey statistical information. The two are then merged together with MS Publisher to format the newsletter. The skills gained in improving the newsletter will be the foundation for other computer work. Using letter templates, creating signs and memos are only three of computerized tasks PFSC staff has individually explored. With a base of knowledge and confidence in their skills in place,
PFSC will eventually gain accustomed to working with their computer to accomplish most of their administrative tasks.

**Purchase of new computers relieves access problems**

The need for additional staff computers was quickly realized. In addition, a desire for computers dedicated to client use was also expressed. For small not-for-profit organizations, like PFSC, it is often difficult to find additional funding. However, in late January, PFSC received a thirty-three thousand dollars grant by the F.I.S.A. of which twenty five hundred dollars was allocated to purchase new computer hardware. PFSC was also in line to receive older model Macintoshes from the Biological Sciences Department from Carnegie Mellon University. The question then turned from not only "How to get computers?", but also to "What type of computers should we purchase?" and to "How we can maximize their use?".

The first step in purchasing computers was learning the terminology. Deb had little exposure to computers and did not know what each of the names of the specific computer components. For example, "What is a megabyte of RAM?", "What is a gigabyte of hard drive space?" and "What's the difference between the two?" were some of the questions asked. Therefore, when looking at the different computer ads, it was impossible for her to find the computer that fit PFSC's needs. Thus, the first step of our solution was simple -- learn the terminology. Through discussions and reading a computer-user magazine, Deb began to learn the basic hardware schematics. She learned that a hard drive was where files and programs were stored; the amount of memory deals with how many programs she could run at once; and a computer needs a video card in order to display images. This understanding was critical for Deb to choose which computer to buy that was appropriate for PFSC's needs.

With a bit of research, using such resources as *Computer Shopper, PC Magazine*, and computer mail-delivery companies (e.g., Dell, Gateway, Micron), it became clear that twenty-five hundred dollars could buy *two* computers, rather than just one. PFSC's software needs do not require high-end processors or large amounts of hard drive space, considering staff work would not likely exceed the realm of MS Office. Therefore, Deb called Gateway Computers and purchased two Intel Celeron (a budget processor) based PCs. With research and a brief analysis of PFSC's needs, Deb was able to make a well-informed purchase decision.

It had been a secondary goal of Deb's to set up some computers for client use and to set up a computer for use in the daycare center. However, once again, the issue of funding became a major obstacle. Jon Minden, Deb's husband, is a scientist at the Mellon Institute and put Deb in touch with William Brown, the Biological Sciences department head at CMU. William Brown works to "recycle" computers discarded by Mellon Institute to organizations and schools that might find use for these older computers. PFSC was able to obtain three operable Macintoshes from William Brown. Although these computers are old, they will serve their intended purpose of providing the clients a chance to practice typing and other job related skills.

**Making a connection: e-mail and the Internet**

Gaining Internet connectivity, especially e-mail, was another secondary priority for the Center. Once again limited by their budget, PFSC could not immediately invest obtaining a SLIP/PPP service from a local Internet service provider. However, knowing the power of the Internet as an informational and communicational resource made finding alternative methods a priority. Moreover, the Internet offers information on countless topics (e.g., entertainment news, education, art, shopping, etc.). Even if PFSC did not find a direct application of the Internet for PFSC-related-staff-work, it would definitely serve as a conduit for research. At the very least, the access to the Internet would provide extra incentives to explore the capabilities of a computer.
There are numerous services that offer free access to e-mail. One such service, Juno, served as a short-term fix for PFSC lack of Internet connectivity. In exchange for statistical/biographical information, Juno provides a free, basic e-mail service. Although e-mail only access is a severely handicapped version of the Internet, it provided a starting point. For PFSC, e-mail was not only a communications tool but also a peek into the world the Internet has to offer.

Since PFSC did not want to invest in a service they had no experience in, I provided PFSC with indirect, temporary access to Carnegie Mellon's Internet network. Therefore, PSFC staff would have the chance to explore the Internet and determine whether investing in an Internet service was worth its expense. PFSC does operate on a limited budget, and PFSC staff is always pressed for time. Providing an opportunity and exposure to the Internet's resources was the best method for PFSC to assess the value of the Internet. At this time, PFSC has not made a final decision regarding subscribing to the Internet. Hopefully, through their experience, PFSC will realize the importance of gaining access to this ever increasing resource.

**SCOPE OF WORK**

Deb's primary goal was to enhance computer literacy among PFSC staff and her specific goal was to create a more professional format for the monthly newsletter. Since these two goals go hand-in-hand, a majority of the sessions were used to experiment with different software applications that related to publishing and word processing. Other goals included gaining access to electronic mail and the acquisition of computers, both new and used.

The following table outlines what specifically occurred at each session.

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 25</td>
<td>Introduction to community partner, Deb Dunton. Introduction to staff. Tour of the facilities. Discussion of current status (computer wise) Discussion of future goals.</td>
</tr>
<tr>
<td>January 27</td>
<td>Deb Dunton comes to CMU campus. Deb surfs the web for the first time. We examine possibilities of the facilities computers.</td>
</tr>
<tr>
<td>February 1</td>
<td>Deb &amp; Joanie (PFSC secretary) set up JUNO email accounts and send EMAIL! General discussion with Deb about future plans.</td>
</tr>
<tr>
<td>February 3</td>
<td>Transportation Problems : Leonard was sick Session Cancelled Make-up date has not been set.</td>
</tr>
<tr>
<td>February 8</td>
<td>Primarily work with Joanie and Barbara about the possibilities of the center's newsletter. Barbara and Joanie experiment with new layout on computer.</td>
</tr>
<tr>
<td>February 10</td>
<td>Transportation Problems : Cab never showed up Session Cancelled Make-up date has not been set.</td>
</tr>
<tr>
<td>February 15</td>
<td>PFSC closed for President's Day Session Cancelled. Session made up on 2.19.99</td>
</tr>
<tr>
<td>February 17</td>
<td>Give a basic computer tutorial to Sister Donavan while Deb and Joanie install Microsoft Office on facility's computer. Give a brief introduction to Deb and Joanie to MS Word.</td>
</tr>
<tr>
<td>February 22</td>
<td>Worked with Deb, Barbara, and Joanie with Microsoft Office. Fixed email problems they were having.</td>
</tr>
<tr>
<td>February 24</td>
<td>Give a basic tutorial in what to look for when buying new computers (w/ grant money) Discuss what is need and what is not for incoming computers. Outline options/vendors for her too look at.</td>
</tr>
<tr>
<td>March 1</td>
<td>Deb is on vacation. Mid-semester break for CMU Session Cancelled</td>
</tr>
<tr>
<td>March 5</td>
<td>Deb is still on vacation. Joanie further explores MS Publisher in order to prepare for the formation of the new newsletter. Brief discussion with Richelle about possibilities of PFSC catalogue. Further discussion is scheduled.</td>
</tr>
<tr>
<td>March 8</td>
<td>Newsletter Work</td>
</tr>
<tr>
<td>March 10</td>
<td>Newsletter work</td>
</tr>
<tr>
<td>March 15</td>
<td>Newsletter Work</td>
</tr>
<tr>
<td>----------</td>
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</tr>
</tbody>
</table>
| March 29 | Session Cancelled  
Andy’s flight arrives late. | March 31 | Session Cancelled  
Deb goes to Philadelphia for Passover |
| April 5  | Basic Planning  
Reorient ourselves.  
Discuss what has to be done the last couple of sessions. | April 7 | Ordered Gateway computers.  
Discussed donation proposal for the Gateway foundation. |
| April 12 | Deb writes Gateway proposal.  
Explore MS Word’s letter templates. | April 14 | |
| April 19 | The new gateway computers arrived. Set up Richelle’s (Women’s Program Directors) computer.  
Installed MS Office and other peripheral software.  
Deb takes on the task to set up her own computer by herself. (cross fingers) | April 21 | Went to CMU Mellon Institute to pick up donated computer from the Biological Sciences Department.  
Tested computers and set three computer up for client use. |
| April 28 | Discuss and plan presentation. | April 30 | |

**EVIDENCE OF INCREASED CAPACITY**

The most significant obstacle PFSC needed to overcome was staff inexperience with and fear of computers. The staff’s preconceived notions that operating computers required an innate knowledge limited them from effectively utilizing their computer. In addition, the lack of computers (as of January 1999, PFSC staff had access to only one PC) also handicapped any initial attempts or interests. In January 1999, PFSC was quite literally at “square one”. With guidance and information, it was my primary goal to plant a “seed of interest” and to monitor its growth. In the past four months, PFSC have taken significant steps. The following highlights explain and illustrate their increased capacity -- both in terms of the staff and technical environment.

**Staff**

To successively plant a “seed of interest”, you must have a willing and enthusiastic audience. In my first sessions at PFSC, it became apparent to me that the staff had a very weak grasp of what a computer can and cannot do. Basic functions, such as cut-and-paste, creating folders (in Windows), and moving files were all unclear to the staff. Initially, the staff’s general reaction toward computer was one of insecurity. However, they were receptive and highly motivated -- thus providing fertile ground for growth and expansion.

**Guidance + initiative = progress**

The remodeling of the PFSC monthly newsletter is the best example of the staff’s increased technical capacity. Deb wanted desperately to change the format of the newsletter. Clients, volunteers, donors, and community leaders were all potential recipients of the newsletter. Thus, Deb needed the
newsletter to look as professional as possible. Barbara Jones and Joanie Eyerman, Assistant of Women's Programming and PFSC staff secretary respectively, are in charge of formatting and publishing the newsletter.

Previous to our sessions, Joanie and Barbara relied solely on MS Works 95 to publish the newsletter. They used a basic three-column format and played with fonts to emphasize or highlight certain parts of the newsletter. When an illustration was needed, Joanie and Barbara would search for a piece of clipart from Corel Paintshop and print their desired picture on a separate piece of paper. They would then proceed to cut out that picture with scissors and then attach the cropped picture to the printed text via scotch tape. Finally, they would photocopy the text plus picture to simulate an integrated text and pictured copy. Although effective, this process also exists as a basic computer macro well known as “copy/cut and paste”. In one of our first sessions working together, Barbara, Joanie and I extensively reviewed this macro and also practiced resizing, deleting, and moving pictures into and out of MS Works.

To the experienced computer user, and maybe even to a novice user, what Joanie and Barbara learned during those sessions may seem minor and insignificant. However, learning such basic tools as “cut/copy and paste” and discovering that the computer can offer a variety of timesaving features opened their eyes to the boundless services computers can offer. Once insecure about even using the computer, Barbara and Joanie were now curious about what else the software had to offer. In our following sessions, we explored MS Office (which includes Word, Excel, and Publisher), and these programs continued to fuel their interest. Joanie, especially, took learning and discovering the applications to heart. During five one-and-a-half-hour sessions, Joanie, Barbara and I explored MS Word and MS Publisher in order to improve the newsletter. The final results were astounding.

The week of the March 23, I was away for spring break. (See Scope of Work above.) In the two weeks prior to my vacation, Joanie, Barbara and myself learned MS Publisher and MS Word to develop the new newsletter. We reviewed the basics for MS publisher -- such as creating a text frame and cropping and placing a picture. However, I was concerned that during my absence Joanie and Barbara's learning would stagnate. The deadline for the publishing an April newsletter was an additional pressure. When I returned from spring break, I was pleasantly surprised to see the April newsletter. Not only was the newsletter noticeably improved but also the format included many things that I had not taught Joanie or Barbara. This included different border patterns, the rotation of pictures, integration of text in pictures, and several other features. With a base knowledge in place, Barbara and Joanie had gained the initiative to further explore the applications on their own. The result was a high quality newsletter.

Staff: Evidence of sustainability

PFSC has a lot more to learn. However, Joanie and Barbara are examples of the high level of enthusiasm and potential pervasive in the PFSC staff. In fact, there has been recent talk of expanding the availability of computers to its adult clients as well as the daycare center. Even idle talk about expansion is evidence that the staff has realized and welcomed the idea of integration of computers both in their administrative tasks and client work. The Internet has also been a source of interest. Four members of the staff have acquired email accounts via Juno, and Joanie has even begun looking up information on the web. PFSC is still at the initial stages of integration. However, if the enthusiasm and motivation continue, I have no doubt that progress will flow easily.

Technical environment

In January 1999, PFSC had one Windows-based 200 Pentium II computer. The primary software application used was MS Works 95 and Corel Paintshop. Since then, through grants and donations, PFSC has acquired two Gateway Window-based 366 Celeron computers as well as three older, donated Macintoshes. All of the Window-based computers have both MS Office and Corel suite.
PFSC staff members are still in the process of evaluating their specific needs; however most have learned the basics of word processing and file/computer management. Specifically, Deb is interested in learning Quicken 99 to manage her financial tasks, and Joanie constantly explores different software programs both for her staff work and personal interest. With the recent addition of five new computers, I believe that the PFSC currently good access to computers and thus should concentrate on maintaining and exploring its current hardware and software.

Technical environment: Evidence of sustainability

Although PFSC has recently received new computers for its staff, Deb has also become increasingly interested in obtaining computer for client use. In order to facilitate that interest, Deb has applied to the Gateway Computers for possible donations. Deb's monetary and time investments in increasing the Center's capacity make me confident that she is serious about computer integration. It is my hope, that she will continue to make the effort and see that this technological resource becomes fully utilized by both the staff and clients.

RECOMMENDATIONS

For the past four months, I have participated in and observed PFSC's technological growth. The staff and Deb's enthusiasm to improve their current situation has been tremendous. As a result, PFSC has taken giant strides in increasing their level of computer literacy as well as quintupling the number of computers in the center. With a strong foundation in place, a myriad of doors will open. Beginning a basic computer literacy course for the clients and starting computer-related classroom activities for the daycare center are only two possibilities. However, PFSC must continue to foster their own growth in order for these new goals to materialize.

Recommendation #1: Establish a computer "go-to" person at PFSC

In order to guarantee that PFSC continues its growth, it is imperative that someone is identified to oversee further development and to troubleshoot any problems that may occur. This sounds overwhelming; however, it is a lot simpler than it seems. This "go-to" person does not necessarily have to have all the answers but this person should be responsible in attempting to find a possible solution. For example, if a problem with the new computers arises, then the "go-to" person should contact Gateway technical services. Furthermore, this "go-to" person should also initially explore new software that PFSC may need; thus, making the transition smoother for other staff members. Overall, the main reason in establishing a "go-to" person is to prevent PFSC from losing its momentum. Often when dealing with computers, frustration can lead to desertion. Desertion of interest and, more importantly, the desertion of their computers (physically) are what the "go-to" person must prevent. Integration of technology is too important for PFSC to leave behind.

In my observation of the staff, I believe that Joanie Eyerman, PFSC staff secretary, is currently the most suited for this responsibility. Joanie's work with the newsletter exemplifies her enthusiasm and her high aptitude for computers. Whether it is Joanie or someone else, it is imperative that someone is given the responsibility in maintaining and updating PFSC computer hardware and software. For an organization that is tight on manpower and time, it would be extremely easy for it to lose the goals at hand. The computer is an awesome tool and resource; however, it must be continually explored and updated in order to unveil its full potential.
Possible Resources for Recommendation #1

_**Person-to-Person Technical Help.**_ As mentioned in person to Deb, PFSC can always contact me if anything goes awry. However, I would recommend that PFSC use the go-to person as a primary resource.

Problems with the new Gateway computers should be directed to Gateway Technical Service. In attempts, to pre-solve any hardware and software problems, Deb and I agreed that purchasing the 3-year extended on-site warranty would provide the most safety for PFSC's investment. The total cost of the warranty was $100/per computer for two additional years of labor and parts warranty. The average computer repair rate is $30/per hour. The average computer part price is $100. If anything were to go wrong with the computers after that first year, PFSC would save a significant amount of money on labor and parts cost. However, the greatest benefit of the warranty is the piece of mind that it provides.

_**Books.**_ There are a plethora of computer books specific to almost any software application or software topic. If more technical reading is desired I recommend going to a large computer store (e.g., CompUSA) and browsing through the computer book section. It is difficult recommend a specific book because of the different skill levels. Therefore, s/he should look for a book that s/he feels comfortable reading. In general, the “For Dummies” series is popular, and I personally think that books published by O'Rielly and PeachTree are also well written.

**Recommendation #2: Develop computer skills programs for clients and their children**

Toward the last of my sessions at PFSC, the staff discussed starting a basic computer skills program for their clients, as well as setting up a computer class for the children. I was ecstatic to hear that PFSC had begun to incorporate computers into their client program planning. However, talk is cheap. I would highly, highly recommend that PFSC actively pursue this. Seek funding. Seek teachers. Make this happen.

It's increasingly common to see computers introduced to children as young as at the preschool age. Brian Tobin, a junior child psychology major gave the following description of computer use at the CMU preschool/daycare center:

"The kids at the Margaret Morrison (CMU) preschool have a few computers in their kindergarten (5 year old) classroom, 2 computers in their four-year-old classroom, and one computer in their older three-year old classroom. They use the computers for all sorts of learning games but the most common thing they do with them is read books on the computer such as "Little Critter" books. They have interactive pictures that do cool things when the kids click the mouse on a worm in the picture or a cloud or anything. The book is also read to the children through headphones. The five-year-olds use the computers in their classroom to make pictures and more personally creative things. While each child in all the classrooms is encouraged to use the computers, none are forced to."

Computers can provide the personal attention to a student when a teacher can not. As mentioned above, interactive software exists to teach children almost any subject. The software is a powerful teaching tool and could enhance the overall effectiveness of the PFSC program. However, the teachers also must devote time to learn about the software in order for PFSC to reap the full benefits of having a computer in the classroom.

If the lack of computers proves computer-daycare programming impossible then, at the very least, daycare teachers can retrieve a plethora of children-education resources on the Internet. Games, activities, discussion groups, and even email contact to other preschools can greatly enhance PFSC's daycare program.
Computers will play an extremely important role in the future of these children. It is a certainty that in the future, computer skills will become essential for educational and job success. An introduction to computers, even at this young age, will put these children one step ahead of the rest.

**Possible Resources for Recommendation #2**

_ Educational Programming._ The only true resource for this recommendation is the people who have run this type of programming before. Therefore, PFSC should get in contact with other organizations that have tried this type of programming. For example, the daycare might want to contact CMU preschool to see what type of software they recommend for learning. For adult programming, PFSC should contact a local high school or university and inquire which books and software they use to teach basic computer skills. Without a trained computer teacher on staff, PFSC should rely on the experience of other organizations to guide them in providing educational programming for their clients.

_ Join an organization such as CTCNet._ CTCNet is an organization that works to providing equitable access to computers and actively seeks partnerships with organizations that share its goal. CTCNet provides resources to enhance its affiliates organization's "capacity to provide technology access and education to its constituency." (CTCNet mission statement; See Appendix) The benefits of joining an organization are obvious. CTCNet not only provides invaluable resources but also establishes a link to other non profit organizations that are in similar situations to PFSC's.

**Recommendation #3: Subscribe to and explore the Internet**

Deb and I have discussed this topic numerous times. The fact is that PFSC is once again in preparation to move to another, and hopefully, permanent site. Although Deb agrees that the Internet is an important resource, she believes that the cost of adding an additional phone line for the modem, ergo Internet access, is irrational due to their impending move. I agree.

However, I would like to once again emphasize the importance of eventually gaining access to the Internet. The Internet is an awesome informational database. In terms of Deb's needs, for example, the Internet offers information on thousands of different grants that PFSC is a viable candidate for. Information on foundations and programming similar to PFSC can all be found on the web. Discussion boards about counseling single parents and drug patients are available. Most importantly, the Internet provided a free way to contact and discuss topics to those in similar organizations or to others who can be of assistance. Although, the gaining access to the Internet and its actual usefulness is currently vague, I highly recommend that PFSC pursue installing a connection at its future site.

**Resources for Recommendation #3**

Being that PFSC in a nonprofit organization, PFSC is entitled to a variety of benefits from different organization. Information Renaissance provides an array of computer support services for non-profit organization. (See Appendix) When PFSC is ready to install an Internet feed into the center, they should look to capitalize on these types of discounted services.

**Recommendation #4: Keep in touch with the computing world.**

_ Read current computer literature._

The single easiest way to keep in touch with the computing world is reading. By this, I do not mean subscribing to obfuscated magazine like *PC Magazine* or *Computer Insider*. For PFSC staff sanity, I would recommend reading a general computer interest magazine such as *Wired*. Magazines like *Wired* are technology based; however, they write entertaining and informational articles about upcoming trends and
issues. Most of the articles will not relate to PFSC in the slightest, but the keeping in touch with what is currently developing is extremely important. Such reading will deepen one's understanding about computer-related issues, and thus making him/her more comfortable with technology.
Appendix:

**CTCNet:**

CTCNet, EDC, 55 Chapel St., Newton, MA 02158, 617-969-7100 x2727617-332-4318 (fax)

Ctcnet@edc.org
http://www.ctcnet.org

**Mission Statement**

Community Technology Centers' Network (CTCNet) envisions a society in which all people are equitably empowered by technology skills and usage. CTCNet is committed to achieving this end.

CTCNet shares with Playing To Win, its founding organization, a recognition that, in an increasingly technologically dominated society, people who are socially and/or economically disadvantaged will become further disadvantaged if they lack access to computers and computer-related technologies.

CTCNet brings together agencies and programs that provide opportunities whereby people of all ages who typically lack access to computers and related technologies can learn to use these technologies in an environment that encourages exploration and discovery and, through this experience, develop personal skills and self-confidence.

CTCNet offers resources to enhance each affiliated agency/program's capacity to provide technology access and education to its constituency and to help and nurture other like-minded programs in its area.

CTCNet will facilitate telecommunications, print, and in-person linkages enabling members to benefit from shared experience and expertise.

CTCNet will be a leading advocate of equitable access to computers and related technologies; it will invite, initiate, and actively encourage partnerships and collaborations with other individuals and organizations that offer resources in support of its mission; and it will strive, in every arena, to bring about universal technological enfranchisement.

**Information Renaissance**

Information Renaissance is a nonprofit corporation that promotes the development of regional networking infrastructure in support of education, community development and economic revitilization. It works in three primary areas: community networks, on-line resources and policy issues, such as improving public participation in government.

One segment of their programs provides a range of computer support services for non-profit organizations. These services include Internet connectivity, training, and the staffing of community computer labs. Non-profit organizations interested in these services should join Information Renaissance as affiliates. Each affiliate is entitled to three hours of Information Renaissance's training or consulting services.

The information contained above is a summary. Persons interested in pursuing the specifics of these services need to contact Information Renaissance directly.

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