Second East Hills Social Services Center - Final Consulting Report
Student Consultant, Yeong Zann Seow
Community Partner, Laverne Holliday

I. Context Analysis

Organization:

The Second East Hills Social Services Center (SEHSSC)'s mission is to "enhance the quality of life for the people that (they) serve". Located at 2342 East Hills Drive, Pittsburgh PA, this organization serves the entire Second East Hills area, consisting of 326 families. They focus on serving these families by providing a diverse range of comprehensive services for almost any need they may have.

Facilities:

The main area of interest is the 2 apartment blocks (2342 East Hills Drive) in which administrative and educational services take place. The rooms in these apartments have been converted from their residential purposes to serve administrative functions. Each of the rooms is equipped to serve different functions, as such; inventory lists of items belonging to each room are kept. There are excellent computing facilities available for the kids and adults, and there is great untapped potential in these facilities.

Programs:

There are many programs available in SEHSSC such as Computer Literacy classes, Children Year Round Program and Cultural Programs. These programs are mostly targeted at children, to increase their quality of life, through education. These numerous programs are hosted mainly at the many rooms available at 2342 East Hills Drive.

Staff:

There are 10 key positions in this organization, of which 5 are permanent. The permanent staff in this organization are the ones who undertake the most administrative responsibilities and they are the ones who make most of the planning decisions. The staff (with the exception of the Lab Instructor) had little to no experience with computers. Tasks, which involved Computers, were mainly handled by the Lab Instructor. This was a problem because the Lab Instructor would be over-run with every single task, which involved Computers. This was also an opportunity for the organization: For if the staff were trained to use Computers, not only would they be able to relieve the Lab Instructor's burden, they would also be able to use Computers to expedite some of their own daily routines, and even instruct the students in SEHSSC on Computer use.

Technical Environment:

There are 9 Dell Computers in the multipurpose computer Lab, they run on Windows 98 and a Dell PowerEdge 1300 Internal Server connects them in a network. There are 3 printers in the office: HP DeskJet 870C, HP LaserJet 2100 and HP OfficeJet LX which is a printer, fax machine, copier and scanner in one. The computers have Dial-Up Internet access through the Server. They also come equipped with CD-Rom drives which allow children to run educational software titles such as "JumpStart First Grade".

There are about 50 different educational titles available for the students. These educational games are frequently used. However, Office software and Internet access had been under utilized.

Technology Management / Planning:

Before consulting, there was no concept of Technology Planning in the organization. This may have been due to the fact that computers were perceived as an educational tool rather than a valuable multipurpose resource. This belief is reflected in the ways computers are funded - they come from a general 'supplies' fund, which funds everything from tables to pencils.

II. Consulting Objectives

II. The Consulting Tasks

The major consulting tasks were to:

1. Develop a Technology Strategic Plan for SEHSSC (Through Training and Consultation)

Objectives of task: To arrive at a Technology Plan by the end of the Semester and in the process, (as a sub-goal) achieve as many of the training goals specified in Appendix A, by the same deadline.

The aim of this task was to increase the awareness of technology in the 326 families in East Hills, beginning from SEHSSC; which will empower them to explore the many diverse ways in which technology can benefit their lives. This task also aimed to incorporate technology in SEHSSC's operations would also help them reap eventual time and cost savings, allowing them to serve the community more efficiently. However, without sufficient experience and exposure to technology, the staff could not create a plan that realized the full benefits of technology in the organization. To develop that plan successfully, some training had to be carried out - because it was necessary to help the CP learn more about common software programs and their capabilities so that the CP can have a deeper understanding about the limits and capabilities of the available resources. Ultimately, the goal is to arrive at a Technology Plan with which the CP understands, follows and continually evolves, and in that process benefit the organization. The jointly developed Technology Strategic Plan would increase organizational awareness of the benefits of technology and encourage the use of technology to solve common problems. This is done with the intention of increasing SEHSSC's operational efficiency and increasing the ways in which SEHSSC can serve the community. Both ends further the mission of SEHSSC.

Planned Approach
Due to the CP's unfamiliarity with computers, the first step was to cover all the basics of computer operations as fast as possible. After the CP learnt to use Computers, the consultant was to gradually play a more advisory rather than instructive role, prompting the CP to make their own technology decisions and assessments as they learn about different software functions. At the end of the Semester, the CP should have formed their own unique idea of how technology fits into their organization - so that they are able to talk about it and form a technology plan.

> Teach the CP how to operate a computer
> Teach the CP how to run computer programs
> Teach the CP how to perform common office functions
> Teach the CP how to solve common problems using a computer

Teach the CP to recognize the scope and limitations of software
Teach the CP to choose software that is necessary for their operations
Work with the CP, to draft and modify a technology strategic work plan
Put the work plan into practice

Expected Outcomes
At the end of the Semester, the client was expected to create a technology work plan, which provided the navigational blueprint for their technological efforts so that SEHSSC could improve in an organized and logical way. The strategic plan was expected to be easy to understand and comprehensive in coverage. The client was also expected to pass the tests as listed in Appendix A.

2. Develop the CP's technical knowledge to manage Databases (Through Training and Examples)

Objectives of the task: To create a simple Database to assist in the common administrative purposes (such as student profile look up, inventory tracking) by the end of the Semester.

Increased responsiveness to their client's needs would further the mission of SEHSSC and also be a sign of efficiency in SEHSSC. If SEHSSC were able to monitor in greater detail the profiles of the people they serve, they would be able to provide a more personalized service, specially catered to suit the needs of each individual they serve. This would be possible if SEHSSC had more control over the profiles of their clients - if they had the computer processing power to track each client's record. This would result in client satisfaction - increasing the quality of their lives. If SEHSSC were able to keep track of every item they have in their inventory with a Database, they would also find it much easier to submit monthly inventory reports. Because of the wide range of services SEHSSC offers, knowing how to create and manage a Database would definitely be an asset to SEHSSC.

Planned Approach:
The consultant will focus initially on creating simple examples and teaching the CP by using Case Studies. The eventual aim would be for the CP to grasp the conceptual essence of Databases and be able to move on from there to create possibly more sophisticated Databases to handle their requirements.

Teach the CP how Excel maintains information
Teach the CP how to edit and navigate in Excel
Teach the CP how to look for help in Excel
Teach the CP how to organize data and create simple Spreadsheets (by examples)
Teach the CP the common Spreadsheet functions
Teach the CP the common formatting options
Teach the CP to use the various Shortcut keys
CP will demonstrate what they have learnt by creating Databases specific to their organization
Work with the CP to refine what they have learnt

Expected Outcomes
At the end of the Semester, the client was expected to have a fully functional database, designed to meet some of their administrative needs.

III. Outcomes and Recommendations

Objective 1 Outcome: Technology Plan drafted, CP trained in basic Computer Skills

Training and Consultation work to achieve Objective 1 had the following outcomes:

Outcome 1a: CP has learnt basic Computer skills

Before the consulting begun, the CP did not know how to operate a computer and was not familiar with using input devices such as the mouse and the keyboard. During consulting, practice sessions covered the whole process of booting up, using the input devices, various input actions and shutting down. The CP has since been able to start up the computer and go onto http://www.google.com without any prompting or assistance. The CP has broken the initial barrier of using the computer and has started experiencing first-hand the process itself. This helps the CP to have a better understanding of technology in the organization, because the CP will be more attuned to the needs and problems the students face when they first learn to use computers at SEHSSC.

Outcome 1b: CP has learnt basic troubleshooting / installation routines and documented them

CP was able to pass the few troubleshooting routines and drills which were practiced in class. CP was able to remember to use CTRL-ALT-DELETE to terminate programs which were not running (instead of turning off the power supply). The entire drill of purging print jobs, printer hardware reset, reconfiguring network settings was repeated without assistance. Another major exercise was fixing the Internet Connection for the whole lab. Notes were taken by the CP and staff alike, so that they may refer to these steps and apply them in the absence of the Consultant.

Outcome 1c: CP has learnt to use the Internet

After training these are some of the tasks the CP performed:

(1) Fill in Online Forms to request for free periodicals (eg. "Our Daily Bread")

(2) Send Online Greeting Cards to their friends (www.hallmark.com)

(3) Access information and search for offers on sites such as www.target.com, www.gianteagle.com

(4) Access dynamic web content such as streaming video from www.oprah.com or streaming audio from www.smoothjazz.com,

(5) Find a particular recipe they were interested in (i.e. gingerbread cookie) and print it (www.allrecipes.com)

(6) Find driving directions from SEHSSC to Panera Bread along Murray Avenue (www.mapquest.com)

(7) Accessing online travel agencies to check ticket prices (www.travelocity.com, www.expedia.com etc.)

(8) Make online purchases such as an Excel Training Book, and Christmas gifts online using Credit Card

(9) Compare prices for the same item across different online Merchants

(10) Bookmark Interesting Sites in their 'Favorites' folder

(11) Use a Search Engine to find specific Search Strings (www.google.com)

With an understanding of how to use the Internet, the CP can now carry out many tasks (such as purchasing goods for the Center, looking for information etc.) in the comfort of the computer room. Trips to the departmental stores were eliminated.

In addition to the technical knowledge attained, they were extremely pleased to have been exposed to these things that they never realized or thought was possible. The CP's perception of technology was shaped and thus this made them aware, in much greater capacity, of the ways in which technology can improve their organization.

This outcome is sustainable, because in the following sessions, the CP and staff have been talking about how they searched for the latest KSwiss Shoes, and how they managed to find Air Tickets online, which were far cheaper than their travel agent's quoted price. They have managed to identify and use the Internet to fulfill some of their daily needs and thus it is likely that they will continue to enjoy the benefits of the Internet.

Outcome 1d: CP has started to write a new Technology Plan

The CP has started to write a technology plan together with the Consultant. Using the "National Benchmark: Technology literacy for Non Profit Organizations" as a starting point, the CP has started thinking about implementing a practical strategic plan for SEHSSC which is the whole point of this exercise. The CP has came up with her own independent ideas on how technology could be used to further her organizational goals, such as the computerization of all her forms, and the use of technology to eliminate physical tasks (such as using Email or Fax to deliver Cash-Advance forms instead of traveling by car to the sponsor to hand-deliver those forms). Also, the CP has indicated interest in signing up for a computer course to continue learning more about computers. These outcomes indicate that the CP has started thinking about ways in which technology can be used to improve SEHSSC. Once completed, the Technology Plan will provide a direction for SEHSSC to improve and advance in. The Technology Plan will be a sustainable piece of document that will motivate SEHSSC to continue supporting their mission

Objective 2 Outcome: Database NOT created

The consulting task was to build on the first point as mentioned above and to increase the client's knowledge of Databases - how to create one and how to maintain one. Although there was not enough time to actually create a database, the CP learnt to perform the following tasks:

Outcome 2a: CP has learnt to use Custom Forms

The CP has learnt to use Custom Forms (created by the consultant to solve their business problems) and they have been able to use these forms without any form of assistance from the Consultant. Feedback from them has indicated that using these forms (along with the instructions attached) has significantly decreased their time spent on processing these forms. This is because these forms are preformatted properly for printing and are designed to calculate values automatically, thus the CP and Staff are just concerned with filling in the values on the form. The detailed instructions at the beginning of each form are provided with the aim of improving sustainability - in case the CP forgets the steps involved in using the forms. However, the instructions are not meant to be an ends in itself, they are meant only to tide the CP over temporarily, before they become more familiar with Excel.

The forms created are the Cash Advance form and the Meals Records Form, in the place of the paper forms that are used in the organization. The Consultant has created detailed instructions saved together with each of the forms (as mentioned above)

Outcome 2b: CP has learnt to Organize, Save and Retrieve Data

Although it may not have been possible to teach the CP all the detailed concepts of maintaining a database, the main idea of Organization, Saving and Retrieving data on a computer was learnt through the use of the forms and instructions with the forms. The CP learnt to save the forms with meaningful names so that they are able to reference those forms in the future. They have also been taught the use of folders to organize data - previously, their desktop is a flurry of icons and random files - the Consultant has organized everything and taught them how to maintain their files so that they can extract the information easily the next time. Tests will also be conducted during the last session of the Consulting to ensure that the CP has learnt how to manage their information by classifying them the right way and by placing the files into meaningful folder names. Better house keeping will help increase efficiency because it reduces the time taken to search for information.

Recommendation 1: Hold regular reviews to continue refining the Technology Plan

It is recommended that the CP continue to refine the Technology Plan by conducting periodic reviews. Constantly reviewing the plan would encourage the CP and Staff to be constantly aware of the areas of needs in the organization that can be satisfied by using technology. Constant reviewing of the Plan will also encourage feedback and communication from the staff about the use of technology in the organization. If helpful feedback is often received, the SEHSSC can better plan and allocate their resources to the areas in which technology is particularly effective and refrain from potential problem areas. Constantly reviewing might not directly lead to increased efficiency, but it will reduce inefficiencies. To get started, the CP will have to designate a particular period (say every quarter), in which the CP and Staff would gather in a meeting to discuss the Technology Plan and Technology related issues of SEHSSC. Issues they may consider include:

    Technology Spending
    Review of the equipment they have
    Suggestions on 'How to speed up work flow'
    Suggestions on 'What new equipment should be purchased, and why'
    Technical Problems encountered
    Complaints and problems with equipment
    Positive Experiences with Technology

Of course, this list is not exhaustive and new items of discussion can be added every meeting. These topics aim to encourage dialogue and aim to inspire new ideas and new ways of thinking about Technology at SEHSSC.

Recommendation 2: Continue learning Excel in the absence of the Consultant

The CP has recently purchased a book recommened by the Consultant: "Learn Visually Microsoft Excel 2000" and has gone through part of the book. The CP is encouraged to continue learning Excel through that book in the absence of the Consultant. Important ideas such as sorting groups of cells according to a particular column was demonstrated to the CP, but never actually taught formally. The CP should strive to learn to perform these tasks because part of their Meal Record Submission process requires a list of students sorted alphabetically according to first name. This list of students is variable, thus the CP has to perform the sort function continually. Also, the CP should continue learning Excel so that they may be able to create their own Forms in the absence of the consultant and also modify existing forms.

IV. Additional Recommendations

Additional Recommendation 1: Conduct Online Research

Other Non-Profit agencies have used online technologies (lists, newsgroups, gophers and web pages) to research various topics, such as:

- o How to get funding for a position
- o Where to find certain government documents
- o Things to remember when developing a database
- o Mortality rates of children in comparison to other cities
- o Current legislation concerning welfare costs
- o What other agencies are doing about crack cocaine
- o Where to find grants to buy a computer system
- o Info about a problem with word perfect
- o Tips for creating a newsletter
- o Latest stats on the Nuggets for a group of kids they are working with
- o Volunteer recruitment and management information
- o Why NPOs should get on line

These topics are of relevance to SEHSSC and since the CP already knows how to use the Internet, if they spend some time researching these topics, they may obtain new knowledge which can save time and money.

Additional Recommendation 2: Subscribe to helpful Email Newsletters

In addition to searching online for information, which is helpful to SEHSSC, the CP can also choose to have that information sent to them via Email. An example of such a service is Tech4Impact, a free monthly e-mail newsletter, which provides information on:

> How technology is used effectively by mission-based organizations -- nonprofits, public sector agencies, NGOs, schools -- and their supporters to benefit individuals, communities and the environment;
> What tech and online tools, resources and practices are proving most valuable to these organizations and their volunteers;
> What cultural and financial conditions, legislation, and other factors are that can and do influence tech use by these groups.
> News and resources relating to all of the above

Signing up for this service requires just sending a blank e-mail to: **tech4impact-subscribe@yahoogroups.com**

Subscribing to Newsletters such as this will also give the CP ideas how they can leverage on technology even more effectively by observing other organizations in similar situations.

About the Consultant:
Yeong Zann Seow is an Computer Science & Economics Senior in the School of Computer Science at Carnegie Mellon. He is a student fully sponsored by the Port of Singapore Authority.

WORK PLAN

Activity	Who	How Long	Start Date	End Date
Develop a Technology Strategic Plan for SEHSSC				
Teach the CP how to operate a computer				
Lesson covers connecting computer cables to the computer, booting up, interpreting common boot up messages, adjusting the monitor settings, using common input devices (keyboard and mouse), shutting down in the proper way.	CP & Cons	1 week	**Oct 3**	**Oct 10**
Lesson covers mouse operations such as clicking, double-clicking, dragging, right-mouse click and using the mouse wheel to scroll in menus. The use of conventional Microsoft shortcut keys such as CTRL-ALT-DEL and F1 is also mentioned.	CP & Cons		**Oct 3**	**Oct 10**
Teach the CP how to run computer programs				
Lesson covers how to launch applications on the Desktop by clicking on their icons, how to launch applications on the toolbar by clicking on it, how to drag icons onto the toolbar, how to launch applications via the start-button, how to navigate through folders to locate the appropriate files.	CP & Cons		**Oct 3**	**Oct 10**

Lesson Covers how to terminate programs in execution using CTRL-ALT-DELETE, how to use ALT-F4 to close open windows, how to use ALT-TAB to switch between windows, how to move, resize, maximize, restore and minimize windows.	CP & Cons	1 week	**Oct 10**	**Oct 17**
Review of all the Lessons above. Demonstration of competency with the above tasks.	CP		**Oct 10**	**Oct 17**
Teach the CP how to perform common office functions				
Lesson covers how to run Microsoft Word, how to use the Word Interface, how to input characters, how to format characters, how to save the file, how to look for help, how to use common Shortcut Keys.	CP & Cons	2 weeks	**Oct 17**	**Oct 31**
Demonstration of competency by generating a well-formatted sample letter.	CP		**Oct 17**	**Oct 31**
Teach the CP how to solve common problems using a computer				
Lesson elaborates on the uses of Microsoft word by showing how it can create a variety of documents. Brief introduction to Excel. Brief introduction to drawing programs. Brief introduction to common programs such as calculator.	CP & Cons	1 week	**Nov 1**	**Nov 7**

Teach the CP to recognize the scope and limitations of software. Teach the CP to choose software that is necessary for their operations				
Lesson covers describing the functionality of common software programs, using the Internet to read functional reviews, technical specifications of software.	CP	1 week	**Nov 7**	**Nov 14**
Walk the CP through problem identification, formulation of solution and finally purchase decision - with the aim of instructing CP how to choose software to suit their needs.	CP & Cons		**Nov 7**	**Nov 14**
Work with the CP, to draft and modify a technology strategic work plan.				
CP learns to identify a set of problems they wish to solve in their organization, writes down a set of technology solutions, writes down the effort and manpower involved and creates a Word Document listing down the steps involved and the expected time of completion of the strategic plan.	CP & Cons		**Nov 7**	**Nov 14**
Teach the CP how Excel maintains information *Teach the CP how to edit and navigate in Excel* *Teach the CP how to look for help in Excel* *Teach the CP how to organize data and create simple Spreadsheets (by examples)* *Teach the CP the common Spreadsheet functions* *Teach the CP the common formatting options* *Teach the CP to use the various Shortcut keys*				
Lesson covers the above topics. CP should demonstrate their competency by performing these tasks without taking too long.	CP & Cons	2 weeks	**Nov 14**	**Nov 30**

CP will demonstrate what they have learnt by creating Databases specific to their organization Teach the CP how to refine what they have learnt				
Overall review. Walk the CP through cases relevant to their organization. In the end, CP should be able to create Databases and demonstrate competence using these Databases to solve their problems.	CP & Cons	1 week	**Dec 1**	**Dec 7**