Evaluation Plan

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Submitted to: Elizabeth Childs EDER 675 – Principles of Instructional Development November 21, 2003

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The following is an evaluation plan to determine the direction of Information Technology (IT) at Rockridge Secondary School.

Background

Rockridge Secondary School is in West Vancouver, British Columbia. The school has a population of 928 students from grades 8 to 12 with a teaching staff of 70. Rockridge was built in 1995 with a vision that it would embody technology. A great deal of money was put in to wiring the school for the possibility of expansion in the future. Each classroom is equipped with Dynacom system (a television broadcast system) and a communication closet (an area that houses hardware and wiring). Nine years later, the amount of funding for technology has been drastically cut because of decreased provincial funding. Moreover, there has been a shift of attitude to whether there is really a discernable difference in learning using technology.

Rockridge Secondary has expanded in the past two years with the addition of grade 11's and 12's. New science labs and additional classrooms have been built to accommodate these students. However, these new additions have also meant the loss of a computer lab. There are currently two teaching labs with 47 computers. Because Rockridge Secondary shares a support technician with another high school in the district, the .5 FTE support has not kept pace with the number of technical requests. As a result, many of the computers are not fully functional. The library also has 15 computers that are available to the students in the early mornings, lunch, and after-school. However, due to the lack of technical support, there are computers that sit idle.

With two teaching labs and a media area in the library, the current student to computer ratio is at 1:15. Although this ratio is a good indicator of how many computers

are available to students, it has no significance on how they are used for instructional purposes. The BC Ministry of Education in their report 'Technology in BC Public Schools' (1995) required student to computer ratios of 6:1 at the elementary level and 3:1 at the secondary level. Within the IRP's for all subjects, there are learning outcomes that require integration of technology as part of the curriculum. The Ministry of Education has also attempted to connect every one of the BC's 1700 public schools to the Provincial Learning Network (PL-Net) with the promise of linking all the schools to the Internet (Spina, 2000). Nevertheless, the final decision of where provincial funding goes rests on each school district. With other areas in schools requiring immediate attention, technology in recent times has not been fully funded, with the 'true cost of ownership' ignored. This evaluation will promote the awareness of the true cost and responsibilities of ownership and determine the direction of IT at Rockridge using the data collected. Purpose

As a school that has evolved from a junior school to a secondary school, all stakeholders have an important task of deciding what value technology has with our school vision. With limited technology funding and physical space, Rockridge has been put in a position of either going along with the vision as the creator of the school saw it or exploring alternatives. The evaluation of the direction of IT at Rockridge has been brought about through communication with the PAC. In a conversation during a parentteacher conversation, the PAC chair took interest in the information she received from the technology teacher and presented it to her PAC members. From this, the PAC decided that money would be available for technology if there was an appropriate plan in place. A working group consisting of several staff members was then struck up to look at this issue. Utilizing the expertise in the group, an evaluation plan was developed. The objective of the evaluation plan is to use the data to solicit for PAC funding. However, the key in getting data that is representative of all the major stakeholders in the shortest timeframe was to involve the administration to add credibility to this initiative.

Target Audience

The true client in this evaluation is the PAC (Parent Advisory Council). The other target audience in this evaluation are the Rockridge teaching staff, district personnel, and the administration. The direction of IT at Rockridge requires the collective input from all stakeholders in the evaluation process. Teachers have a direct role in implementing technology in the classroom; therefore, they are critical to this initiative. The administration advocates for teachers and their leadership shapes this process. The district personnel are the subject experts so the information they offer is important. However, the PAC is the most important client in this process as they are the ones who have suggested that we present to them an evaluation plan included within it future recommendations. This would allow them to make a decision on funding as soon as possible.

Description of Data Collection Plans

In this evaluation plan, a survey questionnaire and a documentation review will be used to gather data. Using these two methods of data collection, both quantitative and qualitative data will be added to the evaluation to give it more depth and breadth. Due to the time constraint the working group has in presenting this evaluation to the PAC in order to receive consideration for funding, this evaluation is not intended to act as a complete plan of technological change in the school. This is more of a formative evaluation that will generate baseline information that will be used to develop long-term goals. Surveys conducted by schools are usually prompted by a need for certain kinds of information related to instruction, facilities, or school population (Gay & Airasian, 2000, p.275). Unobtrusive measures such as documentation review actually make up a particularly interesting and innovative strategy for collecting and assessing data that are unreachable through any other means (Berg, 2001, p.189).

The statement of the problem in the survey is focused on the educational practice of teachers in using technology. The sub-areas in the survey are the teachers':

- i. Demographics
- ii. Perception of professional development
- iii. Perception of available resources
- iv. Perception of the quality of teaching
- v. Perception of the school curriculum

The survey will be in the form of a number of statements describing one of the above sub-areas followed by a Likert scale. Each statement will provide a point of reference to not confusion of the responses (Gay & Airasian, 2000, p.285). As there is urgency in getting the data back to the PAC, a survey previously used by Jamie McKenzie (http://fno.org/jun03/maine.html) to determine the educational practice of teachers in using technology was used. The only difference with our survey is that it will be administered online through a free assessment and survey testing website (http://www.getfast.ca/students/index.cfm?Randomcourse=49138721.0) (password: 63104942). Having an online survey adds to the accessibility as all teaching staff have a computer in their classroom. The teachers can complete the survey on their own time anonymously. It is also inexpensive and easy to score as it is done automatically by the web site, in text and graphic form.

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The second source in our evaluation is documentation review using public archival strategies. Schools, social agencies, hospitals, and retail establishments, and other organizations have reputations for creating an abundance of written records, files, and communication (Bogdan & Biklen, 1992, cited in Berg, 2001, p. 194). In the evaluation, the records that will be looked at include minutes from the technology committee, computer lab sign-up documents, teacher lesson plans / web sites, and memos / email messages between the librarian and teachers. The minutes from the technology committee, computer lab sign-up documents, and teacher lesson plans / web sites will determine who the early adopters and innovators of technology are. Because the librarian is often the person who has the most contact with teachers who use electronic media for research purposes, their memos / email correspondences are important artifacts in looking at the technology integration practices of the teaching staff. A documentation review brings with it both quantitative and qualitative data that is inexpensive to implement.

The sampling for this evaluation will include 46 teachers. As the population size is quite small, this evaluation will use the entire teaching staff to make up the sample. There will be a preliminary check of a few potential respondents to determine their receptivity to the survey (Gay & Airasian, 2000, p.281). Through this check, we will hopefully get an idea if the selected sample will be willing to provide the desired information sought. The risk will be lessen even further with the survey being sent electronically to the principal who will then forward it to the entire staff, which will make it more likely that it will be completed. When a survey is sent from a person of authority, rather than directly to the person with the desired information, this will influence the response rate (Gay & Airasian, 2000, p.282). Mutual trust is an important element in the collection of data; therefore, it is very important that although permission is not essential in this evaluation, a disclaimer will be included that explains to the participants that their identity will be anonymous.

Description of Data Analysis

Data analysis is to draw conclusions and implications from data so that sound decisions can be made regarding learning and non-learning actions. Using a funnel process, the *data results*, indisputable facts that are demonstrated by the data, are clustered into logical sets, '*data patterns*'. A '*conclusion*', reasoned deductions or inferences, is made from the data results. The *implications* is then drawn from statements which describe the impact or 'so what' of the conclusions/patterns upon the goals of the projects and operational/clinical needs (Roithmayr, 2001).

Figure 1 - Data Interpretation Funnel Process (Roithmayr, 2001)



Results from Survey

The items in the online survey will be grouped into clusters that address that the same issue. A total score or their average can be developed across an item cluster or compared with the demographics. Not only does developing and analyzing clusters of items related to the same issue make it more meaningful to report survey results, it also improves the reliability of the scores themselves – in general, the more items, the higher the reliability (Gay & Airasian, 2000, p.291).

Number of Teacher	ber of Teachers Number of Respondents to Survey		Survey			
		18 39%				
Demographics (Questions 1)						
Males			Females			
		33%				
Years of Teaching (Question 2)					
0 to 1	2 to 5	6 to 8	9 to 11	12 +		
11%	16%	11%	11%	50%		
Perception of profes	ssional develop	oment (Questions 3, 16	5, 17, & 19)			
Strongly Agree	Agree	Not Applicable	Disagree	SD		
30%	26%	3%	35%	7%		
Perception of available resources (Questions 4, 5, & 12)						
Strongly Agree	Agree	Not Applicable	Disagree	SD		
41%	30%	15%	11%	4%		
Perception of the quality of teaching (Questions 6, 7, 8, 9, 10, 13, & 15)						
Strongly Agree	Agree	Not Applicable	Disagree	SD		
26%	40%	7%	22%	3%		
Perception of the school curriculum (Questions 11, 14, 18, & 20)						
Strongly Agree	Agree	Not Applicable	Disagree	SD		
28%	28%	1%	25%	4%		

Results from Documentation Review

Using the data collected from the technology committee minutes, computer lab sign-up documents, teacher lesson plans / web sites, and memos / email messages between the librarian and teachers, triangulation, which focuses on multiple perspectives, will be used in order to come to a conclusion. Triangulation is a form of cross-validation that seeks regularities in the data by comparing different participants, settings, and methods to identify recurring results (Gay & Airasian, 2000, p.252). Through this type of inductive analysis, categories, themes, and patterns will emerge. A thematic analysis will then be used to interpret the data collected. The criteria used to determine the suitability of the qualitative data include its credibility, transferability, and explanation of methods and processes used in the study.

The working team, on top of their daily workload, will conduct the data analysis. This evaluation will have direct benefit to those involved as well as the overall operation of the school. Even with the temporary added workload, the evaluation will have priority over other work. The evaluation will be reported to the staff at a staff meeting. Since the information from the evaluation process have been well documented and communicated to the staff, most of the staff will be well aware of this issue. The conceptual framework and methodology used to obtain the data will be explained. In a perfect world, each subarea of the data results could be presented and reaction sought. The staff would then identify and agree on conclusions, implications, and possible actions (Roithmayr, 2001). When all data categories have been discussed, actions will be finalized and an agreement will be made on roles and responsibilities. However, with time restrictions and increased responsibilities, it is not expected that all teachers are willing to participate. When the teaching staff understands the goals and directions of the working group, the final version of the evaluation will then be presented to the PAC for their approval. The methods that have been chosen, using multiple perspectives to analyze the data in order to come to a conclusion, will give the PAC a look at what we believe to be a realistic and beneficial plan for the future technology needs of our school. It is not intended to act as a complete plan of technological change in the school, but rather based on a sum of money made available to us from our PAC.

Description of Risks

The PAC is requesting information in order to make an informed decision in allocating their funds. With this in mind, there is minimal risk with this evaluation. The important aspect of this evaluation is to make the teaching staff aware of the issues with IT and to create a stronger bond in the organization. Dealing with non-response will be an issue with the data collection. In a school culture, there are many responsibilities that need attention. This initiative will be in addition to everything else. To counter nonresponse, the working group will need to get the 'buy in' of the staff and communicate the importance of this initiative in adding improvement to their job. With the survey being online and delivered by the administration, the survey will hopefully gain importance. The approval of this evaluation means an improvement in the efficiency and effective of the organization. This needs to be communicated to all the stakeholders in order to minimize the risk that this evaluation will fail to achieve its objectives.

<u>Timeline</u>

The timeline of the evaluation process is shown in the Gantt Chart below.





Project Timeline

Communication Plans

Maintaining a partnership with all the stakeholders through the duration of the project requires a communication plan. Transparency is needed in a process that involves a huge sum of money and that has real ramification in the working condition of the people in the organization. Email and voicemail will be the choice of communication as the evaluation is within a school. The administration will be briefed with minutes taken during the working group's meetings. The working group and district personnel will also be sent minutes taken from the meetings as well as other relevant materials, such as budgets, notes from vendors, and other communications. With each successive working group meeting, the information will be clarified with roles and responsibilities formed along the way. The teaching staff and the PAC will only be presented with the final report. Even though the PAC is the true client, they will not be consulted as they are only requesting information at this time.

Expected Results / Actions

The next step after presenting the information to the staff and PAC will be to wait

for a decision. The following goals/actions are deemed realistic and relevant:

- Look for changes which would offer improvements to the whole school population before looking at individual program improvements
- Collect feedback from staff regarding effective strategies for incorporating technology into the classroom and how to support and encourage future use
- Form a portable computer lab which does not put additional demands on school IT support staff
- Use district and local expertise to put technology at the heart of more things we do in the classroom

Technological changes have been rapid and because of this, personnel and funds

have not always kept pace. The working group has attempted to look at where we are

now and where we would like to be in the future, keeping in mind that funding is limited.

- i. Where we are now
 - There is no space for a dedicated computer lab
 - Most computers are 3 years old (P3 733) (128 Ram)
 - Only a .5 FTE support person for 100+ computers
 - Ministry has stopped tech funding initiatives
 - District funding has included money for hardware in the past, but is still dependent on the Ministry for tech funding
 - District support is via infrastructure: wiring, IT time, and training
 - New grad requirements require computer access

- Only centralized computer access is in the library and those computers are largely ineffective because of lengthy delays accessing Internet and the printer does not meet expectations
- Art/Design lab computers have not been upgraded due to their department needing all monies to go towards software
- IT lab is functional, however, upgrade in Ram would better support programs used
- ii. Where would we like to be in the future (4 year plan)
 - Administer yearly funding (PAC monies) through tech committee
 - > Year 1:
 - Upgrade Ram of Library computers
 - Add 6 new computers to Library
 - Laser printer in Library
 - Upgrade Ram in Art/Design Lab
 - Upgrade Ram in IT lab
 - LCD projector in IT lab
 - o Upgrade Ram for counseling department computers
 - > Year 2-4:
 - Utilize district and local teacher expertise regarding relevant and effective technology to support computers in the classroom activities
 - Establish an IBM Wireless/Portable lab where hardware and maintenance are covered within the contract (3 year contract commitment). This cart of computers and printer would be portable and available to be used throughout the school

<u>Budget</u>

Rockridge Secondary School - IT Rejuvenation PAC Budget Proposal							
Year 1							
	-			· · · · ·			
Area	Equipment		Cost				
Library		¢	1 000 00				
	6 New computers	Ф Ф	1,898.00				
	o new computers	Ψ	4,000.00				
	Laser printer	\$	1,000.00				
			·				
IT Lab							
	RAM upgrade - 25 computers	\$	2,650.00				
	LCD Projector	\$	2,000.00				
Art / Design Lab	PAM upgrade - 27 computers	¢	2 862 00				
	2 New computers	Ψ S	1 600 00				
	& software licensing	Ψ	1,000.00				
Counselling							
oounsening	RAM upgrade 3 computers	\$	318.00				
	· · · · · · · · · · · · · · · · · · ·	Ŧ					
Year 1 Total		\$	16,926.00				
Year 2							
A 110 G	F anding and		Orat	Nete			
Area School Wide	IBM Wireless/Portable lab		COST	NOTE			
Year 2 Total		\$15,000 see allached quole \$15,000					
			<i><i><i></i></i></i>				
Year 3							
Area	Equipment		Cost	Note			
School Wide	IBM Wireless/Portable lab	\$15,000 see attached quote					
Year 3 Total			\$15,00	0			
Year 4							
A ====		·	Cast	Nete			
School Wide	IBM Wireless/Portable lab		¢15.00	Note			
Vear 4 Total			φ15,00 ¢15,00				
			φ10,00				
Total Investment		\$	61,926.00				

Resources

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