

# Braddock Carnegie Library & Community Center

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## I. Consulting Situation

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### **About The Organization**

The Braddock Carnegie Library and Community Center located on 419 Library St. Braddock PA is the first of the many Carnegie Libraries. The 113-year-old building now houses not only a library but also a series of educational out-of-school time programs. While the programs are housed in the library they are a very separate aspect of the library. The out-of-school time program's mission statement reads: *we strive to provide high quality, out-of-school time programs; to the children, youth and families of the Greater Braddock communities.*

The out-of-school time program works with children grades kindergarten through 8<sup>th</sup>, (the summer program goes up to 9<sup>th</sup> grade.)

The out-of-school time programs are really two separate series of programs.

### JmP (Summer Program):

The summer program more formally Summer Program Jump and Play to Fitness, is referred to as JmP. Students enrolled in JmP attend 5 days a week all summer long, they are served breakfast and lunch at the program. Each week there are two field trips planned to a variety of educational and fun locations around Pittsburgh.

### After School Program:

During the school year the Braddock Library and Community Center has 5 programs running.

- BLAST stands for Braddock Library After School Tutorial program. In this program children are registered to attend and work in the computer lab on either the CCC machines that were donated by the school district or on the other computers working online.
- The One-to-One reading program works with 1<sup>st</sup> and 2<sup>nd</sup> graders teaching them necessary reading skills, giving them a one on one environment to learn more about the possibilities that reading allows.
- WHSD is another one on one program where students come on a drop-in basis for homework assistance. The Braddock library hosts one of 5 sites throughout the Woodland Hills School District where the WHSD program is located.
- CACFP is a program that provides dinner for the children, as well as any at-risk residents in the library's service area.
- "Design-It!" is a program that helps cultivate design, engineering, and technology skills in the participants. This program stimulates mathematical and scientific interest in the participants. Students compete in a national competition (one of 30 participating schools).

The many different programs, all administered by the educational director, Cynthia Elk, have helped serve approximately 300 individual youths. Most of these youths are from low-income families.

The educational director supervises 28 people, volunteers and staff, to provide these students with high quality out-of-school time programs, consisting of: a recreational supervisor, 3 BLAST monitors, 7 people working on the One-to-One reading program, and 14 tutors who work one-on-one with the children to enable them to better understand/complete their homework assignments. The programs also have hired a nutritional specialist and a nutritional aide supervises the CACFP (dinner) program to ensure the meals are healthy and nutritional.

## **Technology Situation**

### Computer Lab

There is a computer lab on the third floor that is used primarily to enrich the programs that the students are provided with. The lab is split into two sections one which is regular computers and the other which is CCC computers.

### *Internet Ready Computers*

The computers consist mostly of Compaq 590's and are all connected online with a DSL connection through eiNetwork. In February 5 new Dell's were purchased for this lab and put online. These computers are hooked up to the library's internal network.

The students use these computers primarily to go online and learn about the internet.

### *CCC Computers*

There are six CCC computers that were donated by the Woodland Hills School District and are used solely for the software that is installed on them. These computers have the program called CCC that the school system uses; this enables the students to work on the same material that they are learning in school. By using this software it is ensured that the programs offered are helping the students with the same area that they are focusing on in school.

The executive director is currently working to try to get these computers networked with the school district so that the children will be able to work from the point they were at, at school instead of having to repeat the section of the program that has previously been completed.

### Administrative Technology

The administrative details of the organization are currently paper-based. The organization collects a lot of documentation on each student, which leads to a lot of papers very quickly. There are many file cabinets in the educational director's office with more paper work stored elsewhere. The current documentation does not lend itself to easy analysis.

While computers are evident in every office they do not play a large part in the administration of the educational programs. There are many ways which computers could be integrated into the way things are currently run to make operations run smoother.

The largest technological block that the organization seems to face is not having a good idea of how to integrate technology into the administration and programs. As a whole the administration is enthusiastic about working technology into their programs.

## **Consulting Partnership's Focus**

The educational director is challenged by her need for an information system that would make it easier to generate funding reports, produce statistical information regarding attendance... Thus, the consulting partnership focused on creating and implementing an information system that would fulfill the needs of the organization.

Funding Reports: One of the largest and most time consuming elements of the community partner's job is working to receive grants from funders. Each funder requires different information detailed in distinct manners. Such as which students come from low-income families thereby qualifying for funding, or how often each student attends the program. The educational director spends a large portion of her time working to provide the right people with the information that they require.

This issue needs to be addressed to enable the educational director to provide the necessary people with documents containing pertinent information quickly and efficiently; she currently searches through files and manually counts out the data. By addressing this problem Cynthia Elk will be able to spend her time on improving the programs offered, with an increased amount of funding.

Program Participant Data: A constant setback that the Braddock Carnegie Library and Community Center face is the inability to quickly track attendance. The attendance of students needs to be tracked for bookkeeping records. Currently the only attendance tracking method is a handwritten attendance sheet. Many of the funders require a record of students' attendance to be kept in order that the organization can receive funding. Currently whenever a list of absences is needed someone hand counts the days that each child was in attendance, which is a tedious and time-consuming process.

By tracking attendance it will be easier to present data to funders in order to garnish more money with which to improve the out-of-school time programs. This will also give the educational programs a way to measure the success of various programs. By tracking not only the attendance but the improvement related to attendance the educational coordinator can find which programs are most helpful and which could use a little bit of improvement themselves. This would help to improve the quality of the out-of-school time program.

Information System: For the consulting focus after analyzing the problems that the organization faced it was decided to create an information system that would have the capacity to track program participant data and generate information for funders. The most important part of this database was to ensure that the Educational Director could not only use it, but also be able to change any part of it as necessary. This will help to ensure that the information system is sustainable.

To build and implement the information system we elected to use Microsoft Access. There were a number of topics in Access that we decided to focus on during the consulting process. Some of the topics include: tables, relationships between tables, queries, basic SQL, forms, and reports. In order for the database to fulfill the functions that we set for it we thought that all of these would play an important role.

## II. Outcomes and Recommendations

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### Consulting Outcomes

#### Information System

a. Access Database with Related Tables

A database is basically a system of tables that have certain fields that allow a connection between them. Using Microsoft Access the organization now has a database with ten tables and relationships between the tables established. In addition to having it setup Cynthia Elk knows how to create fields, tables and relationships using Access. She established many of the tables such as “medical info” by herself. Cynthia Elk not only has the knowledge necessary to sustain the database structure but she can also alter the database as needed as the needs of the organization change.

Building the database is a stepping-stone in order to address many issues. While the creation of the database alone does not signify any expanded capacity of the programs, through the implementation of the database many of the administrative details of the organization will run smoother and allow the educational director to put more energy into the programs.

b. Query Building Skills

Rene Hill and Cynthia Elk have both worked to acquire some basic query building skills. Rene Hill created a query, which would output a list of the emergency contact information on every student currently enrolled in the program, so it would be accessible when necessary rather than having to run upstairs to access the information. Through queries the functions that the database fills can be easily expanded, allowing capacity to be continuously expanded. This is easily sustainable as long as they keep creating queries; the simple act of creating more sustains it.

c. Standard Queries

Through saving some standard queries the organization is able to easily gather statistics that will be necessary. By double clicking on the desired query the organization quickly has an up to date statistic on the organization. Currently the organization has saved queries that allow the administration to quickly find out which students are in a specified program, or to gather the emergency information for the students enrolled in the program. Through a set of queries the administration will be able to quickly and efficiently gather data that is important to either them or the funders that they report to. This will allow the organization to spend time focusing on the programs which they provide. The queries are saved and hence sustainable, also they are setup to be easily adjusted as the administration needs.

d. Standard Access Forms

Similar to the Queries there are a set of forms that will be useful throughout the organization. They are basically a friendly interface to input data. Also one form can input data into more than one table. Currently the organization has some saved forms that allow easy registration for students. Currently over 20 students have been entered into the database through the forms. Both Cynthia Elk and Rene Hill have worked through the process of creating forms. They have the skills needed to sustain the forms, as changes are made necessary due to changes in the tables that the forms are based on. The administration can use the forms to make entering data more efficient, this will streamline the organization’s processes.

e. Increased Capacity of Educational Director

Through working on this project Cynthia Elk has learned to embrace technology with confidence. Before the consulting project the educational director used technology in a limited fashion. Her computer use was mainly for email and Microsoft Word. Currently Cynthia Elk uses technology in many aspects of her life. She has gotten Internet connection at home, she now has a home email account, and she has also subscribed to newsgroups through the web. She utilizes the Internet to search a variety of topics. More important than the way that Cynthia Elk currently uses technology in her daily activities is her outlook on using technology. She has come to embrace technology and has lost her fear of technology. This displays an increased capacity on the part of the educational director. Being confident with technology will help her to integrate technology into the programs that will enrich the experience that the students get from the program.

## **Related Recommendations**

a. Login Entrance Kiosk

Description: Have a computer (desktop or laptop) at the entrance in a kiosk structure to have students sign in when they arrive. This could be expanded to have everyone sign in as they arrive; the library currently has people sign in by hand (not the students, just the library visitors.)

Currently the organization has a sheet of paper where people sign in as they enter the library and sign out when they leave. Instead of having this I am proposing setting up a nice looking user-friendly interface that is used solely for having people sign in as they enter. It would have different sign in forms depending on if you were visiting the library or signing in for one of the educational programs.

Rationale: By having an entrance kiosk when the students log in the database could be automatically updated. This would save the administration the effort of having to take attendance every day, and later enter it into the computer. This will cut back on time spent tracking attendance, and allow the organization to further focus on better providing higher quality out-of-school time programs. This allows the database to track attendance without having to put in a significant amount of effort.

Using a computer as the means of logging in seems the easiest however it could easily be arranged in other manners. The students could have ID cards that they scan as they enter, or the organization could use a fingerprinting method. The library could integrate scan able ID cards into their current library card format. I would recommend using a computer format at least initially.

Resources: A computer would be necessary, as well as some sort of kiosk to put it in. The database could be put online in order to allow login, or it could be managed through other mechanisms. There are security issues with having an online login, such as remote logging in. This could be managed through an administrator login necessary to initiate the logins.

A user interface is necessary so that the student can log in. I would recommend that the educational director research relevant topics online, then decide whether she would like to do this herself, hire an expert, or get another CMU student. Some relevant topics include active server pages, SQL. To do this it would probably require hiring someone to undertake the project; this requires money to fund the project.

b. Online Database / Funder Logins

Description: Put the database online through the libraries website, or through a website which would be made solely for the out-of-school time programs, then assign funders identification and passwords.

Rationale: By putting the database online and assigning funders passwords the organization can streamline operations further. The organization can setup the website in a variety of manners, when the funder logs in it can display the information which is relevant to that specific funder, or it can bring the funder to a menu of options on different statistics that are available. The idea in setting this up is to have up to the minute statistics available to the people who need them without the administration needing to spend time preparing the reports. An added benefit to this is that the database is kept up to date and allows people to work from home as necessary.

The mission statement of this organization is to provide high quality out-of-school time programs for the youth and community in the Braddock area, this is really a stepping stone. It would really be implemented in order to make the current processes more efficient rather than directly improve the programs offered.

Resources: To implement this plan knowledge of a scripting language, SQL, and html would be necessary. This could be done by either hiring an expert or learning through online sites, books, or other reference material. Tutorials can be found by searching sites such as <http://www.google.com> using keywords such as tutorial, html, asp and SQL. Some HTML tutorials can be found at <http://www.htmlgoodies.com>, some ASP (a scripting language) tutorials are available at <http://www.imformIT.com> there are other easily available tutorial sites.

I would recommend that my CP complete some tutorials and then decide whether she would like to tackle the issue of putting the site online or hire a professional to complete this for her. Whether the CP decides to do it herself or hire someone I feel the tutorials will provide her with background, which will help sustain the project once it has been placed online.

Microsoft FrontPage also has a feature that allows for the integration of web design and asp (a scripting language). This would be an easy way to put the database online. A helpful website to work with this program is <http://msdn.microsoft.com>, this site has information on all Microsoft applications and can be used to make this transition.

Another way to approach the implementation of this would be to approach Carnegie Mellon University and work with one of the outreach programs to accomplish this.

c. Allow Users to Give and Receive Feedback (in conjunction with Login Kiosk)

Description: Allow for students to enter information into the database in either an anonymous or signed manner. When students log in they would be allowed the option of commenting on any workshops they are involved in, or any activities which they have recently taken part in. Students would also be given the option to check personal information, such as how much they have improved, or any teacher comments that might have been given.

Source: Tracking attendance is complicated to automate because of the risk of students signing people in who are not present. This can be solved in any number of ways, one of which is to give students incentive not to tell give their passwords out to friends. Another method would be to have a list of questions about students, and the computer would randomly generate a question and the student must provide the correct answer to be marked as in attendance. Often times the purpose of a password is

privacy, if we want to get students to keep their passwords secret the password must protect something. Given the data that the organization will have it makes the most sense to have the passwords allow students to check their personal information.

Rational: By adding this feature we hope that the students will not want to give friends the opportunity to make them look bad by posting comments from them. Not only would sharing the password allow friends to play practical jokes it would also allow students to see your private information such as grades. This would be an incentive to not allow your friends to sign you in.

Resources: This would not take that much additional work, especially if the organization is implementing the web interface as well as the login kiosk. In terms of additional resources this would require the creation of a report in access as well as linking it through frontpage. Some resources for integrating FrontPage and Access can be found at [www.msdn.microsoft.com](http://www.msdn.microsoft.com). This would also require time, it should not be a lengthy project if the other two afore mentioned recommendations are implemented.

## **Additional Recommendations**

### Backup Files

Description: The organization currently backs up the shared office wide drive, however many of the files that are crucial to the educational programs are not saved on this drive. I am proposing that Cynthia Elk begins to back up her computer on a regular basis.

Rational: While nothing has currently gone wrong to necessitate the need for a backup of the computer it is a precaution that is worth the time spent. By backing up her computer on a weekly basis Cynthia Elk can not lose more than one weeks work at a time. This way in case of an emergency the files will still be accessible.

Resources: This does not take much in terms of resources. The computers already have the necessary software to backup the hard drive. All it would take is having someone show Cynthia Elk how to back up her hard drive, which files to save, once then she can backup her hard drive once a week.

### Build & Implement Additional Database for Woodland Hills School District

Description: The Braddock Carnegie Library & Community Center is the central of 5 sites that host the Woodland Hills School District Tutorial. The program doesn't currently have a database, which combines the information from all the sites.

Rational: Through building a database to combine the information from the five sites, the organization manages to streamline processes. This also allows the educational director to ensure that her gained knowledge of Microsoft Access is sustained, and use her knowledge to further expand the capacity of the organization.

Resources: To complete this the organization needs to use Microsoft Access that they already have. They also need to decide on a means of combining the information. They can use the internet as a means to upload the individual site data or save it on disks to transport it. The Internet would be a more efficient means of combining data. This means that the database would need to be put online which would require similar resources to the recommendation "Online Database / Funder Logins" above.

### Offer Technology Classes to the Students

Description: The computer labs are used to help the students become more comfortable with technology. They can be used to not only do this but also help give them skills that will be useful in the future. Skills which people don't necessarily just pick up through continued exposure to computers.

Rational: The students benefit from exposure to technology, by adding to their technological skills they will be more marketable when the time comes. I recommend offering classes in different types of programming. Offer classes in HTML web page building, C++ and other applications.

HTML is a helpful skill for people to have, the students would be able to create web pages and post them online. Having a web page online would allow the students to see the output of their work, as well as show their friends what they have learned. Being able to create web pages is a useful and marketable skill.

C++ is one of many programming languages, while there are many different languages they have many things in common. One thing that many languages have in common is the ideas that are represented. So while teaching C++ allows the students access to only one language it opens up the world of programming to them.

The importance of computers in today's technological environment is constantly growing. By offering classes in different technological topics the students are better prepared to work in today's society.

Resources: Classes require teachers be hired. The classes can be done in a year long fashion, or have tutorials. For tutorials teachers would only be needed for a shorter period of time. The administration could try to get a teacher from the Woodland Hills School District or they could look to hire someone elsewhere. It may be possible to get students from Carnegie Mellon University, or another college in the area to teach the classes.

Computers for these classes are already in place with Internet access, which means that less is needed. For the HTML classes the library currently has a web page, which the students could post pages on, if the library gives them permission. Otherwise the after school program would need to have a site where students could post their websites.

For the C++ classes the organization would need to purchase software to install in the computers. Code Warrior is software that allows C++ programs to be run, it is sold for 59 dollars at [www.codewarrior.com](http://www.codewarrior.com).

#### **About the Consultant:**

My name is Gurukirn Cheng. I am a junior business major computer science minor. As of this summer I am entering a masters in information systems management program here at Carnegie Mellon University. I hope to find a career that allows me to use a variety of my skills in the workplace.