McKelvy Elementary School

Student Consultant, Vishal Radhakrishnan
Community Partner, Annette Jordan

Situation Description

Organization

McKelvy Elementary School, situated in Bedford Avenue, Hill District, Pittsburgh, is dedicated to providing a learning environment for students from Kindergarten to 5th Grade. It has been serving the Hill District community for the past 83 years in this fashion. The school enrolls roughly 250 students who are broken into classes of 20 each. All the students and most of the staff are African-American. The school concentrates on helping the deprived students of Lower and Middle Hill District communities and does this through close interaction between the staff, students, parents and the community. This is made possible through the small class sizes, multiple extracurricular programs and dedication of the staff.

Programs

- The primary education imparted to the students include training in math, reading, spelling, science, social studies, and physical education.
- The school has a seven-pronged moral competency program which focus on love and respect, self-esteem, self-persistence, self-confidence, orientation learning, interpersonal skills and self-reliance.
- The school has an award-based rewards program that promotes excellence in academics, citizenship, and attendance.
- Extracurricular activities like participation in sports, choir, field trips, safety patrol, energy patrol, and an African drumming group are strongly encouraged.
- There is a growing focus on computer based education as many students are brought regularly to the computer labs to participate in reading exercises and learning to navigate the internet. Students spend time researching the web for resources that allow them to learn more about their heritage and communicate with schools in Africa with which they have partnerships.
- The Village at McKelvy: The school focuses on advancing the community and bridging the academic gap between the inner-city students in Pittsburgh and the rest of the nation. To that end the school runs "The Village at McKelvy" a program that employs special staff that work closely with the students both inside and outside the classroom to develop their academic skills and teach them learning tools to succeed in their academic career.
- After school homework help: Teachers work with students after hours to assist those who need extra attention and review their performance over time to gauge the effectiveness of their efforts.
- Various College Programs: McKelvy works with Carnegie Mellon, University of Pittsburgh and Duquesne University to participate in their high school programs.

Facilities

The school is housed in an 85-year-old building, a mile East of Downtown Pittsburgh. The building has three floors, with the first floor containing the cafeteria, an old computer lab, the gym and the music room. The administrative offices are located in the second floor, where three staff workers handle the routine responsibilities of the school. Housed inside this office is Mrs. Jordan's office. Her air-

conditioned office has a row of filing cabinets, which are separated from the rest of the office by her work desk and chair. Guest chairs, a small conference table and bookshelves, which double as showcases, occupy the rest of the office.

The rest of the second floor contains a library and classrooms, which extend onto the Third Floor. The Third Floor, in addition to the classrooms, contains the relatively new computer lab. The school also has a large open field in the rear, which run to the foothills of the local hills. The school also has facilities that are not usually associated with a school. McKelvy houses a washing machine and dryer, which are used to clean the clothes of students who are not able to afford the cost of cleaning and maintaining their clothes. This is a key example of the ways in which the school extends its love to the students.

Technical Environment
- Each classroom is equipped with a Pentium II 266Mhz computer with 64MB RAM
- There are two main computer labs; one with 25 computers with similar configurations and HP 4000 printers and another with 25 older Intel 486 computers with 8MB RAM each.
- The Principal and all administrative staff have a PII 266 Mhz computer with 64MB RAM
- The school's computers are networked with each other and to a main server that dials into the Board of Education's server.
- The newer computer lab houses a scanner and a LCD projector.
- The school also possesses a SmartBoard – an electronic whiteboard that can be used for teaching purposes
- McKelvy owns a digital camera that can be borrowed by teachers to use in their classes

Technology Management
The technical infrastructure is partly maintained primarily by Geri Abrams, a 4th Grade teacher who doubles up as the computer lab manager. The Pittsburgh Board of Education supports the infrastructure that they deployed in the building, through their IT department. The school uses this rather spotty resource whenever they encounter obstacles that they are not able to solve themselves. Another student consultant, Heather Devine, has been working on this segment.

Staff
The institution is run by Annette Jordan, the Principal. She is supported by 8 educational assistants and two secretaries who also double up as student counselors and mediators McKelvy employs 20 teachers, many of whom are responsible for a 20 student strong section in a grade.

Focus of the Consulting Partnerships

McKelvy Elementary School had been endowed with significant computer hardware but the teachers and staff were not properly trained to use these resources to their fullest extent. Therefore, one of the major problems that the school had was in remedying this and another major issue with McKelvy is that the school, after all these years, is going to be closed down in June and replaced, in the same location, with a school for the specially talented. Therefore, the focus of the institution has changed and the partnership also had to deal with these issues. In detail, these were the issues that we encountered and researched.

Problems and Opportunities

1. Lack of ability to utilize the technology provided
The Board of Education decided to give the staff computers and technological equipment but did not adequately train them to use the technology. The mission of McKelvy Elementary School is to provide the best possible experience that the students can get, and by not knowing how to use the equipment given to them, they are not able to streamline their work and teach the students the technology.

Approach
The Principal spent time learning how to use the computer as more than just a typewriter but as a word processor and a tool to organize her data and process information.

Outcomes

1. Principal Jordan increased her skills as a computer user

Windows environment: Gained confidence over her use of the Windows platform and the applications on it. She now has better control of the organization of data – her cleaning of the desktop area and storing her files on separate directories exemplify this. Learning to use applications more efficiently has saved her a considerable amount of time, as she is able to reuse documents to streamline her job processes. Things like copying and pasting were not known to her and this discovery has benefited her significantly as a lot of her work involves composing letters and easy transferring of data from other applications like her email account is very useful for her.

She has increased her knowledge of the computer, in her learning of Excel. She was able to solve her data gathering issues through this newfound knowledge as she used the statistical tools of Excel to analyze staff evaluations and recommendations.

A lot of the routine methods that went through to perform functions on applications were reviewed and discussed as I presented better and faster ways of doing the same task. In doing this process, she now understands the logic behind the functions and this gain in knowledge of the GUI has manifested itself in increased confidence shown by her initiatives in teaching others how to understand the interface and how to navigate through it.

Initially, Mrs. Jordan expressed lack of confidence in her Internet navigation skills and wished to learn more about searching on the web and how to get better results when querying. We together found that she is able to, with a fair amount of success, search for the information that she requires. Going through additional techniques to search for information and also introduction of various search engines enabled her to unearth various documents about McKelvy that she was not aware of. She was also able to pull up academic documents on educational techniques.

Over the course of this consulting period, we have worked on MS PowerPoint as Mrs. Jordan would like to present to the Board of Education with the help of this application. I was able to work with her on teaching the basic functionality of the application, and she was able to instantly produce a few well laid-out slides. At present, she is waiting for the other parts to be given to her from the others in the school, for her to assemble them together into one large presentation. Once that has been done, I anticipate a full, cohesive document being put together all by herself. This was one of the initial goals of the partner, which is in the process of being completed.

Part II

A significant part of the work that I have been doing with Mrs. Jordan is to teach her how to use applications and more importantly, how to learn to learn. As a result, she has been getting a better feel for the GUI environment and the inherent logic that is built into the operating system. She has greater expectations of the layout of applications, and therefore is able to start any new application and very quickly get her bearings. Therefore, I believe that these skills are sustainable as she builds on these through experience. Just from watching her improve her adaptation skills over the course of this period, from learning MS Publisher to learning MS PowerPoint, I can see a trend that will be rising in the future through practice and experimentation.

The only risk is that Mrs. Jordan will get bogged down in work and not have the time to experiment. As a Principal of a school that is about to close down, these next few months are going to be very hectic and in her new job, the initial few months again are going to be extremely busy, therefore I perceive this to be a big danger. But apart from that, I cannot see anything that should keep Mrs. Jordan from reaching the potential that she is capable of.

2. The progress that was achieved by Principal Jordan in addressing the issue of computer literacy among the staff

Most of the teachers at McKelvy are not computer literate. While some of them do not know how to even turn on a computer, some are moderately capable. There are a few teachers who are well versed in utilizing technology to suit the needs of the school. Mrs. Jordan wants to be able to communicate with everyone through email and reduce paperwork. She would like to take many processes electronic and have the teachers send her the documents to her via email or file sharing.

To that effect, Mrs. Jordan selected three teachers who are among the least tech savvy and has been teaching them basic Internet functions like setting up an online email account and navigating through websites. The teachers now use their accounts and communicate with their relations through email. Due to the limited amount of time Principal Jordan has, she has not been able to spend further time teaching them, but in the future she plans to spend more time making them comfortable with the use of Email as a tool for interoffice communication and having them directly contribute towards the McKelvy memorial website program initiated by another Student Consultant, Heather Devine.

Recommendations

Recommendation #1 – Experiment and try out new software applications

My recommendations for Mrs. Jordan for this particular area are rather simple. I recommend that she spend time experimenting and trying out new applications and seeing what they can do. Also, I recommend that she explore and learn about the various options and features in the applications that she uses, like MS Word. This will further enable her to perform to her capacity and lessen the amount of time that is taken for her to do her daily tasks. This will also enable her to do things that she was not able to do previously on the computer and therefore further enhance the role that she plays in the academic system in Pittsburgh.

To enable her to learn more about these Microsoft applications, she can use the following online tutorials

1. **http://www.microsoft.com/education/tutorial/default.asp**
This is the official Microsoft site that gives you access to tutorials for all the Microsoft products. They are from the horse's mouth, so to speak, and provide a fully detailed, easy to learn, excellent platform to learn all the features of any of their applications.

2. **http://www.baycongroup.com/word.htm**
   Great tutorial for Microsoft Word; it walks the reader through the basics and addresses all the details also, allowing the user to become an expert at their own pace.

3. **http://www.baycongroup.com/excel.htm** - Similar tutorial on MS Excel.

I would like to ensure that she furthers her pursuit of using the internet as a resource for increasing her knowledge base. To do this, she needs to be able to search for documents or articles more efficiently, and a part of that process is to explore various search engines and learn more about techniques used to get better responses from engines. Towards that, I recommend the following search engines. These are the major search engines that rank in the top ten search engines, as evaluated by ZD Net, an Internet trade magazine. The compiler of this list is in no way financially related to these institutions.

a. **http://www.vivismo.com** - This search engine categorizes hits into neat little folders that you can expand, just like in windows, to gain more information.

b. **http://www.google.com** - This is a no-frills search engine that has won many awards on their depth. Sometimes skewed towards academia

c. **http://www.yahoo.com** - This site has its content physically added by people, so the quality of hits are usually high.

d. **http://www.lycos.com** - This also has an academic bent as it started off from CMU. Has a category based listing

e. **http://www.altavista.com** - Has a fast response time and a strong focus on multimedia like clip arts and graphics galleries.

For more knowledge on techniques to search, the partner can visit **www.searchengines.com** and **www.searchenginewatch.com**.
A chart comparing the various search engines described is attached in the appendix.

Recommendation #2 – Develop a plan for training teachers

All the recommendations that I presented in the other problem can be repeated in this instance, as resources that people can use to further their skills. In addition, from a strategic perspective, there are a few ideas that can be put to use to teach the teachers. The issue becomes, not one of just sustaining education, but one of rolling out education on such a large scale. Associated with it, is the incredible task of motivating people to learn and spend time building their skills. The fruits of having teachers technologically savvy are obvious. We will have teachers who will encourage their students to spend

time with computers. The current system is based on the teacher deciding whether the students go to the computer lab or not. And if the teachers are not able to function effectively in front of a computer, then they are not in a position to teach the students, and as a result deprive students of this benefit. To have teachers motivated and ready to learn and to impart to them this education, I recommend the following options.

1.   In order to motivate the teachers, I suggest that a presentation of how their learning enhances the experience of the students should be conducted. This will impact the teachers as they have dedicated their entire lives towards the betterment of these students and will be inspired to change their ways for them.

2.   In many classes, there are students who have better control of the computer than their teachers. To have the children come and show their teachers how they have done it would be interesting and also motivating for the teachers. The teachers will be, in a way shamed, but being outdone by little elementary children builds awareness and not resentment, as they are the same individuals that the teachers adore.

3.   A program be instituted where the teachers who have a better understanding of computers teach the others who haven't gotten to that point. Since teachers are project-oriented, I recommend that they break it down into discrete projects and have each teacher deal with one of them.

Appendix A

Crawling	Yes	No	Notes
Deep Crawl	All	Excite	
Instant Indexing	AltaVista (pages appear within days)	Others	
Image Maps	AltaVista, NLight	Excite, FAST, Google, Inktomi	
Meta Robots Tag	All but Excite	n/a	
Link Popularity Helps Deep Crawl	All	n/a	
Learns Frequency	AltaVista, Inktomi,	Excite, FAST, Google, NLight	
Paid Inclusion	Inktomi	Others	
Indexing	**Yes**	**No**	**Notes**
Full Body Text	All	n/a	Some stop words may not be indexed
Stop Words	AltaVista, Excite, Inktomi, Google	FAST, NLight	
Meta Description	All	FAST, Google, NLight	
Meta Keywords	All	Excite, FAST, Google, NLight	
ALT text	AltaVista, Google	Excite, FAST, Inktomi, NLight	
Comments	Inktomi	Others	
Ranking	**Yes**	**No**	**Notes**
Meta Tags Boost Ranking	Inktomi	AltaVista, Excite, FAST, Google, NLight	
Link Popularity Boosts Ranking	All	n/a	Very important at Google
Direct Hit Boost Ranking	HotBot	Others	

Activity	Who Owns	How long?	Target Date	W1 2/28-3/6	W2 3/7-3/20	W3 3/21-4/3	W4 4/4-4/10	W5 4/11-4/17	W6 4/18-4/24	W7 4/25-5/1
Assess the technical status of staff	Cons/CP	1 wk	3/6	▓						
Examine experiences of users through interviews	Cons/CP	1 wk	3/6	▓						
Map out the distribution of people's skills and determine how many people need to be coached	Cons/CP	1 wk	3/6	▓						
Determine those who are competent	Cons/CP	1 wk	3/6	▓						
Initiate teaching sessions	CP	1 wk	3/20		▓					
Examine response of session through noticing increase in capabilities	Cons/CP	1 wk	3/20		▓					
Gauge effectiveness of session	Cons/CP	1 wk	3/20		▓					
Elicit feedback from knowledge transfer	CP	1 wk	3/20		▓					
Motivate staff to learn	CP	1 wk	4/3			▓				
Prepare for meeting with staff – get presentation material prepared	CP	1 wk	4/3			▓				
Elicit feedback from staff on usefulness of motivational presentations	Cons	1 wk	4/3			▓				
Establish weekly group sessions	Cons/CP	2 wk	4/17				▓	▓		
Review weekly progress	Cons	2 wk	4/17				▓	▓		
Coordinate between teachers	CP	2 wk	4/17				▓	▓		
Coach teachers and partner	Cons	2 wk	4/17				▓	▓		
Review progress and complete knowledge transfer	Cons	2 wks	5/1						▓	▓
Compute progress over teaching period – examine the learning curve over the past few weeks	Cons	1 wk	5/1						▓	▓
Analyze growth opportunities	Cons	1 wk	5/1						▓	▓
Examine future options	Cons	1 wk	5/1						▓	▓
Motivate users to further their education by showing the potential for growth in them	Cons	1 wk	5/1						▓	▓