Park Garden s Three-Partners Program:

Classroom Teacher, Computer Teacher, and Librarian

Overview

An example of Park s Three-Partners Partnership Program in action:

Unit of study: Middle Ages
Activity: Create a Middle Ages dictionary

- *The classroom teacher, librarian and computer teacher plan collaboratively, deciding what skills will be taught, what resources will be used, what curriculum expectations will be addressed, how the results will be assessed.*
- *Students do research on the computer (Internet) and in books, going back and forth between the two sources to get information for their dictionary.*
- *Students spend class one period a week in the library, and one in the computer lab.*
- *For example, students chose M for MOAT:*
- *they search the Internet and CD-Roms to find information on moats*
- *if there is not enough information available, books are also provided*
- *students write jot notes after being taught note taking skills and how to highlight important information*
- *some students take the information and narrow it down to five key points about a moat*
- *others make a drawing, using resources from the computer or a book*
- *others choose to use KidPix to draw a moat on the computer*
- *Students use library information and computer information to complete the task.*
- *The classroom teacher, librarian and technology teacher assess the unit together.*

The principal s views on computers:
I think that computers are shaping education. Computers have changed education more than education has changed computers. The things we spend time on in school now are much more related to computers than they ever used to be. It s had a tremendous influence. Teachers will learn to use computers in a way that is not just slotted to kids getting jobs in the business field, they ll teach kids to use computers to think and to be creative. And they ll have kids using computers as tools and not computers running the kids lives. The kids will be running the computers.

The principal s views on technological innovations:
Innovative people can be innovative regardless, but if you really want the whole system to move, then politics has a really big role to play. If the government comes out and does a lot of funding with technology, it will make a big difference for all schools. If they don t fund for technology and don t insist that schools

have things, the whole system won t progress...

Students in grades 4-6 at Park Gardens Junior Public School are part of collaborative teams called Three-Partners , in which the classroom teacher, computer teacher, and teacher-librarian share the planning and teaching of classes. This pedagogical innovation, which has been in operation for six years, is known as the Three-Partners Program. Three-Partners are organized by grade, so, for example, the school s two grade 6 teachers, the computer teacher, and the teacher-librarian make up the grade 6 Three-Partners. Grade 1-3 students focus on learning basic computer skills in preparation for participation in the Three-Partners Program.

At each grade, the Three-Partners teachers share responsibility for determining outcomes, planning and preparing activities, and evaluating students. Common planning time is set out in the school s timetable to facilitate this collaboration. The classroom teacher is responsible for developing students writing, editing, and presentation skills, and some computer skills related to classroom learning. The teacher-librarian is responsible for developing students research skills, including the preparation of outline form notes and thinking skills. The computer teacher is responsible for teaching students the required skills for accessing software and electronic information sources, and for helping them produce a final, multimedia, computer-based product. All three teachers participate in assessing student achievement.

Each participating class visits the computer lab and library twice a week, and the class divides in half between both locations. In the Three-Partners class, students participate in activities to develop their thinking skills, research, make notes, edit on paper as well as with the word processor, lay out and design pages on the computer, and create computer-based multimedia presentations. Grade 1-3 students spend 2 periods a week in the lab and one in the library, using literacy-based computer programs and integrating what is happening in the regular classroom as much as possible.

The goals of the Three-Partners program, as set out in school documentation and on its website, are to:
- serve as an extension of the regular classroom program, especially in social studies and language arts;
- improve the level of computer literacy of students;
- develop research skills using a wide range of resources books, films, multimedia, computer, Internet, and ScriBE (the school district s email system).

Program benefits for students and staff are also outlined in the school s documentation. For students, these benefits include:
- increased self-esteem;
- creation of a more level playing field for inner city students;
- enhanced cross-curricular learning;
- increased motivation;
- lowered pupil-teacher ratio;
- giving the community (students and parents) something of which to be proud.

The stated benefits for staff include:
- increased skill and knowledge in using new technologies and a wide variety of resources;
- improved professional pride by offering quality programs for students;
- provided a focus for the school;
- extended quality programs in the classroom;
- introduced new ideas and skills that have led to further innovations.

The Three-Partners program is integrated completely into the prevailing school culture, and in fact serves to

connect many aspects of the school. Examples of this integration include:

- The program is adapted to meet the needs of all students, including ESL (English as a Second Language) and Special Needs students;
- The program is tied in completely with the curriculum;
- Teachers work together to complete the students report cards.

In support of this idea, the principal states,
(the Three-Partners Program) connects so many things together that are unconnected in a lot of schools...it connects them through the structures in terms of timetabling, through the planning with teachers, through the choices made in terms of the curriculum, and the fact that money goes towards it as well and the support and the staff decisions.

Students and parents also see many benefits to the Three-Partners Program. Students say they enjoy working on the computer and the skills they are learning will help them later on in life, while parents see the confidence and skills that students are gaining while in the program.

The Past

A former teacher and librarian initiated the Three-Partners Program at Park. The former principal recognized the potential of the program, and provided the necessary support to get the program going in the school. When the current principal arrived at Park, she met with the staff to determine if they wanted the program to continue:
The staff as a whole decided that they wanted it to continue, they wanted the collaborative planning to continue...as a new principal, I needed some kind of commitment from the staff that they wanted to continue.

The program is now fully integrated into the culture of the school, with the extra staffing provided as a result of being an inner-city school dedicated to the computer lab.

In the principal s view, the school has become more innovative in the last four to five years with the implementation of the Three-Partners Partnerships program and a school-wide emphasis on information and communication technology (ICT). However, she also cites indicators of innovations that predate her time with the school, such as a working fireplace in the library and shower stalls from a time when it was necessary to clean children who arrived at school in need of a shower. Offering an explanation for this history of innovation, the principal states that I sometimes think that in inner-city schools, depending on who the principal is, you have a freedom to be innovative if you choose to be.

A number of barriers were overcome to reach where the school is now in terms of the Three-Partners Program. For example, one of the barriers encountered when the program was initiated was the intense reliance on the computer teacher for assistance in all areas of ICT. To deal with this issue, the school is now trying to spread out the resources now, rather than focus them into one person...because it is very real that somebody is going to burn out.

Another barrier that is still being addressed is the time and quality of teacher professional development. In order to remain current, teachers require on-going training. The computer teacher is responsible for planning and running most of the in-school training sessions at Park. Trying to meet the range of needs of a varied staff, with only one teacher doing most of the training, has been a difficult task. The principal encourages

teachers to take courses from the school Board, and ensures that when new staff are hired, their computer knowledge is taken into account so more people are made available to act as facilitators and trainers.

A physical barrier to initiating the Three-Partners program has been overcome through structural changes to the school. When the program began, the library and the computer lab were two separate rooms in the same hallway, but unconnected. With the computer teacher and the librarian working closely together, the physical barrier of not being able to quickly consult with each other needed to be addressed. The school took advantage of a grant made available from the school board for technologically innovative schools to make structural changes. A wall was removed and the library enlarged a little to facilitate that going back and forth of ideas and movement of children themselves. The school worked with architects, planners and engineers to decide what changes to make, considering ...traffic flow, how would the library be changed, and how the lab was going to be designed.

An inadequate number of computers available for students to use was another barrier encountered when initiating the Three-Partners Program. The principal and staff recognized that many more computers were needed to implement the program effectively, because students began work in the lab and were unable to continue it in the classroom due to lack of computers. Through constant fund-raising, the school budget and Board [*i.e*., school district] upgrading programs, the school has addressed this issue. While the school staff would always like more computers and software, the current student-computer ratio of 5:1 is much better than the provincial and Canadian averages for elementary schools.

The Present

The school s vision for ICT is embedded in its broader mission statement, as follows:
Park Gardens Junior Public School provides students with high quality programs that emphasize numeracy, literacy, and social responsibility. A special focus throughout the school is the development of a wide range of computer skills.

Evidence of the school s ICT vision is also found in its web-site description of ¼The Lab-Library Connection at Park,¼ which states:
Computers need to be used as a tool and as a source of information with a connection to other areas of the school such as the classroom and the Library in order to be beneficial to students...The Three-Partners Program at Park is committed to integrating computers into the curriculum to benefit students learning. This is not just teaching computer skills...scheduled collaborative planning, teaching, and monitoring occurs among the teacher librarian, computer teacher, and classroom teacher.

The school s ICT infrastructure has been built up over time. As of October 2000, the school is equipped with:

- a computer lab consisting of 20 Apple computers (including 18 iMacs), a SharpVision video projector, a Sony Digital Maverick camera, an UMAX Astra 1220S scanner, three printers (Image Writer II, Laser Writer Select, Epson Stylus Colour 740), a CD-Writer and an LCD-panel;
- full access throughout the school to the school district's Wide Area Network (WAN) and the Internet;
- at least two Apple computers in each classroom from kindergarten to grade 6, most of which are connected to the school s local network;
- a fully-automated library using the Winnebago system that includes a catalogue browser, a checkout computer and separate server, plus two additional computers in the library available for student research purposes.

According to the technical questionnaire and principal s survey, the school has approximately 60 operational computers in total, about 50 of which are connected to a local network that supports software and file-sharing between classrooms and the computer lab, and provides email and Internet access. A total of 45 of these computers are multimedia computers, equipped with a CD-ROM and a sound card.

As mentioned previously, the current student-computer ratio at Park is 5:1 In addition, almost all of the computers in the library, computer lab and classrooms are connected to the Internet. The computer teacher, a board-level computer technician assigned part-time to the school and 2-3 other staff members all serve as technical support in the school. The board-level computer technician is in the school once a week to address technical problems.

The following types of software are available for teaching and learning on at least one computer in the school: word processing, desktop publishing, spreadsheet, database, graphics, statistical/mathematical programs, programming languages (HTML, HyperCard), drill and practice programs, tutorial programs (All the Right Type for keyboarding skills), simulations, educational games, recreational games, for constructing/administering tests, Internet browser, email software (ScriBE), encyclopedia on CD-ROM, video/audio/authorware, and presentation software.

In practice, ICT is used for research (Internet), publishing, graphics, multi-media, word processing, e-mail, projects, designing web pages and games. Every classroom in the school has at least two computers, in addition to the fully networked computers in the computer lab. Computers are used in math, language, creative arts, computer education, multidisciplinary projects, science and social studies.

Most teachers at Park are comfortable using a computer to write a paper, search for information on the World Wide Web, send and receive e-mail, and draw a picture or diagram. On the other hand, most are not comfortable using a computer to create and maintain web pages, use a data base, program, or present information.

Main Hypotheses

Role of technology in educational innovation and improvement

At Park, technology has proven to be a strong catalyst for education innovation and improvement. The principal of Park sees computers as ¼¼the hook, they're the motivator and they're what the kids are going to have to learn¼within the inner city, particularly.¼ Thus the Three-Partners program provides an opportunity for students to learn traditional academic research and study skills, while at the same time acquiring new technological skills.

Park s focus on ICT has increased pride in the school, and evidence of this pride is abundant. Before the program started, Park was known as a rough school, a label that would not be apropos today. The principal stated that previously the school was called Park garbage, which hurt the children. Now the school uses the slogan Park proud to reinforce the school's newfound pride that has its roots largely in technology and the Three-Partners program. Further evidence is the respect shown by students for the school property in general and, specifically, for the care that they exhibit for the computers and other equipment.

One can also see the pride reflected in the students' positive attitudes toward their schoolwork, their motivation, and fewer behaviour problems than what teachers said they expect to see in inner city schools. Encouragingly, Park s grade 6 students scored substantially above the district and province on a province-wide attitudinal survey carried out during the 1998-99 school year on their responses to two statements: I like to write and I am a good writer.

The principal feels a number of Park s accomplishments are a result of the school-wide focus on ICT. These include:

- In 1999, the school was named a member of the Network of Innovative Schools (NIS), sponsored by Industry Canada s SchoolNet, because of its school-wide focus on information and communications technology.

- Board personnel often recommend the school to individuals and groups wishing to visit schools that are innovative in ICT and offer quality programs in literacy. The school has hosted people from other countries, the Ministry and other boards.

- The school has been written up in the media several times for ICT related programs.

- Park was chosen to be part of the Early Years Literacy Project by its school district (main criteria was a demonstrated commitment to literacy).

- The school was chosen as one of 25 schools for a $2000 grant for innovative teaching for the work done promoting literacy beyond the classroom.

The collaborative nature of the Three-Partners Program has also had an impact on the school s educational innovation and improvement. The principal has established structures to reinforce and facilitate collaboration among the school staff, involving Three-Partners and non-Three-Partners teachers alike. She also credits the staff for their keen attitude toward working together in a shared commitment to level the playing field for their needy student body. Her own words express this succinctly, You need both, willingness and wanting to, and built in time. Other contributing measures and structures that the principal set up include clarifying the respective roles and responsibilities among Three-Partners teachers, and requiring staff to set a budget collaboratively.

The principal and staff who were interviewed all share the view that this school is quite unique relative to others in which they have taught in terms of the extent to which staff work together and share information and knowledge with one another. The fact that time for co-planning and co-teaching is timetabled into the school schedule is cited by one and all as an important, and even crucial variable to both the success of the Three-Partners program and the general collaborative mind set among staff.

Diffusion of the innovation

At Park, the diffusion of the innovation followed the traditional diffusion pattern for innovations. Initially there were a small number of early adopters, followed by institutionalization of the innovation with the majority on board, and a small number of laggards who are late in adopting the innovation. The program started with a couple of knowledgeable people, they trained others, and the teachers have gradually built up their skill level so they can comfortably integrate ICT into their teaching.

When the principal identifies visionary teachers, she supports them and tries to keep the roadblocks out of their way. Some of the visionaries at Park were hired before the current principal arrived, and they were the ones to initiate the Three-Partners Program. When the current principal arrived at Park, the program was more clearly defined, and staff consensus determined that extra staffing would go to the computer lab so the Three-Partners program could continue. At this point, most staff members were on board with the program, feeling that it s our job, we can t be computer illiterate.

The principal states that the people who are not terribly interested, they hear other people talk about it and they want to know something about it. The principal has established an environment to promote growth, rather than pushing reluctant teachers into the program. She says that if she were to start this program in another school, she would follow a slow and gradual implementation process:
I doubt very much that I would just impose it right away. I might start it with a few people who are interested and then build it from there and then at some point I might say: this is what we re going to do! But I would make sure I had some support before I did that.

ICT implementation outcomes

According to the principal, successful implementation of ICT at Park has depended mostly upon staff competence in the integration of ICT into instruction and learning. She feels that teacher lack of knowledge is a barrier to implementing Three-Partners Program. The Program started with a couple of knowledgeable people, they trained others, and gradually they have built up teachers skill levels so they can comfortably integrate ICT into instruction and learning.

The technology teacher provides most of the school s professional development during lunch hours and after school. Teachers can request particular training, and the technology teacher tries to meet their needs. Two other staff members assist with ICT training when required. The principal feels that staff development is a high priority, and supports teachers requests for external training whenever possible.

As a result of this focus on training, the teachers feel they have become dependent on technology. They state that ICT saves them time, and that without it, the richness of the program for students would suffer. The principal also discusses the role of student ICT knowledge in the program:

I think it s possible for the kids to do more teaching at the older levels...Here, the kids are not that far long yet. So the teacher are still a little bit ahead of them and there s still a focus on: this is how we want you to do it. And then the kids do it. And I don t know whether that s because it s inner city and the kids maybe need more of that structure, or whether that s just how we work.

At Park, staff ICT competence is essential for implementing the Three-Partners Program. Student ICT competence is then dependent on teacher competence.

Student academic performance

At Park, all students have equal access to ICT. However, the principal and teachers feel that even with this equal access at school, more advantaged students will increase the performance gap with disadvantaged students. Some students have computers at home, where they can practice what they have learned in school, and where parents can show them things and help them out. These students pick things up more quickly, and their quality of work is ahead of the other students. Students who only have access to computers at school end up at a disadvantage. Even with teachers effectively teaching ICT at school, students with no place to practice these skills outside of school see their academic performance suffer. The school attempts to address

this problem of access with computer clubs after school, but even this is not the same as having a computer at home.

The teachers at Park feel that computers are a strong motivating power in helping inner city students to learn and succeed in areas they might otherwise struggle with. As one describes it, The lower kids who are hesitant to write in their journals jump at writing on the computer. They re not scared. Computers are really motivating.

As the principal says:
The difference between the haves and the have nots will be more and more dependent on technology. That ties back in with the inner city and giving them an opportunity.

Academic standards

The staff at Park feel that successful implementation of ICT will lead to the same or higher academic standards in spite of the low quality of many ICT materials. Academic standards are a function of teacher and school expectations and not of the standards of textbooks or ICT materials.

All staff are acutely aware that ICT knowledge and skills are necessary for their students future success and that, for the majority of these students, school is likely the only place where they will have such learning opportunities.

The Three-Partners program is clearly an integral part of the school's curriculum, one which places an overall emphasis on literacy, numeracy, and social responsibility, while focussing on developing a wider range of computer skills. As a result, any attempt to isolate the Three-Partners program and attribute specific student achievement outcomes directly to it would be misleading. Indeed, neither the school staff nor parents would make any claims about measurable achievement gains due to the program. This was despite the fact that, according to the principal, Park students in the last few years were doing fairly well on annual, provincially-mandated tests of reading, writing, and mathematics in grades 3 and 6, yet lower overall than the average for the school district and province. There were, however, other outcomes that can be directly linked to the Three-Partners program.

First, and perhaps foremost, is the increased student skill in computer usage. As a result of the program, most students become very adept for their age at using the word processor (ClarisWorks), the web browser (Netscape), and at integrating text, graphics, and images into HyperStudio. The principal said that if there was a provincial test for computer skills, the students at Park would be miles ahead. A school district consultant knowledgeable about the school described the grade 6 students as very advanced users. The two non-Three-Partners teachers we interviewed shared this view: one teacher said she was amazed at what these children can do with the technology; the other expressed her amazement too with the very professional-looking presentations that the grade 6 children are able to create.

Some teachers expressed concern that students do not have as much access to technology once they leave Park. However, even if students do lose some of their computer skills after Park, they will take with them a more generalized sense of pride and accomplishment, a feeling that they can do what other students from more privileged backgrounds can do. One teacher expressed this sentiment well:
I think any chance they can get, any step up, they really need and hopefully that will carry them all through junior high and high school and they will feel just as capable as everyone else.

The principal is hopeful too that as a result of the Three-Partners program, students will have increased

confidence because they know that they can create things, know that they can do things.

Projection to the Future

Sustainability

The Three-Partners program has its roots in *Partners in Action*, a province-wide initiative started some 10 years ago that fostered team teaching between the librarian and the classroom teacher. Six years ago, the previous principal of Park adapted this program and included a computer teacher. According to the district computer consultant, the present program has survived three computer teachers and two librarians. Clearly, the current program is well established within the school culture and structure. Furthermore, the Three-Partners program operates within the context of a school-wide commitment to computers that is proclaimed in the school s mission statement and integrated into its planning processes and documents. In addition, the principal takes advantage of any resources offered to help maintain the program.

As noted previously, staff have unanimously decided each year that the school s extra staff allocation, awarded as a result of the low income status of the school community, be used to support a full-time computer teacher. They have not taken this decision lightly, because of the trade-offs that had to be made. The principal explains:
Right now, I've played around a lot with my staffing this year. I don't have nearly...the support staff outside the classroom that I'm supposed to have. I don't have the ESL [English as a Second Language] teacher I'm supposed to have, I don't have the special education resource teacher that I'm supposed to have...We folded that in to make the class sizes smaller and we did that consciously as a staff decision; we wanted to maintain the library and the lab. So the choice was between the library, lab, and extra support, and basically we went with library, lab and took the extra other support and put it into the classrooms.

But as a grade 4 Three-Partners teacher said, there are limits on how far teachers are willing to extend themselves for the sake of the program:
I think the bottom line comes to the numbers of teachers that you have in your school. If it means that you're going to lose a classroom teacher by having another [computer or librarian] specialist [when teachers] already have 30 [students in a class] and if it means we have 35 kids in our class now, the beginning of the year, and five more walk in the door and we get 40, I would say no.

The non-program teachers (primary grade teachers) who were interviewed all said that they would like to be involved in the Three-Partners program. From their perspective, the main barrier to their involvement is resources (i.e., another full-time computer teacher and teacher-librarian would be needed in order to extend the program into the primary grades). However, these teachers were not optimistic about the prospect of the school getting the needed extra staff.

The principal feel that the current program is sustainable as long as the school district is committed to allocating an extra staff person to the school and provided that the school continues to have local autonomy in deciding where this extra resource will be used. The proper kind of individual in the Three-Partners is key too according to the principal:
You have to have people who can work together, that's really, really crucial. If you don't have somebody in the library, in the lab, particularly who are open and receptive, who are innovative, who are good listeners, it won't work.

She also expressed concern about the demands on the computer teacher and the potential for burnout. The principal is taking preventative steps in this regard by broadening the base of computer expertise in the

school by hiring a new teacher with ICT skills and directing primary teachers to this new teacher first, before asking the computer teacher for help. A media specialist who comes from the school district a half day per week to maintain the network and respond to computer problems reported by teachers further helps to relieve the burden on the computer teacher, and thus, should be seen as an essential resource to sustain the program.

When asked about the possibility of the program continuing for the foreseeable future, the principal was less than sanguine in her reply:
I feel that if you want to do something badly enough, you can find somewhere the statements you need to justify you doing it...but if our staffing really gets cut, and we have to cut the library and the lab staffing, that will have major impact here...the teachers couldn t carry on at the same level. They would get further and further behind.

A Board administrator agreed with the importance of staffing for sustaining the program, saying that ...the staffing is really the key for (the program) and if they can t work out a means to keep a teacher in there (the computer lab), the program will fall apart.

Transferability

In the abstract, the basic Three-Partners model of collaborative planning, supported by weekly scheduled joint teacher planning time, is certainly one that is easily transferable to other school settings by making information available such as sample program objectives, lesson plans, and model school schedules for other schools to adapt. The unfortunate reality is that other schools in the district have tried to emulate Park, according to the district computer consultant, but without success. While we have not studied these failed implementations, several reasons or barriers that prevent the model from being successfully transferred to other settings are evident.

Beyond the basic physical requirements of a well-equipped computer lab that ideally permits one-to-one computer access for students during their lab period, and is located in close proximity to the library, human resources must be available and committed to supporting program implementation. The key challenge is how to provide a full-time computer teacher and teacher-librarian to support the computer-library-classroom cross-curricular, integrated connections. As the principal noted, a school has to be sufficiently large to have the flexibility for innovative timetabling and staff allocation, otherwise class sizes will be unduly increased. Even Park, with over 400 pupils, was stretching the limits of what can be accomplished by creative timetabling.

Even with the physical and human resources in place, support by all of the school's teaching staff is critical for successful implementation elsewhere because, as we have seen at Park, even those not teaching in the program need to make some sacrifices for the common good.

Hand-in-hand with overall staff support is the need for the Three-Partners teachers themselves to be fully committed to the program. Observed one of teachers from her vantage point of not being directly connected to the Three-Partners program:
I think it's commitment...learning the [software] programs, knowing how to use them, and encouraging the kids to use them in the classroom as well. And being down there [in the computer lab] with them. You definitely have that commitment [here]; it's so evident in all the teachers.

Interestingly, the principal observed that the lack of community involvement in the school made the task of developing and extending the Three-Partners program into other grades easier. She feels that parents in more affluent communities watch their children's school more closely and are actively involved in its affairs. As a

result, she would have a much greater challenge because she would have to win them as well as her staff over to supporting the program. This is not to suggest that the principal does not want parental involvement. To the contrary, she has actively sought ways of involving parents by encouraging parent volunteers, sending home newsletters, and holding adult computer classes in the evenings. In fact, if the parents we interviewed were any indication, they are proud of what the principal has done with the Three-Partners program and strongly feel that other schools should adopt the program too.

Finally, as with any newly introduced innovation, the school's leaders must be supportive of the initiative, otherwise its chances of gaining a foothold are minimal. We saw at Park a principal who inherited a novel program when she took office, recognized its potential, and nurtured it into being the cornerstone of the school's identity. As one teacher put it,
you have to have somebody who believes in pushing it through...the administration has to believe in it. They have to believe in it and be willing to go through the tough time, the period of adjustment.

Appendix A

Methodology

" 3 researchers spent 5 days at Park

Amounts and types of data
Classroom observations
- 3 classrooms (1 hour each)
- completed Classroom Observation Guidelines
- collected documentation related to observations

School observations (atmosphere)
- 1 morning

Photographs
- school
- classrooms

Documentation
- Technology Projects binder
- Permission forms
- Student Agenda book
- School web site information
- School profiles
- School newsletters
- Partnership documentation
- Board-wide testing program information
- Report card samples
- Map/school layout
- Sample communications from principal to teachers (e-mail)
- Census information for township
- Performance Appraisal Program documentation (teachers)
- Strategic Planning Process Action Plan documentation
- Staff Handbook

Surveys
- Principal Questionnaire
- Technical Questionnaire (2)
- ICT Practices Survey for Teachers
- Your Teaching Philosophy Survey

Interviews

Teacher A	3 teacher	3 hrs.
Teacher B	3 teachers	2 hrs.
Student A	4 grade 4, 5, 6 students	30 min
Parents	4 parents	30 min.
Principal		2 hrs.
Computer teacher		1.5 hrs.

Appendix B

ICT Practices Survey for Teachers   18 surveys returned

How comfortable are you with using a computer to do each of the following? (1=very comfortable, 2=comfortable, 3=somewhat comfortable, 4=not at all comfortable)

	1	2	3	4
Write a paper	14	2	2	
Search for information on the WWW	8	4	4	2
Create and maintain web pages		1	5	12
Use a data base		5	9	4
Send and receive e-mail	12	3	3	
Programming			2	16
Draw a picture or diagram	5	5	4	3
Present information	2	4	6	6

During the past year, how often did your students on average do the following for the work you assigned? (1=several times each week; 2=several times each month; 3=a few times; 4=never)

	1	2	3	4

Use the WWW	5	3	3	5
Create web pages	1		4	10
Send or receive e-mail	2	4	2	8
Use a word processing program	7	3	2	3
Use a computer to play games	10	4	1	2
Use a spreadsheet		2	3	11
Use a graphics program	3	8		5
Join in an on-line forum or chat room			4	12
Use a presentation program			4	12
Use an instructional program	2	1	4	8
Other computer uses	2			5

How would you rate your ability to use a computer?
Good 7 Fair 8 Poor 1

Was student computer use every evaluated for grading?
Yes 12 No 2

If you assigned WWW searching, how much freedom did you allow students in locating sites to visit?
No restrictions Some restrictions 1 Designated sites only 9

Did you create or modify a Web site with any of the classes that you taught?
Yes 3 No 11

What portion of the computer use in your classes was directly related to the course content?
All 2 Most 9 Some 2 Very little

What portion of the computer use that you assigned was done by students individually?
All 2 Most 5 Some 6 Very little

How often did you use a computer at home for preparing for teaching?
Several times a week 7 Several times a month 4 A few times 2 Never 2

Did you participate as a student or instructor in a virtual course through the Internet/ WWW?
Yes 1 No 14

Did you involve your students in collaborative learning over the Internet/WWW?
Yes 1 No 12

Are you currently using technology to collaborate with other teachers?
Yes 9 No 7

How many e-mail messages total do you send each day on average?
>12 1 6-11 1 1-5 14 None 1

How many of the following have you ever done? (0-5 or more times)

0 1 2 3 4 5

Park Garden s Three-Partners Program:

Made changes to a computer s hardware	12	2	1			2
Updated an application program	6	2	4	1	1	3
Recovered a damaged file	9	2	3	1	1	1
Created a web site	13	3			1	
Developed a data base	8	3	2	3	1	