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Markham, Ontario
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January 30, 2009

Mr. Longridge
Superintendent of Schools
School District 72
426 Pinecrest Road
Campbell River, British Columbia
V9W 3P2

Dear Tom:

From January 12 through January 14, 2009, the IBM Canada K-12 Consulting Team led a Professional Development Assessment for Educational Technology with Campbell River School District 72 (SD 72). The objective of the workshop was to ensure that the investment in Educational Technology is maximized by aligning the investment to district priorities and ensuring that the related professional development plan supports and facilitates this alignment; by enabling teachers to embrace and embed technology into their teaching and learning practice. In this way the return on that educational technology investment will be maximized in terms of helping SD 72 improve student achievement in the areas of Literacy, Numeracy, Social Responsibility and Transitions.

This report contains the findings and recommendations from on-line surveys and the interviews and focus groups that were conducted. We wish to thank the District Educational Leadership Team for allowing us the opportunity to conduct this workshop. We are confident that our recommendations will help SD 72 make effective use of your educational technology investment in the years ahead. We look forward to reviewing highlights from this report with your Executive team.

Sincerely,

Anne Saftich
National Teaching and Learning Manager
IBM Canada, K-12 Education Division
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IBM Canada, K-12 Education Division
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IBMr

Campbell River School District 72

Professional Development and Educational Technology Assessment

Final Report

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1. Introduction

There's a dark little joke exchanged by educators with a dissident streak: Rip Van Winkle awakens in the 21st century after a hundred-year snooze and is, of course, utterly bewildered by what he sees. Men and women dash about, talking to small metal devices pinned to their ears. Young people sit at home on sofas, moving miniature athletes around on electronic screens. Older folk defy death and disability with metronomes in their chests and with hips made of metal and plastic. Airports, hospitals, shopping malls--every place Rip goes just baffles him. But when he finally walks into a schoolroom, the old man knows exactly where he is. "This is a school," he declares. "We used to have these back in 1906. Only now the blackboards are green"

"How To Bring U.S. Schools Out Of the 20th Century", Time Magazine, December 18, 2006

"In the digital age, how can we expect schools to improve student achievement—the most important outcome of education—without taking full advantage of technology to support students, teachers and administrators? No other leading industry would try to position itself for success today without using technology comprehensively and purposefully to achieve its goals."

Don Knezek, CEO of ISTE (International Society for Technology in Education)

Integrating technology effectively into the classroom can be a daunting challenge. To assist with this challenge IBM has developed the K-12 "IBM Professional Development and Educational Technology Assessment Workshop". The objective of the workshop is to ensure that the investment in Educational Technology is maximized by aligning the investment to district priorities and ensuring that the related professional development plan supports and facilitates this alignment enabling teachers to embrace and embed technology into their teaching and learning practice.

Objectives and Process

The IBM Canada K-12 Education Division was asked to perform the IBM Professional Development and Educational Technology Assessment (PDETA) after discussions with various members of Campbell River School District 72 (SD 72). School District 72 has made a significant investment in educational technology, especially in the area of infrastructure, and the leadership and the Technology Planning Committee want to ensure that, going forward, this resource is being used as effectively as possible in support of their district goals.

The objective of this workshop was to:

- examine the effectiveness of SD 72's current Professional Development in optimizing the use of their existing Educational Technology (ET) to improve student achievement
- recommend improvements to the PD model to maximize the current investment in ET in terms of its impact on student achievement.
- design a long term, optimal PD model

This workshop process was conducted for School District 72 between November 19, 2008 and January 16, 2009. During this time IBM K-12 consultants immersed themselves in the District to review related internal documents, conduct on-line surveys, face to face interviews and focus groups with various stakeholders (discovery process).

This was followed by a half day session with the Technology Planning Committee and the Superintendent of Schools where the district priorities were confirmed, initial findings discussed and our initial, high level professional development plan to support the priorities was presented.

This report is the follow up to that presentation and contains our detailed findings and recommended professional development plan.

To present the findings we have used IBM's Educational Technology Framework (shown below).

IBM Educational Technology Framework

This framework was presented in the half day session and best practices related to those components that are critical to the development of a Professional Development plan were discussed. These components are highlighted in yellow above:

- Why Are You Buying Technology?
- District Wide Commitment
- Access to Information and Resources
- Student Access
- Teacher Access
- Professional Development
- Digital Curriculum Resources

In this report we provide an analysis of these key components - identifying gaps that exist between these best practices and current practices in the district, and we provide general recommendations and action plans to address these gaps.

Based on this analysis, a long term Professional Development plan was designed and an accompanying budget created.

Although we did not examine the other components of this framework, as SD 72 prepares to renew their technology plan for the next 3 to 5 years, we would recommend an in-depth analysis of all components of the framework be undertaken and a plan be created that encompasses all of these components. The work that has been done for this report would help to minimize the effort required to complete an analysis of the entire framework.

IBM's Educational Technology Framework is described overall in Section 4. In Section 5 each highlighted component of the framework is presented in detail including a description of best practices and the consultants' observations on how SD 72 is performing against these. Recommendations are then provided to improve the District's performance within each component area (also in Section 5.)

We identified 6 major areas that have the greatest gap against best practices and will likely be the biggest impediments to effective use if not addressed. A summary of these findings and recommendations can be found in the next section of this report (Section 2).

2. Summary of Findings and Recommendations

This section summarizes the findings and recommendations for the areas where the largest gaps exist between SD 72's current practice and industry best practices. A more detailed description of each of these is found in Section 5 of this report.

This section also describes the areas where the findings indicated SD 72's current practice is exemplary and which will serve as a strong base for the effective use of educational technology in the years ahead.

Areas Where Gaps Exist Between SD 72 and Industry Best Practices

Formal Statement as to Why SD 72 Is Buying Technology

To effectively use educational technology a district must understand and define why it is buying technology. Unless SD 72 can clearly state why they are buying technology, and these reasons are directly related to their educational goals, they will never be able to achieve the promised benefits of this investment. The SD 72 stakeholders we spoke to were able to list how the technology was being used but they could not state the District's reason for buying technology with any confidence.

Recommendation #1:

SD 72 must develop a statement that clearly defines their reason for buying technology that is related directly to the District's educational goals. This statement must then be clearly articulated to all stakeholders.

Evidence of Commitment to the Use of Technology to Achieve District Goals

Even with a clear statement of why a District is investing in technology, if the stakeholders are not committed to this vision, the investment will not be maximized. The vision must be clearly communicated and commitment to it at all levels especially at the school and District leadership levels. This commitment should be evidenced by: it's inclusion in District and school improvement plans; modelling by trainers, coaches and mentors; clearly stated expectations of use by school principals and District leaders. Little of such evidence is currently seen in SD 72.

Recommendation #2:

District leaders, school principals, trainers, coaches, mentors and teachers must be provided with an understanding of effective use through formal in-servicing. Leaders, trainers, coaches and mentors must model effective use and teachers must be expected to use it effectively.

Access to Information and Resources

Teachers reported the need for access to information that would help them effectively use technology as a teaching and learning tool. In addition, they asked for a set of Web 2.0 tools that would facilitate collaboration and communication with and among their students.

Recommendation #3:

SD 72 needs to clearly define their portal strategy. As part of this definition process, they should consider providing a digital curriculum management system that would be a single point of access for all curriculum related resources. In addition, standard Web tools must be selected, supported and incorporated into the portal to facilitate communication and collaboration amongst all stakeholders.

Student Access

For technology to have an impact on educational priorities it must be available where the learning of these takes place. The majority of student access in SD 72 takes place in labs with some limited access in classrooms where laptop carts are available.

Recommendation #4:

Technology must be made available at the point of instruction, which for the majority of subjects, means in the classrooms at SD 72. This can be accomplished with classroom pods or laptop carts. An assessment of the appropriate deployment model for SD 72 is recommended.

Teacher Access

In order for teachers to embrace and embed technology into their teaching and learning they must have access to it when they are planning and delivering their lessons. SD 72 has done a wonderful job of ensuring that all teachers have their own workstation in their classroom. Their use of these in the teaching and learning process is, however, hindered by two things. One is the lack of a projection device to use it in whole group instruction and the other is that they may not have access to relevant resources when they are doing their planning anywhere but in their classroom.

Recommendation #5:

Teachers should be provided with an LCD projector in their classrooms. This will enable them to use their workstation for whole and small group instruction. If SD 72's portal strategy is developed to include access to resources, this should make it easier for teachers to do their instructional planning anytime, anywhere.

Professional Development

Research indicates that teachers must receive professional development on how technology is related to the educational priorities that it has been purchased to address. This professional development should be provided in a variety of ways: face to face, in-school coaching and mentoring, web-based supports. While SD 72 has developed a reasonable level of staffing to deliver PD, the professional development made available to teachers has not been as effective as it could have been for one main reason. The staff responsible for developing and delivering the PD have not been aligned and connected to a common, unified purpose and vision, directed by the priorities of the district.

Recommendation #6:

SD 72 should develop at PD model that is directly aligned to District priorities and targets the increased integration of technology into the teaching and learning process through the blending of various approaches which include face to face, coaching/mentoring and online professional development. When implemented, this model should provide support to maximize the current investment in technology and the district priorities, while having a positive impact on student achievement.

Areas Where SD 72's Current Practice Is Exemplary

IBM's findings identified many areas where SD 72's current practices are exemplary – where SD 72 meets or exceeds best practices in the industry.

While the primary purpose of the workshop and this report is to identify gaps between SD 72's current practice and industry best practices (in order to provide recommendations for improvements) the areas where SD 72 is exemplary are important to note because they are just as essential to the effective use of educational technology in the future. To overlook these strengths, and thereby run the risk of not continuing them, would be just as harmful to the effective use of the technology as not addressing any of the gaps that were identified. *For this reason these areas are noted in each Framework section of the report, and if they are in the areas that were evaluated (as described above) they will be evaluated as Green. If they are from one of the areas that we did not assess, we will make note of it in that component of the framework.*

- *The areas where SD 72's current practices are exemplary and are well above the average in the industry are*:

  There is strong evidence that SD 72 is firmly committed to a single vision and capable of strong and effective communications. No matter who we talked to, all stakeholders in the District could clearly articulate the educational goals of the District.

  The Technology Planning Committee believes that the educational needs of the District should drive technology. The IT Manager, a member of Technology Planning Committee, stated that he looks to Instructional Programs for his department's directions.

  There were numerous examples of excellent teaching practices integrating technology being displayed, particularly in the two middle schools. In the middle/secondary school student focus group, the secondary students commented on how much more advanced the middle schools use of technology is now compared to when they were at those schools four years ago.

  SD 72 has a strong belief and active participation in mentoring. This is evidenced by the CIT grants, Collaboration for Growth grants and the Teacher Leader program. In addition, we heard many examples of informal mentoring amongst the principals and vice principals.

Many participants of our focus groups commended the work that the IT department is doing and in most cases, the uptime for the technology in the schools was reported as very high.

SD 72 has made a major commitment to teacher productivity and skill development by providing a desktop computer to every teacher.

An extremely high degree of collegiality was seen at all levels of stakeholders in SD 72.

These areas of exemplary practice are not only to be commended, but in the same sense as a strong foundation is essential to a building, these areas will serve as an essential and strong foundation to enable SD 72 to make effective use of educational technology as they move ahead.

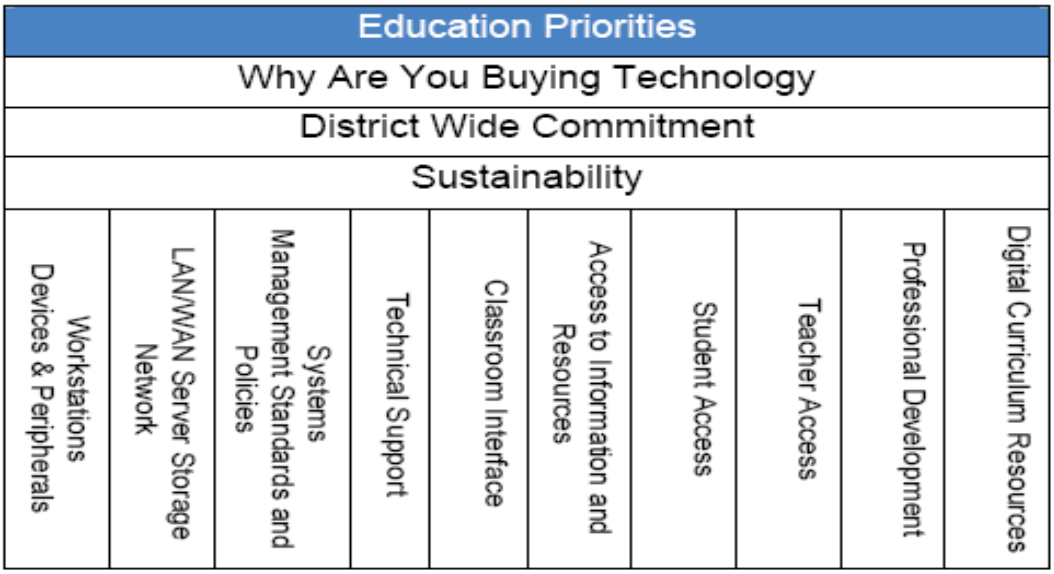
3. Technology Planning Committee Members

Jim Ansell	Assistant Superintendent
Lyle Boyce	Secretary Treasurer
Nevenka Fair	Director of Instructional Program
David Fredrick	District Principal of Technology
Jeff Wilson	Manager of IT
Barb Drake	Lead IT Technician
Kevin Harrison	Principal, Timberline Secondary School
Greg Haynes	Principal, Ecole Phoenix Middle School
Phil Cizmic	Principal, Georgia Park Elementary School
Phil Cassidy	Teacher, Secondary School
Shannon Haggon	Media Teacher, Secondary School
Cathy Babchuk	Media Teacher, Middle School
Vince Sequeira	Music Teacher, Elementary
Adrian Davis	Deaf and Hard of Hearing / Student Services
Rob Godell	District Librarian

IBM Consulting Team	
David Ell	K-12 Educational Consultant
Anne Saftich	K-12 Teaching and Learning Consultant

4. The IBM Educational Technology Framework

IBM's experience indicates that there are common priorities and approaches that characterize successful IT implementations in schools by being both effective (in terms of improving student achievement) and cost efficient. These commonalities constitute a "best practices" approach to IT implementations and can be portrayed in a framework consisting of multiple layers, each resting on the strong base of the lower layer. This is the IBM Educational Technology Framework.



For the purposes of the Professional Development and Educational Technology Assessment only the following components were assessed:

- Why Are You Buying Technology?
- District Wide Commitment
- Access to Information and Resources
- Student Access
- Teacher Access
- Professional Development
- Digital Curriculum Resources

IBM offers other consulting engagements that examine some or all of the other components. Based on our observations during the assessment and given SD 72's desire to revisit their strategic technology plan, we recommend that they take this opportunity to engage in a full Educational Technology Strategic Planning Workshop which would assess all aspects of the framework and their interdependencies.

5. Assessment Using the IBM Educational Technology Framework

In this section SD 72's observed practices are compared to the IBM Educational Technology Framework. A chart for each relevant component in the framework, identified above, is shown describing the best practices and our assessment of SD 72 against these best practices for Elementary (E), Middle (M) and Secondary (S) Schools. Assessments are colour-based:

- Green - Meets or exceeds best practices
- Yellow - Approaches best practices, minor improvements required
- Red - Some improvement required

Recommendations for improvement for all yellow and red assessments are then provided.

Why Are You Buying Technology?

BEST PRACTICES:	E	M	S
District educational priorities are identified and well articulated			
There is a formal statement of why you are buying technology that is directly related to the educational priorities of the district			
Indicators of success are measured on an ongoing basis			
All stakeholders know and understand why you are buying technology			

The single most important component to ensure a technology investment is effectively used to assist with district priorities is a clear statement by district executives as to WHY they are buying technology. Unless a district can clearly state why they are buying technology, they will never be able to achieve the promised benefits of that investment. Research indicates that until a district can clearly define their reasons for buying it; and that the reasons are related to their educational priorities - the technology will be merely supplemental to what the district is attempting to achieve versus truly an integral part of the teaching and learning process.

SD 72 has clearly stated and well defined educational priorities. All stakeholders, when asked what the District priorities were, were able to quickly articulate them. There was, however, no clear link between these priorities and the investment that they were making in technology.

Observation:

When asked why the district was investing in technology most stakeholders said:

- To support students in schools:
  - word processing, research, demonstration of knowledge. special education, for specific computer courses , online learning
- Administrative tasks:
  - report cards, IEPs, provincial reports, data gathering and management,
- Communications:
  - email (with peers, district staff, parents), PowerPoint, web pages (school/teacher)

They were unable to state the District's formal reason for buying technology with any confidence. Some indicated that the reason that the teacher workstations were purchased was to make to the teachers more productive and enable them to complete required administrative tasks such as taking attendance and completing reports.

When the Technology Planning Committee was asked why they were buying technology the reasons given, for the majority, were to increase productivity and ICT skills of teachers and students, which they felt would ultimately improve achievement. However, they did not have a formal reason for the purchases that was directly related to the goals of the District. They further agreed that they should have one.

Recommendation:

Going forward it is imperative that SD 72 has a clearly defined reason for buying technology that is related directly to the District's educational goals. This reason, once developed and agreed to by the senior team and the Technology Planning Committee, must be clearly articulated to all stakeholders. Like the District priorities, stakeholders should be able to restate "Why SD 72 is buying technology" when asked.

In IBM's Educational Technology Strategic Planning Workshop time is spent with a core team to develop such a statement. The development of the statement has traditionally taken 2 to 4 hours as the team comes to an understanding of how they are currently using technology, which typically reveals an un-stated but implied "why". After some discussion as to whether or not this implied 'why' is appropriate, the team collaborates to create a "why statement" that reflects a purposeful reason for buying technology that relates directly to their educational goals.

We recommend that SD 72 consider engaging in the complete Educational Technology Strategic Planning Workshop to not only create a meaningful why statement but then to align all components of the framework to this statement.

If SD 72 chooses not to do the entire engagement, we recommend that their senior team and Technology Planning Committee come together in meeting specifically targeted to the development of a formal statement of why SD 72 is buying technology. It is imperative that all participants in the meeting agree to the statement and are committed to it.

Once the statement is created a communication plan must be put into place to ensure it becomes accepted and stakeholders commit to it. Recommendations for this are found in the next section.

Observation:

There were no clear, formal measures of success in terms of technology usage, nor was there a process to refine the implementation to better meet the district goals or the users' needs. The Technology Planning Committee indicated that they sought input before making decisions but this was done, typically, on an informal basis. Although a formal process to gather feedback was undertaken when the technology review was done, no formal analysis of the impact of the changes had been done.

Recommendation

Once the "Why" statement has been formalized and communicated, the District must decide how success will be measured. These measurements must be clearly defined and assessed on a yearly basis. Results of these assessments should be used to refine the technology implementation plan.

Suggested measurements and indicators of success might include:

- How extensively are the instructional support team and the Integrated Support teachers, who are focusing on literacy, numeracy and success for all students, are using literacy and numeracy technology-based resources in the work they do with teachers
- Are teachers using digital literacy and numeracy resources as part of their regular teaching practice and are students using these resources as they explore, investigate and build their understanding of concepts in these areas.
- Do School Improvement plans, focused on improving achievement in the areas of literacy, numeracy, social responsibility and transitions, clearly reflect how technology is supporting these goals and describe how teachers and students will use these resources.
- Do Principals observe that technology is being used in mathematics and literacy on a regular basis
- Do students report that they are using technology as an integral part of their literacy and numeracy classes and can provide examples of where it has been used in the classroom to help them to improve their achievements in those areas?

- Consideration is giving to improvements in provincial assessments and an attempt is made to determine what impact the newly focused used of technology has had on these improvements. It will be impossible to attribute improvements made solely to technology but through anecdotal and observational methods, stakeholders should feel comfortable that the technology has had a positive impact on these gains.

  Yearly surveys for teachers, students and principals are recommended to gather this anecdotal information

  Teachers and principals are encouraged to maintain journals where they can record observational examples of effective use

  Principals and Directors are encouraged to use effective use observational tools when they do school walk-throughs.

- A student advisory committee should be formed and the Technology Planning Committee should meet with them three or four times a year to get their feedback on progress and a better understanding of how they are using technology.
- "Application utilization tracking software" should be used to indicate if the software resources that have been identified as being effective in literacy and numeracy are being used on a regular basis.

District Commitment

BEST PRACTICES:	**E**	**M**	**S**
There is formal communication as to why the district is investing in technology with respect to district educational priorities			
All stakeholders understand and can articulate why the technology investment is being made			
District and School Improvement Plans embed technology as a key resource to help attain achievement goals			
Instructional leaders look for and provide guidance on effective integration to achieve goals			
All stakeholders understand the benefits to themselves and to the district overall			
There is a clearly defined expectation of use for technology that is related to the educational priorities (i.e. literacy and numeracy) of the district			

After a district has a clearly defined reason for buying technology that is related to their district priorities, the investment will not be maximized until all stakeholders understand the reason and are committed to it. When the stakeholders understand the benefits to themselves they will be more likely to be committed to the success of the investment.

There are specific indications of district commitment and these are outlined in the best practices described above.

Observation:

SD 72 is clearly committed to technology as evidenced by their ongoing investment in it. There has been no formal communication from the District to the schools as to why they are investing in technology. As a result, stakeholders could not clearly articulate why the technology investment was being made other than to tell us how it was being used.

Recommendation:

The District must create a communication plan for all stakeholders that states the reason they are buying technology and they must reinforce this message again and again to ensure it is understood and that stakeholders are committed to it.

Observation:

Neither teachers nor principals could clearly articulate why technology was being purchased. There was a general sense that it was to improve ICT skills for students and to enable them to be more productive in terms of research and producing reports and presentations. For teachers it was generally felt that it was purchased to enable them be more productive with respect to administration tasks and perhaps communication.

Recommendation:

Once the "why" has been communicated, continued efforts will be required to reinforce how committed senior administration is to the use of technology to help achieve the District's educational goals. In all meetings with District staff, principals and teachers the "why" should be continually reinforced. This can be done in a number of ways, such as:

- Connections of technology to District and school improvement plans should be discussed and reflected in these plans
- Principals, teacher leaders, mentors and District instructional leaders should model the use of technology as they support teachers in their teaching and learning practices and in administrative tasks
- Examples of best practices should be celebrated and shared. Teachers should have an opportunity to know what other teachers are doing and understand the successes in the District. Opportunities for sharing should occur at school staff meetings and District level meetings.

Observation:

A number of people observed that before teachers will invest the time in understanding and becoming more comfortable with technology, they need to understand the benefits to themselves and their students. It was clear to us, from our focus groups that there are teachers and principals who do not understand the promise of technology in terms of improving student achievement and that they consider it too time consuming to invest in at this time.

Recommendation:

In order for teachers and principals to understand the promise of technology and to be committed to the vision of technology in helping to achieve the District's goals, they must be provided with opportunities to gain this insight.

- Instructional leaders (District staff that support instruction, principals, vice principals, directors and the superintendent) should attend an Educational Technology Leadership Institute
- Teachers should be provided with information on Effective Uses of Technology in a 21st Century School including the best practices that research indicates will help to maximize the effective use. In addition, they need to be provided with opportunities to see what's in it for themselves and their students.
- Commitment will be evidenced by inclusion in District and school improvement plans
- Instructional leaders will provide the necessary supports to enable effective use, look for it and expect it

Observation:

Teachers and principals indicated an interest in having more input into the technology that is available to them at their schools but also understood that they needed some direction from the District.

Recommendation:

In order to ensure there is buy-in and commitment to the vision for technology, schools should be encouraged to form a technology steering committee at each school. Members on the committee should include the principals, representative teachers by grade/division or subject and also by technological literacy (high and low). In addition the IT support rep and CIT for the school should be members. The objectives of the steering committee should include:

- Interface with the District Technology Resource Teacher (to be named) to ensure that the District's goals and directions are clearly understood at the school level
- Monitor the needs of teachers with respect to hardware, software, support and professional development requirements
- Ensure technology is woven into the School Improvement Plan and updated on a yearly basis
- Discuss opportunities for new technologies (hardware, software) and work with the Technology Resource Teacher at the District to understand how they fit into the District's technology plan in terms of support and professional development.

Observation:

There has been no formal and clearly articulated expectation of use for technology especially related to District priorities. Although middle and secondary school teachers understand that they must use technology for attendance (at a minimum) there did not seem to be consensus beyond that on how the technology had to be used; and use of the technology for any other reason was considered to be optional.

For example, we heard of teachers that continue to do their report cards in the traditional paper and pencil way and teachers that do not read their email, thereby forcing principals and District staff to publish information in the traditional paper-based way. Finally, any informal expectation of use that does exist is through the "technology lens", not through the lens of literacy and numeracy - and this is reinforced by the fact that the District staff providing in-service on literacy and numeracy do not embed technology as a resource.

Recommendation:

The District must write a clearly articulated expectation of use that includes the reason they are buying technology. It should also describe how teachers and students will be expected to use the technology to attain the benefits of this investment with respect to why it was purchased.

Expectations of use do not need to specify an exact amount of time that the technology should be used but rather should include expectations such as:

- Teachers will be provided with the software resources and professional support to use these resources in the teaching and learning of literacy and numeracy. A clear link between the technology and these priorities will be established.
- Teachers will be expected to use these resources, when appropriate, in whole, small and individual instruction.

- Students will be expected to use these resources to explore concepts in these areas, to develop skills in these areas and to demonstrate their knowledge in these areas.
- Teachers will be required to use IT for access to District and Ministry resources to minimize reproduction costs and reduce the environmental impact of printing and disposing of paper documents and to ensure that information can be more easily searched and shared.
- Principals will be expected to model the use of technology in their schools and provide appropriate support to help their teachers become more comfortable with the technology and to effectively integrate it.
- District staff will be expected to use technology effectively, and where appropriate, as they perform their role.
- Staff who train, mentor or coach teachers, teacher librarians and other support staff will be expected to embed these resources into their discussions with teachers and model effective use.
- For any specific technology project, expectations of use should be defined (i.e. SmartBoards, Student Response Systems, Portals, etc.).
- There should be clearly stated consequences if the technology is not used. Following are two examples of what a district might do. However it is highly recommended that before these actions are taken each situation should be reviewed to determine the underlying cause and additional coaching and mentoring supplied for reluctant users to help them see the benefits to themselves and their students. Examples of a stated consequence are:
  - Workstations (if they are placed in the classroom) will be removed from the classrooms if they are not being used
  - Teacher workstation / LCD projector will be redeployed if not being used

Sustainability

BEST PRACTICES:	E	M	S
Can the district afford to replicate this and sustain the initiative over the years?			
Does it conform to Total Cost of Ownership (TCO) principles to minimize the total cost over the life of the investment?			
Is there an overall evergreening strategy?			
Is this recognized as a change initiative?			
Is feedback collected and acted upon? Are results communicated back to stakeholders for continuous improvement?			

Once the entire district understands why it is buying technology and how it is related to their educational priorities, it is essential that the district ensure that the investment is sustained over the long term so that it can become embedded into the practices of the district. This is a change initiative and must be recognized and treated as such.

An assessment of this component was not done as it was outside the scope of the statement of work. However, based on our discussions of this component that ensued at the presentation of our initial findings we feel compelled to comment on it.

In reviewing sustainability and conformance to Total Cost of Ownership (TCO) principles, we got into a discussion of what the right model for technology deployment is. Until you know the deployment model that is best for your District, you cannot begin to accurately assess the total cost of ownership and make an assessment of your ability to sustain the initiative. We recommend that SD 72 undertake an analysis and exercise to determine the correct deployment model. One method for doing this is IBM's Educational Technology Strategic Planning Workshop. In this workshop, representative members from the District along with IBM Educational Consultants, work collaboratively to build the appropriate technology model for elementary, middle and secondary schools. Based on these models, total costs are identified and all components of the framework are assessed to ensure alignment.

End User Workstations / Devices / Peripherals

BEST PRACTICES:	E	M	S
Industry Standard, Tier 1, Commercial, Manageable – standardized desktop and laptop models			
"Sweet spot" purchase price acquisition strategies / 5 year lifespan / ever green			
Flexible deployment model			
Standards / implementation procedures for laptop carts			
Networked Printing / No Inkjets			
Data Projectors			
Standards re. peripherals: Interactive Whiteboards, Memory Keys, Cameras			
Policy for student and teacher owned devices			

To excel in this component districts must follow industry best practices in their deployment of workstation and laptop technology (Gartner, Best Practices in PC Life Cycle Services, 2006). Tier One technology should be purchased. Laptops should be commercial grade versus consumer grade. Laptops and workstations should be used for their proper useful lifespan and then replaced. Standard models for workstation, laptops and peripherals should be selected and deployed to minimize the total cost of ownership over the life of the investment. Flexibility should be built into the model to meet the varying needs of the schools (typically by grade, division or subject). Policies should be developed around the purchase and deployment of peripherals and the ability of teachers and students to bring in their own devices should be clarified.

An assessment of this component was not done as it was outside the scope of the statement of work. During the interview process a few observations were noted that we are reporting here:

- Administrators indicated that they would like to be provided with a standard toolkit which would include a standard cell phone/PDA, a laptop with a standard software image and appropriate training including a care and feeding introduction to these tools.
- Teachers clearly stated that in order to use their workstations as a teaching and learning tool they need unfettered access to LCD projectors. We recommend that the District develop a standard policy related to LCD projectors including clarification of funding, support and training.
- For other peripherals, such as interactive whiteboards, SD 72 needs to develop District policies that state what will be supported and a procurement process that includes installation, support and training details.

Servers, Storage and Networking

BEST PRACTICES:	E	M	S
Industry Standard, Tier 1, Predictive Failure Analysis			
Servers: Centralized, Consolidated (i.e. up to 10 schools per server)			
Storage: SAN vs. Decentralized in servers			
Scheduled backups of users' server and local data (i.e. My Documents)			
Easy file recovery process			
Drops in every classroom			
Wireless Support			
Sufficient Network Electronics			
Fast and Reliable Wide Area Network			

An assessment of this component was not done as it was outside the scope of the statement of work.

Systems Management

BEST PRACTICES:	**E**	**M**	**S**
Board policies for asset allocation, asset management, network access, software distribution, user ID's			
Tools for managing servers, storage, imaging, patch updates, anti-virus, firewall, etc			
One standard "user directory" for all users / systems to authenticate			
Remote management tools and alerting			
One standard operating system.			
One standard workstation image			
Green computing			
Asset and Software utilization tracking			
Standardized applications and application versions			
Selective Web content filtering			

An assessment of this component was not done as it was outside the scope of the statement of work.

However, in the interview process a number of elementary teachers commented on the complexity that appears to be caused by having two operating systems in their schools – Linux labs and Windows on their teacher workstations. The following issues were discussed:

- Many teachers need to better understand what can and cannot be done in the Linux labs
    - I.e. does the Smart software run?
    - How to save a file in the lab and then open it on their workstation in the classroom or at home (and vice versa)

Best practices would suggest that multiple operating systems in a district can increase support and training costs. If, after completing a more thorough analysis of this component, the District continues with the current model, additional support and professional development to address these issues is recommended.

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Technical Support

BEST PRACTICES:	E	M	S
Tech Support process is communicated, understood and followed by user community			
Help Desk			
Software to track incidents, trends, service levels, etc			
On-demand on-site technicians			
Defined Service Level			
In School Support / Site Admin			
User Support Groups: Cadre, Tech Tuesdays, Wired Wednesdays,			
Support for integrating technology into literacy / numeracy curriculum			

Although an assessment of this component was not done as it was outside the scope of the statement of work, many teachers and principals commented on the excellent support that is provided by the IT department in all three levels of schools. It has clearly improved over the past three years since the technology review was done.

Some issues were reported related to the workload of the IT support staff. Ideas to alleviate their workload and further increase end user satisfaction around technical support would be generated if the Educational Technology Strategic Planning Workshop is performed.

Classroom Interface

BEST PRACTICES:	E	M	S
Workstations are secure from “hacking from within”			
Workstations are “easy to use” for teachers			
Secure data for teachers and students			
Printing works			
Student ID’s and Passwords quickly added / reset / suspended			
Repository for common applications. Automated install process for school specific applications.			
Shared file spaces for teachers and classes			
Intra-Board access to resources for itinerate teachers			
Consistent interface throughout board (good for teachers and tech support)			
Home Access to information			

An assessment of this component was not done as it was outside the scope of the statement of work.

Access to Information and Resources

BEST PRACTICES:	E	M	S
Digital access to all relevant curriculum resources			
Alignment of digital resources to ministry expectations and district priorities			
Searchable resources such that teachers easily find additional "vetted" content			
Electronic Collaboration Spaces for teams to work in, track to do's, share documents (school teams & coaches)			
Personalized web experience for students, teachers, administration (i.e. Web Portal)			
Key Performance Indicators Dashboards … attendance, behavior, progress on goals, etc			
School websites with daily announcements, school news, etc			
Teacher / class websites for class specific information			

This component of the framework considers the access of the different stakeholders to information that is relevant and necessary to their role. It considers both the type of information that is available and whether or not it has been vetted and aligned to educational expectations and priorities. It also determines how easy it is to access in terms of where you go to get it, and how to easily find what you are looking for. Finally it presents the information in a personalized view.

Although we did not do an in-depth analysis of this component, we did ask questions related to it and have some observations and recommendations. As SD 72 is beginning to roll out their intranet with role based logins, we recommend a more in-depth overall review of this component to ensure that the design is as flexible and robust as possible.

Observation:

SD 72's intranet strategy is in the early stage of its evolution. Although there are role based logins for principals and teachers which provide access to information that is not available to the general public, more personalization could be provided that would take teachers and principals directly to performance indicators for the students and/or schools that they are responsible for.

Recommendation:

Web portals are advanced web sites designed to integrate disparate web applications and services. Information and applications are personalized for end users based on their roles within an organization (e.g. students, parents, teachers, administrators, etc). Advanced services such as Single Sign On enable users to enter an ID and Password and have seamless access to a variety of applications.

Web portals can automate manual workflow processes. Web portal application suites now include a variety of Web 2.0 applications to enhance collaboration within organizations and between organizations and their stakeholders. It can include key data and trends from the district's student information and data warehouse surfaced via dashboarding technology. The data to be surfaced should be dynamic, "glanceable" based on the priorities of the end user, and actionable.

Web portal technology will allow SD 72 to personalize the presentation of its web assets and communications such that students, parents, teachers and administrators see what is most important to them. Communications can be audience specific.

Developing a robust, powerful web portal can be a very complex task. In order to successfully deploy a web portal, IBM recommends deployment via the following staged approach:

- Portal Definition Workshop
- Phase I / II / III Plan
- Formal Statement of Work
- HW / SW Installation
- Integration With User Directory
- Application Integration
- Custom Development
- Training
- User Acceptance Testing
- Pilot Group followed by structured rollout
- Disciplined Project Management
- Ongoing Support

The most important step in building a portal is having a plan and vision that has been agreed to by all SD 72 constituents. If mutual agreement is not achieved then infrastructure will be deployed without the understanding and desire-to-use of the end user community. To that end IBM recommends that SD 72 host a Portal Definition Workshop (PDW).

A PDW is a multi-day planning session facilitated by Portal Subject Matter Experts to assist SD 72 in building a mutually agreed to Portal Plan. Pre-workshop interviews and e-meetings occur with business/administrative, curriculum and school leaders to identify current requirements, challenges and IT plans. A master list of requirements and challenges is generated. Portal technologies to address each requirement are identified.

Prior to the workshop an Education Value Assessment Template is also defined. The purpose of the template is to help SD 72 assess the value, ease of implementation and audiences impacted from each Portal technology. Priorities are identified and factored into the template (i.e. increasing student achievement, increasing teacher comfort levels with technology, improving productivity, etc.). When completed the template becomes the foundation for addressing the question "Why Are You Doing This".

In Day One of the workshop the mapping of portal technologies to SD 72's requirements is overviewed. The Education Value Assessment Template is reviewed and agreed upon. Participants then begin to score each proposed portal technology in the template.

In Day Two scoring continues until all proposed portal technologies are scored and ranked. A phase 1 / 2 / 3 plan is constructed and agreed upon. The portal Subject Matter Experts document their findings and provide SD 72 with its Portal Plan.

Observation:

Teachers and principals reported spending a lot of time going to a myriad of sources trying to find good resources to meet their needs as they plan their instruction. When looking beyond the resources supplied by the District or the Ministry, the quality of these resources is not guaranteed and the teacher's ability to share it with others was limited, for the most part, to email.

Teachers also indicated that they would like access to lesson plans for the subject areas that they teach that provided details on how to integrate technology into the subject area.

Recommendation:

As part of SD 72's web portal strategy, consideration should be given to a providing a Digital Resource Repository. Based on the requirements gathered in our sessions, we are recommending a Digital Curriculum Management System (DCMS). A DCMS is a powerful framework that represents the next generation of learning – creating a single point of access for curriculum, communication, collaboration, teaching and professional development. In a time when knowledge is increasingly a competitive differentiator, the DCMS builds communities that fundamentally prepare students for 21st century skills.

The DCMS makes it possible for more individuals than ever before to access knowledge, and to learn in new and exciting ways. Through curriculum delivery, collaboration, content creation, assessment management tools and instruction, a district DCMS generates a participatory environment that allows students, teachers, principals, board office staff and parents to communicate, share information, solicit input and gain access to the latest digital tools.

With a DCMS you can:

- Expand learning opportunities:
  - Facilitate collaboration and feedback among all participants of the learning community
  - Permit teachers to collaborate on projects, link to web-based curricula, join online discussion forums and more
  - Provides access to all of a district's web-based applications
  - Extend learning beyond the classroom, via anytime, anywhere access – allowing parents to participate and collaborate
  - Bring innovation to the classroom through tools such as discussion boards – keeping students more engaged and motivated to learn more. Integrate all assets in one place:
  - Enable the district to build, create, link and maintain a flexible, state-of-the-art curriculum or curriculum resources
  - Align instructional plans, content and assessment to Provincial expectations
  - Update and enhance teaching and learning activities through the addition of custom-generated content
  - Provide a calendar to allow educators to organize curriculum materials, assignments and homework and publish to students and parents (as an optional component if not already addressed in the district portal strategy)
  - Simplify access to content and resources through dynamic search tools
- Inform and improve instruction

Identify the gaps in achievement and helps students get the individualized instruction they need

Help educators adapt lessons and instructional models in real-time to provide the appropriate challenge for students in their classroom

Provide access to all of the excellent Ministry resources, that most teachers are currently unaware of, and the excellent SD 72 resources that are currently being scanned with the new Xerox Document Management System. All of these resources can be aligned to the provincial curriculum in British Columbia, organized, and streamlined it into a single, role-based transparent environment. This will help SD 72 to optimize usage of those resources and accelerate further adoption.

Provide a tool to create vetted district approved Unit, Lesson and Activity plans with all related resources (described immediately above) tagged and accessible online. Whether a teacher is planning at home or at school or actually delivering the lesson in class, the materials are available anytime anywhere through the district portal.

To promote SD 72's assessment for learning initiative, the DCMS could provide examples of best practices in this area.

Provide access to online professional development

Use it to support the learning process that takes place in the classroom by providing resources to:

- Give teachers access to Ministry and District guidelines so the teacher knows where they have to get their students to
- Provide teaches with resources to help get their students to their learning destination
- Help teachers determine when students have learned what they need to
- Help teachers know what to do for the students that don't get there (differentiate instruction)

Observation:

Although some schools and teachers are creating their own websites using a standard District tool, there is no standard template provided nor is there a standard policy that states whether a website is an expectation for a school or a teacher to produce. Teachers and principals indicated that it is not easy to create these and is time consuming. If no one in the school volunteers, the task falls to the principal who may or may not feel capable of taking on this role.

Recommendation:

School web sites are quickly becoming the parent and community communications gateway for a school. It is important that they exist, that they extend the branding and messaging outlined by the district, and that they be easy to use and maintain for teachers and principals. IBM recommends that SD 72 create a standard template for school and teacher websites. Schools and teachers will be accountable for content versus site design.

School sites will have a consistent look and feel and provide links to key SD 72 resources. Teacher sites can include class announcements, homework, and teaching and learning links. This can also be a measurable example of teacher comfort/adoption of information technology, as well as an indication of the principal's expectation of educational technology use by the school staff and teachers.

Policies will be required related to content (what can and cannot be published) and frequency of updates among other things. Training on how to use the webpage creation tool will be required.

Observation:

Teachers would like a way to access standard, district approved Web 2.0 tools that would allow them to collaborate with each other, their students and parents. They are asking for tools that are approved and supported at the district level and that are easy to use. Without formally approved tools, some teachers are using unproved, unsupported tools.

Recommendation:

Web 2.0 applications such as Blogs, Wikis, Collaboration Tools, RSS feeds, Social Networking, Mashups and Tagging are evolving to become the toolkits of the 21st Century teacher and student. With Web 2.0 technologies, teachers and students are empowered to contribute and rank information on the web versus simply consuming information. The challenge for school boards is how to integrate current and evolving web technologies into an easy-to-use and easy-to-maintain environment.

As part of SD 72's web portal strategy the District should assess the Web 2.0 tools that are currently available and select a suite of tools that will meet the needs of the teachers, students and principals and that can be supported and sustained over time. In our review the IT department indicated that they do have a suite of available tools. It is recommended that these tools be reviewed with teachers (both technical and non technical) to ensure that they meet their needs. Once the suite of tools has been finalized, this information needs to be communicated to teachers and principals to let them know what tools are available, how to access them and what type of PD is available.

Student Access

BEST PRACTICES:	E	M	S
At the point of instruction			
Available for whole group instruction			
Available for small group instruction			
Available for students to discover / extend their learning whenever appropriate			

In order to address the district's priorities and to use the technology to support these priorities, the technology must be placed at the point of instruction. If the majority of instruction for literacy and numeracy takes place in the classroom, than this is where the technology must be placed. Placing it in a lab introduces a number of barriers to use including, time and distance, both of which will weaken the ability of the teacher and student to use it effectively.

Observation:

The access to technology for students in all elementary schools is limited to computer labs and the library. On average students and teachers indicated that students use computers for one hour per week. When asked how these are being used, the majority of teachers and students indicated that they are used for word processing, research, typing skills and the creation of presentations.

In middle schools, there are a limited number of laptops but the majority of student access takes place in the library or labs. Although teachers in the middle schools used the technology for demonstrating and exploring concepts in whole group instruction, students in middle schools typically use it for the same applications as elementary students. Actual time on computers varied greatly depending on the subject area and the teacher's interest and comfort level with technology. Also, students indicated that the labs, for the most part, were fully booked and that it was difficult to get as much access to them as they or their teachers would like.

In secondary schools, the majority of student access takes place in computer labs and the library:

- there are 4 carts of 15 laptops each that can facilitate the movement of the technology to the point of instruction.
- amount of time a student is on the computer varied greatly based on the subject area and teacher's interest/ability to use technology
- it was reported that the labs are fully booked

Recommendation:

It is our belief that this focus will not change significantly until the technology is moved into the classroom at the point of instruction (with supporting PD on how to integrate it into literacy and numeracy and on classroom management strategies). When the technology is available at the point of instruction, students have an ongoing opportunity, throughout the day, to use it to support their learning.

There are a variety of models that can be used to move the technology to the point of instruction. In elementary schools, labs are often broken up and redistributed to provide classroom based computer pods (or centres). Laptop carts can also be used as another potential solution to replace the computer lab. Often the laptop cart can create "just in time pods" with a number of classrooms using laptops from one cart and then returning them to the cart at the completion of the class. If a "lab-like" environment is still needed, so that all students in a class can have access to a computer at the same time, the laptop cart can be used in a single classroom.

In middle and secondary schools, it is sometimes essential to keep a certain number of computer labs for those subjects where the lab is the place where the instruction takes place (i.e. media, computer studies). If this is the case, labs that are more cross curricular in nature can be broken up and the workstations moved into specific classrooms to provide access at the point of instruction or laptop carts can be used to replace the fixed lab.

The appropriate number of computers per classroom depends on classroom size (number of students), the grade level, the subject being taught, the digital resources available for that subject area and the teachers comfort teaching in a resource based classroom. An appropriate and customized deployment model for elementary, middle and secondary schools would be developed based on the specific needs of SD 72's schools if an IBM Educational Technology Strategic Planning Workshop is completed.

Observation:

Teachers and principals suggested that they want to be in control of where the technology is placed (although they did agree there is not enough access). If a standard deployment model is created that involves dismantling some or all of the labs, experience has shown that this can cause issues and challenges with acceptance of the new model.

Recommendation:

If the deployment model does change to one where technology for the students moves to the point of instruction, teachers and principals in elementary schools will need an understanding of the best practices related to implementation models including both the research behind the computer pods and strategies to use them effectively. Schools should be encouraged to embrace this model as it has been proven to be the most effective way to truly enable integration of technology into teaching and learning on an ongoing and "just in time" basis.

Teacher Access

BEST PRACTICES:	E	M	S
Access enables them to use it for all administrative requirements of their role - administration, assessing/reporting, communication			
Access enables them to use it for all aspects of their teaching and learning role			
Access enables them to do what they need to do whenever and wherever			
Access is sufficient enough that teachers use it enough to truly become comfortable with technology – both in their ICT skills and their ability to embrace and embed it in their teaching practice			

In order for teachers to embrace and embed technology in the teaching and learning of literacy and numeracy, and to help ensure student success, they must have access to it whenever and wherever:

- they are planning for the delivery of these subjects,
- they are teaching these subject, and
- students are learning these subjects.

Without this unfettered access teachers will not be able to truly embrace and embed the technology into their practice.

Observation:

In all schools teachers have a workstation on their desk. All teachers reported adequate access to do administrative and communication tasks while in their classrooms.

When asked about how they used them for instructional purposes many teachers especially in elementary schools, indicated they are unable to use the workstation in whole group and small instruction as they do not have a way to project the information on the computer screen. Elementary teachers indicated that there are only a few LCD projectors in their schools and that it is difficult to have one available when needed.

Middle school and secondary teachers reported an increased numbers of LCD projectors in their schools but still indicated that the lack of one in their rooms all the time meant that they could not always take advantage of teachable moments.

In all schools, LCD projectors are funded at a school level and often indicated the commitment of the principal and PAC to technology.

Many teachers also commented on the availability of SmartBoards in their schools and indicated they might be interested in having access to one however, they all agreed the LCD issue needs to be addressed first.

Recommendation:

It is necessary to address the issues related to LCD projectors in all schools. It is recommended that SD 72 establish a policy on LCD projectors that includes:

- A standard LCD projector deployment
    - One per classroom that is permanently mounted is recommended
- A recommended PD plan that would require teachers to attend a care and feeding session in order to receive their LCD projector. This session will ensure that they know how to use them as a teaching/learning tool and to maximize bulb life and minimize damage and theft.
- A plan for coaches, mentors and instructional leaders to model their use in PD or coaching that they do with teachers in the areas of literacy, numeracy or other District educational initiatives.
- A description of where the funding for LCD projectors should come from. It is recommended that the District consider funding the entire projector cost or offering a cost sharing to the schools.

In addition, it is recommended that SD 72 establish a District policy and related processes for other peripheral equipment such as interactive whiteboards, student response systems, etc. The policy should address standards, support and installation requirements, funding issues, care and feeding needs, coaching, mentoring modelling requirements, etc.

Observation:

SD 72 should be extremely proud of their decision to provide each and every teacher with access to their own technology. This is extremely forward thinking and has contributed to the increased comfort of many of the teachers with technology.

Teachers in both elementary and secondary schools indicated that they use the workstations for administrative and communication tasks and most said they did not use it a lot for instructional tasks. Part of this was attributed to the lack of LCD projectors, as described above. In addition, however, teachers indicated there was a lack of time to plan for their instruction while in their classrooms. Access to their own technology wherever and whenever they plan would enhance their ability to integrate the technology into their teaching practice.

Recommendation:

In the next refresh cycle for teacher workstations, it is recommended that laptops be considered. This will enable anytime / anywhere access to technology which has been shown to assist teachers with the embracing and embedding of technology into their teaching practice.

Professional Development

BEST PRACTICES:	E	M	S
PD is provided on how to use technology resources to deliver meaningful instruction and activities to enhance student achievement in literacy and numeracy			
ICT skills are acquired through PD and the integration of technology in the teaching and learning process			
Provide multiple models for PD including face-to-face, coaching/mentoring, web-based			
Available to all appropriate stakeholders (teachers, admin, school staff)			
All PD at school and district embeds technology into it as another tool to be used where appropriate			

Research indicates that teachers must receive professional development on how technology is related to the educational priorities that it has been purchased to address. This professional development should be provided in a variety of ways: face to face, in-school coaching and mentoring, web-based supports. All professional development that is related to literacy and numeracy should include a component on how the technology resources available can be embedded into specific units and lessons and how they support different instructional strategies.

SD 72 currently has a reasonable level of staffing in place to deliver professional development to their staff through face to face sessions as well as in-school coaching and mentoring. The online PD calendar available through the District intranet provides teachers the ability to browse the available face to face sessions that are offered and select sessions that meet their needs in terms of content and schedule.

Although the district Technology Resource Teacher position is currently vacant, indications were that the position would be filled in the future.

Teachers cited several key challenges to effective PD, which included:

- Time to attend PD as well as time to work with software following PD sessions.
- Access to technology that is working reliably and is running the same software used in the PD session. The fact that the teacher desktop computers in classrooms are not running the same software as the computers in the Linux labs causes a problem.
- All PD sessions need to have relevance to teaching assignments and the curriculum. They cannot be perceived as technology for the sake of technology.

- Ongoing support is very important to the overall success of PD. Without it, much of the learning is lost when teachers return to their classrooms.
- It is important that PD sessions be geared to the various skill levels of the teachers.

There was little evidence that recent PD on key District priorities demonstrated the integration of technology.

Through various discussions, it was apparent that Middle school teachers seem to be making the most effective use of technology in their teaching.

Observation:

While there is a desire within the District to further the integration of technology into the teaching and learning process in order to positively affect student achievement, a clear structure of aligned and connected PD is lacking.

Recommendation:

It is recommended that SD 72 develops a blended PD model that is aligned to District priorities and targets increased integration of technology into the teaching and learning process through face to face, coaching/mentoring and online professional development.

This recommendation will be comprised of the details presented in the subsequent PD recommendations, which will target:

- Maximizing the current investment in technology and its impact on student achievement
- Use of technology to support District priorities
- Improved teaching practices using 21st Century tools
- An increase in utilization and effectiveness of school technology

Observation:

While there are a number of support resources currently in place both at the District office and school levels, more emphasis should be placed on aligning and connecting these resources to a common purpose and vision, directed by District priorities.

Recommendation:

It is recommended that SD 72 formulate an Educational Support Team under the leadership of the Director of Instructional Programs.

Membership of this team should include:

- Director of Leadership Support

- Director of Student Support
- District Principal of Technology
- District Principal of Aboriginal Education
- Technology Resource Teacher
- Principal Robson Centre
- Manager Information Technology
- Pro-D Coordinator
- K-6 Instructional Support Teachers
- K-6 Special Ed Support Teachers
- One Teacher Leader from each of Middle and Secondary schools
- One CIT from each of Elementary/Middle and Secondary schools

While the number of members of this team may at first seem large, it is important to have proper representation to ensure all key groups are represented and have a voice in the development of the PD model that will be used throughout the District. There appears to be some disconnect between departments and roles at the present time. This team will provide the necessary structure to bring all stakeholder groups together for the common purpose.

Educational Support Team Purpose

The purpose of this team is to align and connect the various departments and roles currently existing within the District, that impact the use of technology, in order to unify the focus and direction of PD.

Given that the top two district educational priorities are literacy and numeracy, the Educational Support Team will use these two priorities as the focal point of technology integrated PD.

Education Support Team Initial Tasks

1. Using Literacy and Numeracy as the focus subject areas identify the grade levels which will be targeted for the initial phase of aligned and connected PD. These grades should be strategically chosen based on greatest need and/or possible impact within the district.
    a. Start small with only a few grades
    b. Select 1 or 2 grades from K-6 schools
    c. Select 1 grade from Middle schools

    d. Select 1 grade from Secondary schools

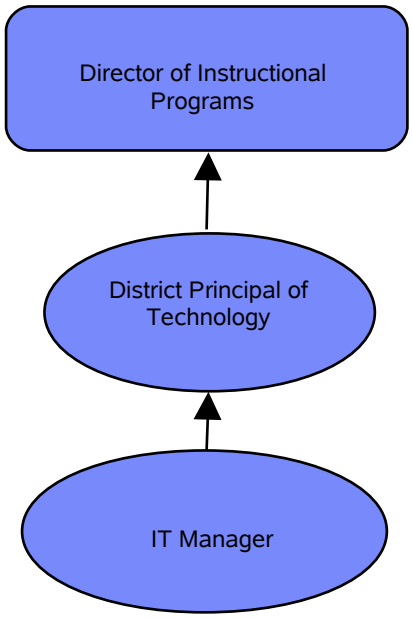
2. Identify one or two key instructional strategies to become the focus of the PD.
3. Identify the available technology and non-technology resources that align with the selected strategies.
4. Ensure all PD instructors are comfortable in using the identified resources.
5. Develop sample lessons to model to teachers in the selected grades
    a. Be prepared to differentiate the way the resources are used in classrooms based on the current skill/comfort levels of the teachers
6. Develop an assessment plan to accompany the instructional strategies and resources.
7. Develop a Team continuous improvement plan
    a. How will the Education Support Team assess themselves and work to improve?
8. Develop a communication plan so that teachers and administrators throughout the District are familiar with the PD model and plan, as well as how it will affect their teaching.

Observation:

When staff was asked to identify the person who was in charge of technology within the District, the majority of responses indicated it was the Manager of Information Technology.

Recommendation:

It is recommended that SD 72 re-align the technology related personnel such that the head of technology for the District is the Director of Instructional Programs, with the District Principal reporting to the Director, and the Manager of Information Technology reporting to the District Principal of Technology as outlined in the following chart.



As education is the primary focus of any school district, it is imperative that all decisions related to the access and availability of hardware and software for instructional purposes, be driven by the needs of instructional programs. It was refreshing to hear from the IT Manager himself that his department is there to support and serve the needs of education. It was equally refreshing to hear that when 'push comes to shove' that it is the needs of education that drives the implementation and support of technology within the District. These are both very healthy attitudes and the internal structure should be aligned to reflect those attitudes.

Observation:

While there have been some very good things happening with respect to PD throughout the District, the overall approach or model of PD related to technology integration within SD 72 appears to have been lacking a clear direction and focus.

Recommendation:

In order to ensure that PD is focused on the educational priorities of the District, it is recommended that SD 72 should clearly state that all PD will be provided under the direction of the Director of Instructional Programs, using the following approach/model:

- A blended model of face to face, in-school coaching and mentoring, as well as the development of technology aided PD.
- For the most part, PD sessions will take place during the instructional hours of the day to foster in-classroom support. This does not mean that teachers will be pulled from their classrooms to receive PD, but rather it will allow for teacher and student in-class support from the various support resources identified.
- The main focus of technology related PD will be on Literacy and Numeracy:
    - PD will target good instruction using technology, not technology itself

- PD will be workshop based as much as possible with the idea of teachers developing a product such as lesson plans during the PD session
- In the workshops an instructional strategy will be introduced and modelled. Narrow the initial focus to one or two strategies.
- After the workshops, provide individual teacher classroom support and 'hand holding', using the various support resources identified
- Provide online support through the District portal in the form of discussion/chat groups, FAQs, a resource repository of best practices and lesson plans

- All in-service delivered is to have a technology integration component
- Continue to access a budget line of substitute teachers
  - The majority of this budget should be allocated to facilitating technology support staff working with teachers in their own schools and classrooms.
  - Limit the number of large group PD sessions to reduce expenditures.
  - An alternative to large group sessions is to take one or two substitute teachers to a school and release one or two teachers for 1-2 hours to receive PD. This provides the opportunity to deliver the PD at the skill level of each teacher and to customize it to their classroom needs and situation.

Observation:

The current level of staffing allocated to supporting teachers is sufficient to meet the needs of teachers. The roles of these supporting positions, however, should be adjusted in order to maximize their impact on technology integration.

Recommendation:

It is recommended that SD 72 make the following adjustments to each of the identified technology resource positions so they are more tightly aligned to the purpose of providing technology integration support to teachers.

Pro-D Coordinator

This role is to become more closely involved with teacher in-service as well as Pro-D. If this role was made full time, it would allow for a more complete picture of all PD opportunities to be developed and presented to teachers as well as providing the possibility of coordinating the PD offerings and registration online.

Technology Resource Teacher

As soon as possible after this review, this position should be filled based on the qualifications of an excellent teacher possessing advanced technology integration skills and ICT skills. This person should also have demonstrated the ability to work with both teachers and students in a supportive, non-threatening manner related to technology integration.

If one does not already exist, a clear job description should be created to include the expectation of developing, coordinating and delivering technology infused training sessions to groups of teachers as well as "hand-holding" support work with teachers and students in their classrooms. In addition this role should be responsible for mentoring the six K-6 support teachers. In terms of actual delivery of PD, this role should focus on the Middle and Secondary schools.

CIT Resource Teachers

The District should ensure that there is a CIT in each Elementary, Middle and Secondary school. Selection of these teachers should not be taken lightly as they will form the first line of support for teachers in each school.

There should also be a clear job description developed which will include the following items:

- The main focus is to provide instructional leadership by working with teachers in their classroom to support technology integration following the direction of the Education Support Team.
- Training is to be provided to this teacher group and should be delivered by the Technology Resource Teacher along with the IT Department so there is a clear understanding of their role.

K-6 Instructional Support Teachers

Re-align the focus of this group of teachers to include a technology integration component in all literacy and numeracy PD that is aligned with the instructional strategy focus of the Education Support Team.

K-6 Special Education Support Teachers

Re-align the focus of the group of teachers to include the support of special education teachers and their integration of appropriate technology.

Teacher Mentors

SD 72 should ensure that there are teacher mentors in every school. This could be part of the School Improvement Plan and aligned to the District educational goals. The mentors should be focused on supporting individual teachers under the direction of the Education Support Team.

Teacher Leaders

Create a clear job description for the position of Teacher Leader, if one does not already exist. This document should identify that this role is under the direction of the Education Support Team and is to provide support for learning which includes the integration of technology as directed by the Education Support Team.

Outsourced Support

In the early stages of creating the Education Support Team and identifying the direction it will proceed in, SD 72 may consider the possibility of retaining the services of an outside proven master teacher to provide guidance and assist the team with tasks such as the creation of lesson plans which effectively embed technology as well as with the overall structure and organization of the Education Support Team.

Observation:

As identified above, SD 72 has sufficient resources in place for an effective PD model to be implemented. It is now a matter of properly aligning and directing those resources to a common purpose.

Recommendation:

It is recommended that all SD 72 technology support resources be under the direction of the Director of Instructional Programs and be allocated to schools in the following manner:

K-6 Support Team

- Three Instructional Support Teachers
- Three Special Education Support Teachers
- One school based CIT per school
- Teacher mentors in each school

Middle/Secondary Support Team

- Technology Resource Teacher
- Teacher Leaders in each school
- One school based CIT per school
- Teacher mentors in each school

Observation:

There appears to be varying degrees of school based administrator and district administrator involvement in supporting the integration of technology into teaching as well as in teacher administrative tasks.

Recommendation:

It is recommended that SD 72 develop a series of PD offerings for school based administrators, and district administrators under the direction of the Director of Leadership Support and the Director of Instructional Programs. These offering should include:

- An update on the direction and focus of the PD plan
  - Ensure that school based administrators have a clear understanding of the in-service direction being followed by the District and encourage their support of the process
- A Technology Leadership Institute
  - Provide the opportunity for school based administrators, District Principals, Directors, Assistant Superintendents and the Superintendent to attend workshops on effective technology leadership in schools
- Administrator Tool Kit
  - Ensure all administrators have a standard tool kit for their job, including a laptop and PDA (Blackberry, Treo…)
  - Implement a "Care and Feeding" session when deploying the tool kit to administrators so they are can develop the necessary skills to make effective use of the tools
  - Follow up with Introductory/Intermediate/Advanced sessions on the use of the tools as needed by the individual users

Observation:

There currently does not appear to be a mechanism to collect input from students related to the use of technology within the District.

Recommendation:

It is recommended that SD 72 develop a Student Advisory Group consisting of representation from Elementary/Middle and Secondary schools to meet with the Director of Instructional Programs and the Superintendent, three to four times per year to discuss issues related to the use of technology from the students' perspective.

Long Term PD Model

Of all of these critical success factors, professional development is the most significant in terms of ensuring that the technology is used to meet the goals and objectives of the initiative. Effective PD will ensure that the teachers can use technology as a resource both in the classroom to affect student achievement and for their own personal productivity. In the opinion of many educational leaders, professional development for educators is not just a major issue; it is the most significant issue in public education today. With the ever growing demands and changes of the curriculum and requirements, teachers are faced with more things to learn than ever before. This, compounded with constraints on the out of classroom time available for professional development, makes it one of the toughest challenges in education.

Relative to ICT and effective use, developing the competencies of teachers is essential. A comprehensive professional development plan can offer a solution that not only meets the needs of the technology implementation, but will work toward improving overall instructional strategies, teacher proficiency and student achievement.

Teachers will need to learn basic ICT skills, improve personal productivity and efficiency using technology, how to integrate technology into the curriculum, and ultimately enhance the learning environment for students. This training needs to be provided how, when and where your teachers need it.

Elements of a Long Term PD Model:

1. A clear vision of why technology is purchased in the District
2. Establish a educational instruction leadership team
3. Ensure the primary focus is instructional support followed by administrative tasks
4. Target key instructional areas such as literacy and numeracy
5. Target initial grade levels for support based on District need
6. Develop a plan to widen the grade level focus over the next 3 years
7. Identify target instructional strategies
8. Identify the human resources that will provide the initial PD and ongoing support, and ensure they all understand their assignments
    a. These resources are identified earlier in the PD section
9. Assess the appropriateness of existing resources, particularly software, as they relate to curriculum alignment and support for District priorities
10. Identify new and existing resources (both technical and non technical) to support the instructional targets of literacy and numeracy as well as the instructional strategies
    a. A key resource need identified by the teachers was that of LCD projectors. With only one computer in the classroom, it is very difficult to use it for instructional purposes on its own. Providing projectors to classrooms will greatly improve to overall value and effectiveness of the classroom computer for whole group or small group instruction.

b. Another resource issue is that of access to technology at the point of instruction. As most students get on a computer for one hour per week, there is little chance that technology is being used as an effective teaching and learning tool. Making more computers available in classrooms has a far greater impact on effective use than computers in labs.

11. Develop sample lessons integrating the identified resources
12. Communicate the PD plan to the stakeholders as often as possible
13. Model the lessons to teachers in PD workshops and work with the teachers to adapt the model lessons to meet the needs of their students
14. Provide follow-up, in-class support to the teachers as they deliver the lessons to students
15. Repeat the cycle of helping teachers develop appropriate lessons, using technology where appropriate and then providing ongoing in-class support as needed.
16. Make use of the District intranet by creating a repository containing model lessons, discussion areas, FAQs, best practices and so on
17. Use the internet to deliver PD sessions through webinars to target larger audiences
18. As teacher skills and confidence improve, less direct support will be needed and teachers will get to the point where they are able to provide support to other teachers.
19. Develop school and district Professional Learning Communities (PLCs) where teachers work together to address issues and develop means to support one another, or to convey areas in which they need further support
20. Develop an annual plan for measuring success. An annual staff and student survey where users are asked to rate their skill levels on various tasks and to provide their perspective on the effectiveness of technology and the PD and support they have received.
21. Continuously improve the PD plan and model by making adjustments based on feedback from the various stakeholders
22. Communicate the adjusted plan often.

Long Term PD Model Costs:

Campbell River
Strategic PD Budget 2009 - 2011

Category	Description and Assumptions	Unit Cost	Qty	2009	2010	2011
Release Time	Substitute Teachers (10 days per school) These funds are to be used mainly for the release of teachers, in their schools, to receive PD and support from the various technology support resource personnel	$300.00	200	$60,000.00	$60,000.00	$60,000.00
PD	LCD Care & Feeding (after school sessions)	$0.00	0	$0.00	$0.00	$0.00
	K-6 Support Team / MS&SS Support Team: combination of f2f and coaching to build integration skills - assume 30 attendees. Three f2f 1-day sessions per person with 15 attendees in each class (i.e. 6 trainer days) and 2 hours of coaching / person (i.e. 12 additional trainer days) for years 1, 2 and 3	$1,800.00	18	$32,400.00	$32,400.00	$32,400.00
	Technology Leadership Workshop for Administrators (4 half day sessions and online support over a 6 month period)	$750.00	30	$22,500.00	$0.00	$0.00
HW	LCD Projectors (one per room over 2 years)	$800.00	200	$80,000.00	$80,000.00	$0.00
	LCD Installation	$400.00	200	$40,000.00	$40,000.00	$0.00
	Total PD Costs			**$234,900.00**	**$212,400.00**	**$92,400.00**

Digital Curriculum Teaching and Learning Resources

BEST PRACTICES:	**E**	**M**	**S**
Correlated to Provincial expectations			
Support educational priorities of the district			
Enable teachers to teach, and students to explore, concepts in unique ways – 21st century ways			
Helps a teacher address multiple learning styles and higher order thinking skills			
Supports differentiated instruction			

Research indicates that in order for teachers to use technology in support of specific curriculum areas or to support specific district priorities, there must be curriculum based electronic resources and software available to them to support these areas. These resources must be correlated to Ministry expectations, easy to use, address multiple learning styles, provide scaffolding for the student, let teachers and students explore concepts in unique ways and enable the teacher to differentiate instruction for each student.

Tools that support the teaching and learning process and also enable teachers and students to be more productive and produce higher quality output are also important resources to provide.

Observation:

Teachers, principals and teacher librarians all reported that word processing and internet research are the two most commonly used resources in labs.

There is a lack of resources that have a direct correlation to the curriculum other than the online resources for secondary science and math courses found on the BC Learn site.

While there are a large number of software titles available, they are not always being used effectively, nor do many of them directly support the educational priorities of the district.

Recommendation: (Further assessment required)

It is recommended that the Education Support Team should:

- Conduct a full review of the appropriateness of existing software
- Develop a software acquisition process to ensure future software purchases are aligned to the curriculum and support District priorities
- Investigate software titles that support literacy, numeracy and differentiated instruction

The software review and acquisition process should be closely tied to the PD direction developed by the Education Support Team. As the support team evaluates existing resources, gaps will appear related to resources needed to support curriculum instruction.

SD 72 has taken some steps in this direction with the purchase of Destination Math which is correlated to the BC curriculum and is well suited for differentiated instructions and for exploring math concepts in unique ways through technology.

It appears that teachers are largely unaware of this software title and how to make use of it in their teaching. As Destination Math meets the requirements of effective software, the support team should investigate the possibility of teacher PD in order to support the District priority of numeracy.

Appendix A: Online Survey Analysis

Question 1&2: Grade & Years Taught

- **Survey dates: December 8 to December 19, 2008**
- **134 teachers responded (3 did not identify a grade level)**

Yrs Taught	Grade Level Taught					Total
	K-3	4-6	7-9	10-12	Other	
< 5	1	1	5	4	3	14
6-10	3	3	3	2	1	12
11-15	6	4	4	9	1	24
16-20	3	3	3	4	1	14
> 20	15	21	7	20	4	67
Total	28	32	22	39	10	131

Survey Analysis: Skill Level by Grade Level

Skill Level	Grade Level Taught				
	K-3	4-6	7-9	10-12	Other
Very Low	3.6%	0.0%	0.0%	0.0%	0.0%
Low	21.4%	12.5%	9.5%	2.6%	0.0%
Average	**46.4%**	**40.6%**	**57.1%**	**46.2%**	**40.0%**
Above Average	28.6%	34.4%	28.6%	38.5%	**40.0%**
Advanced	0.0%	12.5%	4.8%	12.8%	20.0%

K-12 Education

Question 3: Overall Computer Skill Level

Skill Level	Response Percent	Response Count
Very Low	0.8%	1
Low	9.8%	13
Average	**45.9%**	**61**
Above Average	34.6%	46
Advanced	9.0%	12

Note: Tech Review 2006 - 47% rated skills as Very Low , Low or Unknown for implementing ICT Outcomes. Only 23% rated their skills as High or Very High.

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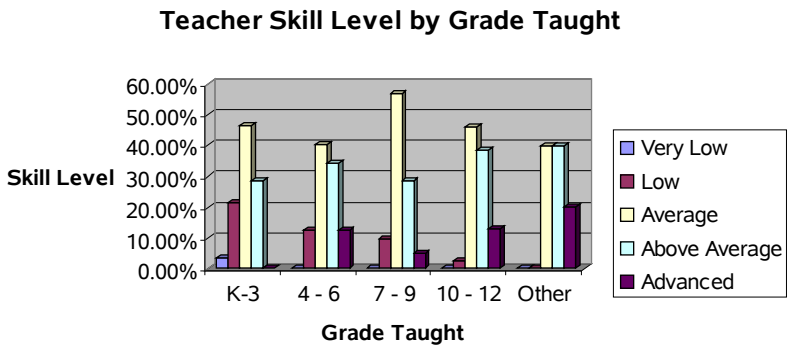
Survey Analysis: Skill Level by Grade Level



K-12 Education

Survey Analysis: Skill Level by Grade & Years
K-3 Teachers

Years Taught	Very Low	Low	Average	Above Average	Advanced
< 5				1	
6 – 10			2	1	
11 – 15		2	4		
16 – 20		2		1	
> 20	1	2	7	5	
# of Teachers	1	6	13	8	0
Total %	3.5%	21.5%	46.5%	28.5%	

Note: Weaker in 11 to 20 years

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Survey Analysis: Skill Level by Grade & Years
Grade 4 – 6 Teachers

Years Taught	Very Low	Low	Average	Above Average	Advanced
< 5				1	
6 – 10			2	1	
11 – 15		1	1	2	
16 – 20			2	1	
> 20		3	8	6	4
# of Teachers		4	13	11	4
Total %		12.5%	40.6%	34.4%	12.5%

Note: Much stronger overall. 12.5% Advanced

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Survey Analysis: Skill Level by Grade & Years
Grade 7 – 9 Teachers

Years Taught	Very Low	Low	Average	Above Average	Advanced
< 5			1	4	
6 – 10			2	1	
11 – 15			4		
16 – 20		1	2		
> 20		1	3	1	1
# of Teachers		2	12	6	1
Total %		9.5%	57%	28.5%	5%

Note: Larger Average group. Fewer Low. Fewer Advanced

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Survey Analysis: Skill Level by Grade & Years
Grade 10 – 12 Teachers

Years Taught	Very Low	Low	Average	Above Average	Advanced
< 5			1	3	
6 – 10			1	1	
11 – 15		1	4	2	2
16 – 20			1	2	1
> 20			11	7	2
# of Teachers		1	18	15	5
Total %		2.5%	46%	38.5%	13%

Note: Almost none below AVE. Highest Above AVE & Advanced

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Survey Analysis: Skill Level by Grade & Years
Others

Years Taught	Very Low	Low	Average	Above Average	Advanced
< 5			2	1	
6 – 10			1		
11 – 15			1		
16 – 20				1	
> 20				2	2
# of Teachers			4	4	2
Total %			40%	40%	20%

K-12 Education

Question 4: Integration Usage with Students
Overall

Use	Never	Sometimes	Frequently	Response Count
Drill & Practice	**54.4% (68)**	39.2% (49)	6.4% (8)	125
Demo Learning in Tech & other Subjects	22.8% (29)	**58.3% (74)**	18.9% (24)	127
Data Analysis & Presentations	30.2% (38)	**54.0% (68)**	15.9% (20)	126

K-12 Education

Survey Analysis: Drill & Practice Integration Usage with Students by Grade Taught

Drill & Practice	Grade Level Taught				
	K-3	4-6	7-9	10-12	Other
Never	**50.0%**	44.8%	**61.9%**	**61.8%**	**60.0%**
Sometimes	**50.0%**	**49.3%**	28.6%	29.4%	30.0%
Frequently	0.0%	6.9%	9.5%	8.8%	10.0%

Note: Mostly Never. Highest in Primary. Very little Frequently

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Survey Analysis: Demonstrate Learning in Technology & Other Subject Areas - Integration

Demo Learning	Grade Level Taught				
	K-3	4-6	7-9	10-12	Other
Never	28.6%	16.1%	19.0%	29.4%	10.0%
Sometimes	**64.3%**	**58.1%**	**66.7%**	**50.0%**	**60.0%**
Frequently	7.1%	25.8%	14.3%	20.6%	30.0%

Note: Higher level use in Sometimes and Frequently

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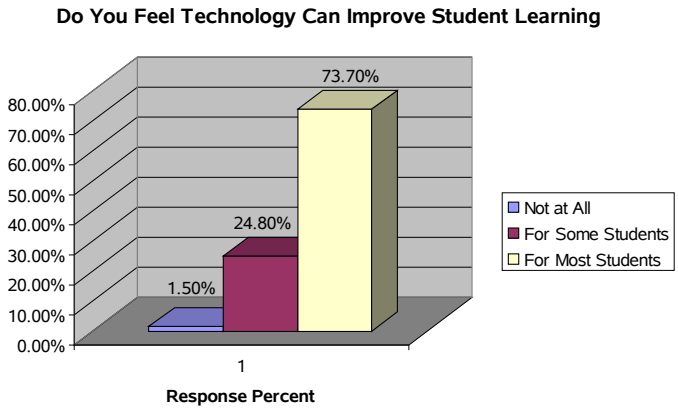
Survey Analysis: Data Analysis & Presentations - Integration

Data Analysis & Presenting	Grade Level Taught				
	K-3	4-6	7-9	10-12	Other
Never	**63.0%**	25.8%	25.0%	16.7%	20.0%
Sometimes	25.9%	**67.7%**	**60.0%**	**58.3%**	**50.0%**
Frequently	11.1%	6.5%	15.0%	25.0%	30.0%

Note: Mid to higher grades using more. Limited in Primary

K-12 Education

Question 5: Improving Student Learning



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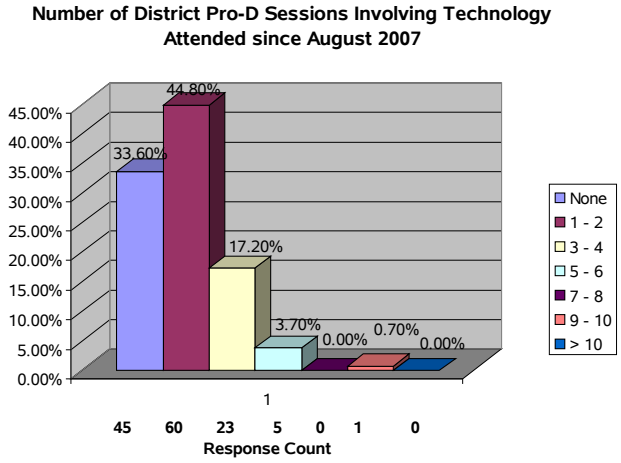
Question 6: Previous Pro-D Attended



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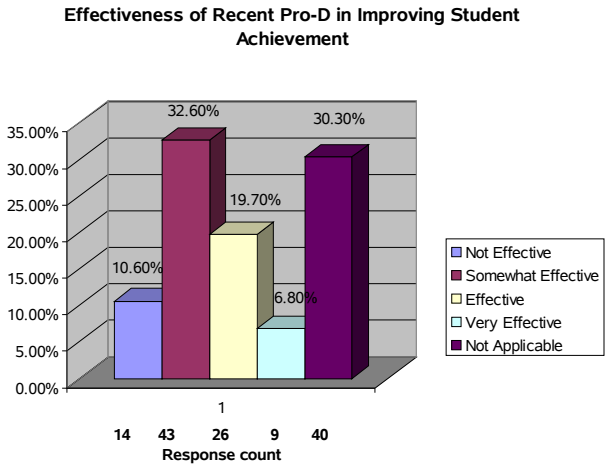
Question 7: Improving Student Achievement



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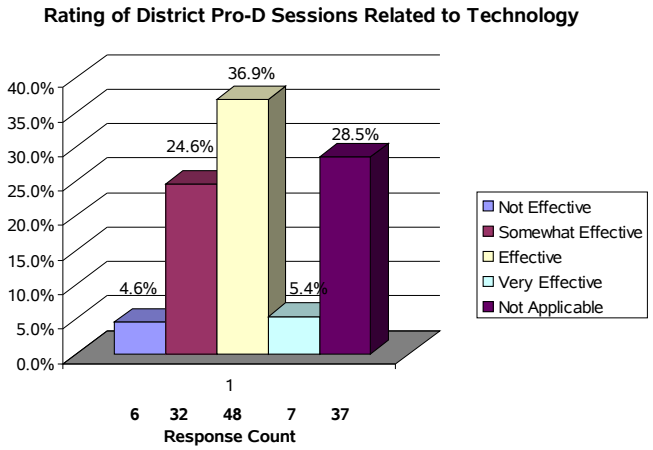
Question 8: Rating Pro-D Effectiveness



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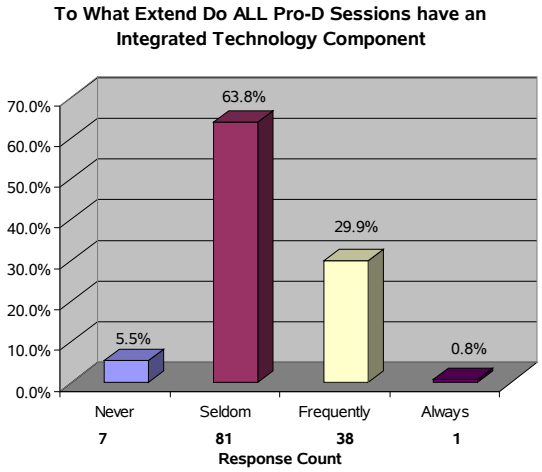
Question 9: Technology Integrated in All Pro-D



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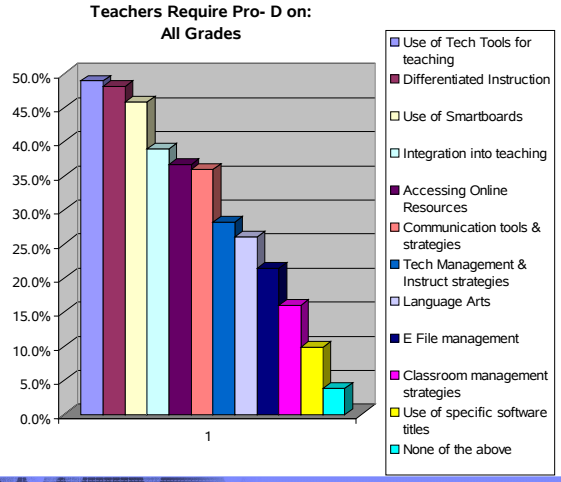
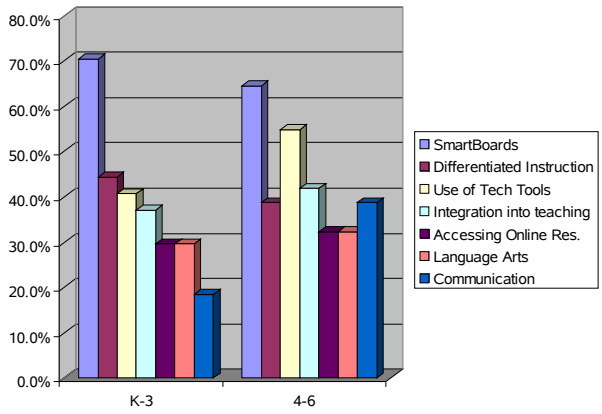
Question 10: Pro-D Required



K-12 Education

Required Pro-D by K-3 and Grade 4-6 Teachers



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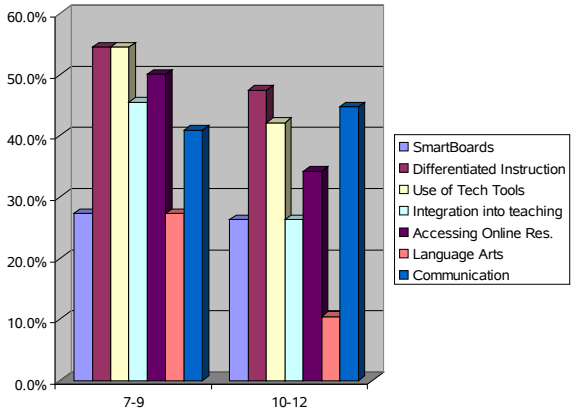
Required Pro-D by Grade 7-9 and 10-12 Teachers



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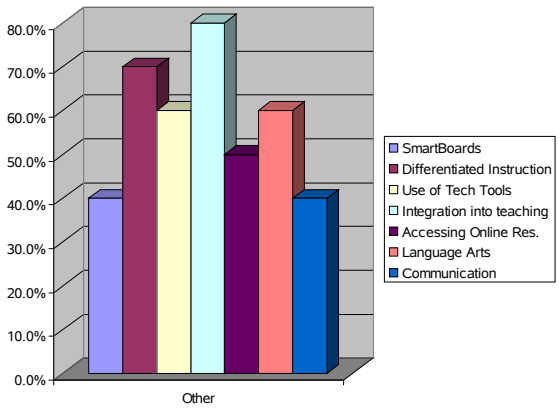
Required Pro-D by Others



K-12 Education

Question 10: Software Requiring Pro-D

Software Title	Number of Responses
Kurzweil	3
Classroom Suite	3
Word Q	3
Dragon Speak	2
CoWriter	2
PowerPoint	1
Destination Math	1
RSS	1
Startpages	1
Podcasting	1
Vodcasting	1
Social Bookmarking	1

Software Title	Number of Responses
Digital Storytelling	1
S/W for Special Needs	1
S/W for Learning Difficulties	1
Photoshop Painter X	1
Final Cut	1
Balanced Literacy	1
I Photo	1
Web based programs	1
Web 2.0 tools- blogs, wikis	1
MS Publisher	1
Linux Titles	1

K-12 Education

Question 11: Software used to support Learning Outcomes

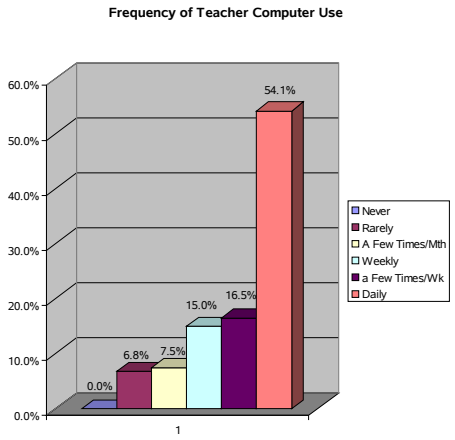
Software Title	# of Responses
MS Word	17
MS PowerPoint	14
Internet	11
Kurzweil	9
Open Office	7
MS Excel	5
MS Office	3
Smart Notebook	3
Boardmaker	2
CoWriter	2
Google Earth	2
Inspiration	2
Typing Programs	2
Speak Q	2
Apple Works	1

Software Title	# of Responses
Atom Builder	1
Auto Cad R14	1
Blogger.Com	1
Destination Math	1
DragonSpeak	1
Dreamweaver	1
DVD Player	1
Edu Blogs	1
Encarta	1
FaceBook	1
Final Cut	1
FrontPage	1
I Movie	1
I Tunes	1
Google Sketchpad	1

Software Title	# of Responses
Math Makes Sense	1
MS Publisher	1
Online Encyclopedia	1
Quicktime	1
Raz Kids	1
Reading A-Z	1
Report Writer Makes Sense	1
Starfall	1
Science Workshop	1
Tumblebooks	1
Web CT	1
WikiSpace	1
Wizard Spell	1
Work Q	1
Write Out Loud	1
Voice Thread	1
YouTube	1

K-12 Education

Question 12: Computer Use to Prepare for Teaching



K-12 Education

Survey Analysis: Computer Usage by Gr.K-3 Teachers

Computer Use	Years Taught				
	< 5	6 - 10	11 - 15	16 - 20	> 20
Never					
Rarely					1
A Few Times/Mth			1	1	2
Weekly			2	1	2
A Few Times/Wk	1		2	1	4
Daily		3	1		6

Survey Analysis: Computer Usage by Gr. 4-6 Teachers

Computer Use	Years Taught				
	< 5	6 - 10	11 - 15	16 - 20	> 20
Never					
Rarely				1	3
A Few Times/Mth		1			1
Weekly				1	6
A Few Times/Wk			1		2
Daily	1	2	3	1	8

K-12 Education

Survey Analysis: Computer Usage by Gr. 4-6 Teachers

Computer Use	Years Taught				
	< 5	6 - 10	11 - 15	16 - 20	> 20
Never					
Rarely				1	3
A Few Times/Mth		1			1
Weekly				1	6
A Few Times/Wk			1		2
Daily	1	2	3	1	8

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Survey Analysis: Computer Usage by Gr.10-12 Teachers

Computer Use	Years Taught				
	< 5	6 - 10	11 - 15	16 - 20	> 20
Never					
Rarely					1
A Few Times/Mth			1		1
Weekly				1	3
A Few Times/Wk	2			1	4
Daily	2	2	8	2	11

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Survey Analysis: Computer Usage by Others

Computer Use	Years Taught				
	< 5	6 - 10	11 - 15	16 - 20	> 20
Never					
Rarely		1			1
A Few Times/Mth			1		
Weekly					2
A Few Times/Wk	2				
Daily	1			1	1

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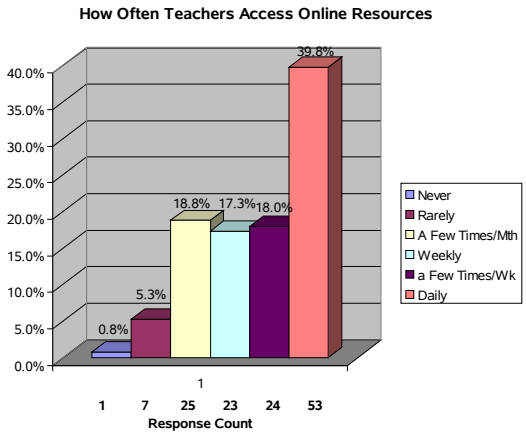
Question 13: Frequency of Accessing Online Resources



K-12 Education

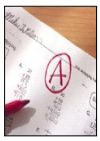
Frequency of Accessing Online Resources by Grade

Frequency Of Use	Grade Level Taught				
	K – 3	4 – 6	7 – 9	10 – 12	Other
Never	3.6%	0.0%	0.0%	0.0%	0.0%
Rarely	3.6%	9.7%	9.1%	0.0%	10%
A Few Times/Mth	17.9%	19.4%	22.7%	17.9%	20%
Weekly	25%	22.6%	4.5%	12.8%	20.0%
A Few Times/Wk	25%	9.7%	4.5%	20.5%	30.0%
Daily	25%	38.7%	59.1%	48.7%	20.0%

K-12 Education

Question 14: What Makes Pro-D Successful

5 Key Elements of Good Pro-D



1. **Relevant to teaching and Curriculum (30)**
2. **Hands On (17)**
3. **Immediate access to properly working technology (15)**
4. **Time to work with application (14)**
5. **Follow-up support (9)**

K-12 Education

Question 15: Pro-D Challenges

6 Challenges/Barriers

1. **Time (32)**
2. **Access to properly working technology (31)**
3. **Relevant to teaching and Curriculum (16)**
4. **Varied skill level of participants (13)**
5. **Follow-up support (10)**
6. **Cost (3)**

Appendix B: Interview Summaries

Elementary Teacher Group Interview

1. **What are the district priorities?**
   - Literacy; numeracy; social responsibility
2. **What are the top three reasons you are using technology?**
   - To improve student learning;
   - Communication: among teaching staff; some do communication with parents via email (kindergarten teacher does it all with email); communicate about library with Blogs; ¾ of the teachers in the room said they send out communications electronically and with paper; parents are emailing; (for both teachers all parents have it, one teacher emails all her parents and manages the school website.
   - Management – marks, demographics, report writer, report cards may or may not be online (some teachers indicated they are still doing them in hardcopy) – can do report cards on the computer or not … ; IEPs are done online with IEP Central; report card software is not web-based but you can download and run from home

3. **What would you like technology to do that it is not doing today?**
   - Teacher librarian would like technology in the classrooms for students to use for teaching and learning
   - A projector with SmartBoard
   - Linux in labs and teachers have window
     - One school (French Immersion) reported that their Linux lab has not worked for the past two years and the teachers are very frustrated.
     - Teacher station has windows – hard to move from one platform to the other – there are now extra steps involved.
     - In the lab they are doing word processing (use open office); do presentations, internet research; keyboarding and use a lot of internet based websites (mulitiplication.com and a games site); one teacher reported that when in the lab each student is using learn Alberta for math and can work at their own pace (only have grade 3 and grade 5 .. grade 4's don't have anything).
     - The Linux labs that are working are great. They seem very stable.
     - Disappointed about what it cannot do. One example is the Smart technology on Linux is a disappointment – all of the teachers that were in the room agreed with this. According to one teacher, 'they' are working on this but it will take a huge amount of storage space for it to work.
     - Teachers felt that Matt Armitage (who is responsible for all elementary schools) is overworked – they couldn't say enough about the excellent job he is doing but he just can't keep up and they feel they need another person. They said it would be nice to have a school based person that had time for technical support.
     - The teachers reported that the Linux software is limited. For example they loved Kidspiration but it does not work on Linux.
     - They would like to have Web 2.0 tools.

- Their teaching of technology has changed. Approximately 75% of the teachers had a shelf of books with ideas on how to use technology in the classroom but they do not use them anymore as it (the software, etc.) doesn't work on Linux and it is no longer available to them.
- Can get a CIT grant (10 days or 20 ½ days) to educate other teachers in classrooms on how to use technology. Two of the teachers said they had done it for years and it was great as you gradually released responsibility to them. Neither one is doing it this year as it is now so limited in what she can teach them due to the lack of software.
    - They used to Kidspiration, Hyperstudio; Mavis beacon typing (which they said was very good) and Kidpix - now they use TUX paint as an example which is not nearly as good). Another example is Ten Thumbs typing which they indicated is not very good.
- When asked how software was selected for the school server, they said teachers ask IT (Matt) to put it on. They recommend it and if Matt can get it to work they may decide to put it on. The tech department decides (Geoff Wilson is the head technology and controls the computers and Dave)
- They indicated they really need LCD projectors first then SmartBoards

4. **Is there a structure where teachers come together to recommend software**?
    - The teachers indicated that there was a process last year.
    - Now teachers try and find useful titles and tell IT. But it is very time consuming for them to try and search it out and since they cannot download the software and use it (as they do not have Linux at home) it is very difficult to even come up with recommendations.

5. **What is preventing IT from being effective?**
    - Lack of funding – schools have to buy their own LCD projectors and then they have a hard time getting them mounted - they indicated there was interdepartmental arguing over this.
    - There indicated that many of them do not know how to move between the Linux lab and teacher stations in term of moving documents etc. This would seem to indicate a need for PD in this area.
    - When a new piece of software gets added to the server, there is no PD offered around it
        - Some said the tech person might do a brief overview
        - In some cases there **might** be a session offered as part of the district PD but it is not necessarily the case.
        - Since they front loaded three of the ProD days in August, they felt that they were essentially out of luck for the rest of the year. They also indicated that many took training on SmartBoards who didn't have them yet – they would prefer the training when they have access to the tools at their schools.
6. **Is there a district technology plan that you are following?**
    - The answer to this questions was no. If there is, no one knows what it is and they are not aware of any plan that addresses hardware and related PD, etc.
    - There is s scope and sequence for ICT skills – what you need to teach

7. **Who is in charge of technology for the district?**
    - Jeff Wilson

8. **Describe your access to computers and what you use them for:**
    - With their desktop making up worksheets, using office suite,
    - They do not take attendance
    - Check email
    - Some bring in their own laptops
    - The Special Ed teacher uses it a lot and does minutes and admin tasks on it
    - They indicated that their principals may or may not use electronic communications – it depending on what school they were at.
    - Instruction – did some instruction on it when they could get a projector
    - Planning and administrative work

9. **What access do your students have to computers?**
    - Their access occurs in the lab and on average they get access one hour a week (either an hour block or maybe two ½ blocks)
    - They are doing whatever the teacher wants or asks them to – it might be ICT skill related and it is a lot of that – mostly word processing, typing, research, Powerpoint
    - Do some scope and sequence for ICT but they do not assess or report on it.
    - For students in special education, they get an additional hour a week ; some kids have laptops and might bring it in from home

10. **How do teachers currently access PD?**
    - Some teachers know what their own needs are and look for what they need and will go anywhere to find it. One reported that she participates in courses and gets Pro D or she pays for it herself if it is something she is interested in. They reported that when you take an after school session you get $200.00 in your ProD account (for the first course you take) which you can use to take courses. You start with a minimum of $100.00 at the beginning of the year. You can also get more money in your account if you teach a course. In addition, the school has a certain amount of ProD money that you can apply to use.
    - District ProD is listed on their calendar. On the ProD calendar that is what the district offers pretty much
    - If you are interested in a course being added you can talk to John Elson about it.
    - Pro D is taken after school which makes it difficult for some teachers to participate, especially if they have children or participate in coaching, etc.
    - If you take ProD out of district you can pay for it out of your ProD account
    - There are 5 designated ProD days for the school year ... this year because of a two week spring break 3 of these days were taken in August. Three of these days are District days and two are School days.
    - They suggested that the CIT grant needs to expand as a teacher in the school could provide in school mentoring and coaching and avoid some of the issues with after school conflicts.
    - They indicated they needed some ProD on how to work form home with my files
11. **How are you made aware of PD opportunities?**

- There is a brochure available early in the school year and John sends out emails.
- Schools have a ProD rep in each school that keep staff aware of the ProD opportunities. During this discussion some teachers indicated they didn't know who their ProD rep was. It was suggested they may not have one as it is a volunteer position)
- ProD for technology is usually fact to face. In-service might use webinars on literacy, etc.
- When they are attending in-services on literacy there is not typically any focus on how to use technology
- At Southgate two teachers are offering a 6 sessions, once a month, and the goal is to teach participants how to use the technology that is available to the greatest advantage possible. They cover social networking with delicious, Google Docs, how to download a video, how to show inspirational videos (if you were doing a Powerpoint and if you had an LCD projector!). The trainers have set up there own site with all of their materials online – it is not a district site.
- Teachers indicated that was no district site where you can go to get district resources – there was one last year and each presenter posted their materials but this no longer exists.
- French immersion teachers got together and are doing a Delicious site with tags for resources, translations, etc.
- Most computer labs do not have projectors
- There are 3 people at the district level that focus on literacy and numeracy – they do have laptops and they work in the schools however they do not show how to use technology when they are discussing literacy or numeracy.
- All of the teachers felt that technology should be tied into literacy and numeracy

12. What PD do you require?

- podcasting, webcasting, 2.0 tools, using microphones and headphones for voice threads
- French Immersion they have an online site where they can get vocabulary on a theme and she says it in French. The plan was to put interactive games on it. Her mentor went to Saudi Arabia and the support for this stopped as did her delicious French site. She would maintain it if she knew how!
- They need Pro D on the tools and time to show the other teachers in their schools how to use them
- How to integrate technology into reading and math – they get none of this now but would like it
- They need school mentors
- When Roy left he was not replaced. Although Dave appears to have replaced him he did not – although he is the District Principal of Technology he has so much more than that in his portfolio. Roy was dedicated to technology. Dave – he is district principal of technology – his umbrella is more than that – he has policy and other things.
- They would like to know how to integrate technology into all subject areas,
- How to use SmartBoards,
- How to use data projectors,
- Classroom management strategies while using computers,
- Electronic file management,

- Individualizing instruction and how technology can help
- Communication strategies including email,
- Technology integration instructional strategies,
- Specific software titles

13. Is there a Coaching or Mentorship program?

- Whether or not the mentoring program is used depends on the school – can get a CIT grant (10 day one) but you need some one at the school interested in it. In terms of the official Mentor program, none of the teachers at their school had a mentor. They indicated without Roy to help them plan it and it is hard to take on this role in terms of scheduling the mentor time, having to prep for their own sub, etc.
- What is their focus?
  - Focus was integrating technology into the curriculum – using tech tools

14. **What % of the school day is the technology being used?**

- The lab is not always used at some schools because the teachers are not comfortable – it is an afterthought for PD for teachers depending on the school – again it is used by the specific teachers who are comfortable with technology.
- The lab is some schools were reportedly overbooked and almost all teachers use it
- Some labs aren't working well so the teachers have stopped using them.
- Kids have own logins if they want to save their work
- MSN is banned. When we asked if they use blogs someone indicated they can get to blogger.com but the district staff does not want them using this stuff.
- With web 2.0 there are no standard approved tools that the district supports.

15. **Expectations of Use – Describe the expectations of use:**

- **For the teacher workstation:**
  - Students were not allowed on it
  - You were encourage to use it for GroupWise
  - Told not to download music or video
  - People with laptops that are there own take them back and forth – it is easier to do their planning – it is hard for them to do it with the workstation
  - **J**ob postings now ask for specific ICT skills but there is no definition of what ICT skills teachers already in the system need

16. Other Comments

- One teacher has a mounted SmartBoard in her classroom – she believes this has made a difference for her teaching and the students learning.
  - She paid for her own training in the summer and got the SmartBoard
  - She is worried about her kids as they move to the next grade as they likely won't have this same technology and she knows how much they love it. She also worries as other kids in the same grade but other

classes at her school do not have access to the same technology – equity was discussed briefly.
- Is equity a problem? Some schools can fundraise more and the school principal is so key to this. Some support technology and others don't'.
- Dave Friederich has said the district will not buy SmartBoards so schools will need to if they want them. So that means the principal will have even more impact. This is also true for LCD projectors.

17. **Final Question: What one thing would you change to make the use of technology better?**
    - Would like paid time to further her own use of the SmartBoards and technology – just doesn't have the time. Need more time – paid and during the day
    - Although they do get 6 prep days plus get two ½ hours a week for prep time, the 6 prep days have become report cards days – you can use them how you want.. Other districts get prep time during the week...
    - Would like to have the equipment she needs where the learning is done.
    - Wants a least an LCD projector and SmartBoard, then she would put several computers in the classroom – used to have Macs in the classroom (from 3 to 6) and they all agreed these were used a lot.
    - Would want an onsite mentor to work with teaches – should have tech capabilities
    - Would want a projector in the classroom – not a worried about computers in the classroom
    - Need another Mathew Armitage!
    - Would rather have the mentor come in then them go out. – tie technology to the work that the people that are focused on literacy and numeracy

Middle and Secondary School Teacher Group Interview

1. **What are the district educational priorities?**
    - Assessment; they are top down coming from the ministry; literacy, numeracy, social responsibility

2. **What are the top three reasons you are using technology?**
    - Try to live with the 21st century student
        i. Students are learning technology at home and teachers are trying to keep up
        ii. They have disengaged students and the technology can do this... but the teachers need the understanding.
        iii. We need to make sure we teach the students the social responsibility aspect
    - To differentiate curriculum and diversify it. It is hard for the student to slow down in the class – teachers need to keep it dynamic and interesting.
        - From the board perspective, use is about management, doing online attendance, reporting, email - all teachers got computers on their desk three years ago as opposed to the educational piece – at this point in time there is not much of a vision with regards to the educational use of technology to support the learning
        - One of the middle school teachers in the room felt that in her school the computers were being used for student centred learning. She felt that it was not a question of hardware, they have it and they do integrate the technology in the school to meet the needs but the district is not setting a vision.
        - One high school teacher told about his media classes and the fundraising he does to get special equipment.
        - Carihi indicated that they did not have enough hardware – only 2 labs and there is inequity in terms of who gets to use it as it is teacher driven. Apparently they have a Mac lab as well.
        - One school indicated that they had 650 kids – they reported having 4 labs plus 15 in the library and 5 or 6 Imacs for media and 1.5 portable labs. Again, it was indicated that inequity is driven by which teachers demanded to use them.
        - Teachers indicated that it would have been nice to have been given laptops versus the teacher workstation.
        - Some schools are buying tablets

3. **What would you like technology to do that it is not doing today?**
    - Like to have a projector mounted, would like more software available in French
    - Not all classrooms have LCD projectors – the high school reported only having 5, the middle school indicated they had 10 to13
    - **Are school based purchases good or bad**?
        i. **w**ould like to have principals support technology without have to prove to them why they need it

- Why aren't they using the technology the kids are bringing to schools - ipods, cell phones, etc?
- Want site management and teacher input but would like a vision that encompasses the use of technology – don't want to fight with the principal when they want to get something new
- Teachers would like the time to figure out what they need and have support from the district to help them.
- If you set a standard – teachers would likely use it, slowly maybe but right now the teacher that is less likely to use it will just not bother - it is too hard to book the peripherals.

4. **What is preventing IT from being effective?**
   - Anytime you want to introduce technology to teachers, you need to show them what is it for them to convince them why they should put the time in up front for the promised benefits down the road.
     i. Ie. With declining enrollments, Dave is teaching multiple grade levels and subjects at once... he has created video lessons that he delivers on the computers – took a ton of time to design them but he can now effectively deliver instruction to many different kids at once.
   - Pat Presidente retired and he was replaced with Roy and then he went to Saudi Arabia... they need someone with that role again. – need it to be collaborative and someone to implement ongoing ProD. People that are not tech savvy don't know how to use the online ProD tools.
   - There is the issue of having to fight for the change – the teacher indicated they wanted to setup a blog with edublog and the district wants them to use something else but there is no one to help so they couldn't get it going.
     i. Ie. podcasting – how to set these up - teacher has to talk to principal to see if kids can use their cell phones/mp3 players to bring in their music...
   - Other thing is being forced into using their tools versus the stuff that the kids are used to using that are free (i.e gmail)
   - Part of the issue with using tech effectively, there are certain things you need to use it effectively – SmartBoard, LCD projectors – they are still fighting to get these. The other part is that if you don't do the ProD that needs to go along with it - since Pat left there has been no one with the educational vision part of it and even before he left the last three years of his tenure his role was changed where he had a hard time implementing this. It seems that the tail is wagging the dog – the tech department has been saying what it is that is going to happen in the schools versus the Program or the schools.
   - They need access for students in the classroom and an educator that drives this.

5. **Is there a tie between district priorities and use/PD?**
   - In the technology area there is little or no ProD offered in the district– he goes somewhere else
   - This year there is a web 2.0 ProD session, there is a SmartBoard user group – there was some ProD in August
   - There are teacher leaders in the school but there is no one at the district level for technology or subject specific assistance – this does not exist – director of

curriculum but there is no one that you can call to ask what are the grade 8 outcomes in math that technology can be used to meet.

- The middle and secondary schools, have the CIT teachers (curriculum integration with technology) – they get a block every second day to help other teachers integrate technology – they don't have enough blocks (75 minutes in a block) to do this. Board provides one block and the school must provide the other block
    i. At the two high schools that person deals with all the trouble shooting at the schools versus helping to integrate technology in the curriculum.

6. Who is in charge of technology for the district?

- Jeff Wilson is in charge… he is not an educator
- Need someone that understands education. They did not feel the technology department shouldn't be driving this.

7. How do teachers currently access PD?

- The ProD that is offered at the district is good for basic level technology but for advanced stuff one teacher reported she goes on her own.
- Some indicated that it is difficult to take the after school ProD as they coach and the courses they wanted to take in August were full.
- They would prefer if it was during the day – most of the courses you take are 6 sessions – would prefer if they were two sessions in length two weeks in a row – 6 is too many
- One teacher reported that the SD in Courtney is doing a better job of PD than SD72.
- They would like ProD on web 2.0 tools – would like to take advantage of things like podcasts and let their students use that instead of a word document for an assignment.
- There are many teachers that do not even realize that there are curriculum ties to technology, but there are and teachers need to know this.
- PD is typically done by the teachers in the field driven by interest and it comes back to people having to give up their own time for future gains. They do not have teacher's week – they have given up some of their ProD days for the two week break and front end load them in the summer. They do not provide the opportunity to do the Pro D as part of their work – this is creating a problem – does not lend itself to personal development. What you find is that teachers who are keen do it, other do not which is widening the gap.
- The Pro D coordinator is awesome and if you ask for something he will try to find it
- Probably 25% of the teachers do a course of some description outside of the 5 days provided
- The 5 days that are offered are well structured and mostly good offerings
- Collaboration for growth grants – the librarians have a group – one Tuesday a month
- When we asked if they were doing Differentiated Instruction – they said they are just starting it.
- They indicated that they need time to reflect in the session and they would like it to be offered during the day.

- Would also like to have a coach/mentor in their school.

8. **What PD do you require?**
   - How to do glogs, blogs, webcasts, podcast, create a virtual library, voice threads,
   - Tablets and the utilities
   - Regular teaches in the district need ProD on how to use the hardware, make them aware of what is available (software, tools, etc)
   - Technology IRP's (learning outcomes)
   - A lot of basic stuff – computer skills are very weak –
   - Starting to develop an elearning strategy – they are making lessons for reference but do not teach the course.
   - How to build a web page (using.nuke)
   - Java
   - Even new teachers, when they arrive, do not know how to integrate technology – they are not taught this at the faculties of education.

9. **Rate your technical support, meets needs, and does not meet needs.**
   - The CIT person spends a lot of time doing tech support and trouble shooting so does not get as much time for integration coaching.
   - There has been improvement in recent years as tech support at the school level has been increased (based on the last report) – midway through last year they have scheduled a board IT person's time onsite. They are in two schools each (which means 50%) - this is a huge change. The days they aren't there the CIT person takes care of any issues or it waits till the next day. They may be in the whole day depending on the problem. They also service Robron and the district office.
   - When asked what issues are happening at the schools, the high school reported that in the labs that are not monitored, there is vandalism on the hardware but the image/operating system is kept secure with DeepFreeze.
   - With respect to the help desk – the teachers asked us to include a comment that this should be manned at all times. They do not feel they should get a recording and this seems to be a growing problem.

Elementary School Principal Group Interview

1. **What are the top 3 reasons the District is using technology?**
    - Communication
    - Record keeping
    - Data gathering for students – research, etc
    - Aboriginal – creation of student learning materials
    - Student learning

2. **What are the top 3 reasons you are using technology?**
    - Communication – email every day – colleagues, board, staff, parents - some schools are paperless so may or may not be emailing staff – some teachers refuse to use their email and there are some in the middle
        - They indicated that some teachers did not want to use email because of their comfort level. One principal indicated that when they switched fro m Outlook to GroupWise the switch was hard for some. He only uses it for the email – he still uses a hardcopy calendar. His staff are similar and he felt that his older staff were less inclined to use email at all.
        - At the paperless school – all teachers read email once / day. They are about to produce their last paper newsletter. The principal was asked how he brought this about. He said that how when people need to learn GroupWise he had a small team from the school that would handhold these people to bring them on board. There goal is that nothing comes out on paper. The school puts money into technology and the principal feels that it is his job to find the money if it is important to his school.
        - The principal on the island has a lot of tech problems – hard to keep it working. They are often waiting for techs all the time. In his view bigger schools have more money so they can also buy more of what they want. He said he has been waiting since last April for his Xerox printer to be setup.
        - One principal strongly believes that all schools should be printing to the photocopier as it saves so much money.
    - For student learning:
        - A lot of lab use for students: researching, PowerPoint, SmartBoard – tied to instruction – most of this is in the lab. They did not believe this was happening in the classroom at all.
            - There is not much technology within the class for a lot of reasons – no LCD projectors, (more in the middle schools as they are better equipped); only have the teacher machine; all schools have wireless; one school has three LCD projectors with laptops .. ½ of his teachers use it… it is a learning curve thing
        - One principal indicated that in his very small school all classrooms have wall mounted televisions (like all secondary / middle schools) and will use these to hook up the workstation to it
        - They discussed the issue with no district purchasing strategy – who installs it? (example given was the SmartBoard)

- In one small school, cost $400 for a replacement bulb in the projector – and this was their entire tech budget - the life of these bulbs can be prolonged when they are turned off correctly and if people are careful when they move them.
- His primary classrooms do not use the labs; on a slow internet connection which causes high levels of frustration and his printers are not working
- Students that need augmentative technology
- District is helping with this by making the schools wireless s a student can bring in their laptop

3. **Is there a District vision for technology?**
   - **What is the focus, education or technology?**
     - The Aboriginal Ed Principal suggested that the vision now is to create the vision. They have hardware under control; infrastructure is in place so now the question is how do you increase the teacher's ability to use it.
   - **Who is driving the vision?**
     - It is coming through the tech department and is supported by some of the senior staff and then supported by individual schools. There is no district wide vision – a few years ago they didn't know what they didn't know - so this discussion is very important…
   - Other comments:
     - One principal indicated that a few years ago it was clearly stated that kids in elementary school should be able to word process, keyboard and maybe do an excel spreadsheet - and this is what they are using it for.
     - In special education, they have done a good job – and it is likely the best way it is being used in the schools.
     - SmartBoards – everyone wants one but could they actually use it if they got one?
     - When teachers are ready to do what's right for kids it is the principal's role to make it so.

4. **Is there a clear district educational technology plan?**
   - All but one of the principals could recall seeing one and are unaware of it. They suggested it is every man for themselves on things like LCD projectors, SmartBoards, wall mounted TV's, etc.
   - Also, there are no learning outcomes for technology in this district for teachers to know what kids need to know/do at each level (old scope and sequence)
   - Principal of Aboriginal Ed said there has been a plan and the only thing that wasn't done is the ProD piece – the person that was tasked with the scope and sequence didn't do it. Someone from the district purchased SmartBoard last year and didn't' let anyone at the district office know (i.e. IT or facilities) so no plans were made for installation, electrical, etc. This was an example of poor communications.
     - The question came up as to whether or not they need to know that there is a plan especially if everything is working.
     - The Tech department and support in schools is considerably better than it was. Everyone agreed with this.

- Now that the Tech department is more responsive, teachers that used to spend their time getting technology working have been able to get back to teaching. They are now using their expertise to do what they should be.

5. **Who is in charge of technology?**
   - Jeff Wilson is in charge of technology

6. **What is the role of the principal in teacher PD?**
   - Have a keen teacher with SmartBoards – in order for her to mentor others, he takes over her class during her PE period and she brings in teachers to her classroom during that time to teach others;
   - One principal has taken the initiative that every classroom have a TV mounted out of the way so that for DPA (daily physical activity) they can use it for DPA
   - In Aboriginal Ed one of the goals of language and culture department is to evaluate sites and links related to Ab-ed to get on the district website and create relearning modules on their languages and develop materials;
   - troubleshooting with teachers on how to use email, find web sites, fix technical problems; provide information to teachers on new technologies so they can read up on them and explore how they might be used with kids (i.e. an article on moodle)
   - When we asked if their teachers were comfortable with the technology and ho to use i.e., they indicated that they often don't get a chance to go the lab to plan for what they will use. Also, many are still not comfortable using computers – and for many educators using technology is not important. When
   - In order to get teachers ready to use technology, or any teaching strategy, the group agreed that it was their role to create conditions to get them ready and be able to take advantage of the resources on hand.

7. **Should teachers be sent to after school workshops?**
   - Low cost but often low reward.
   - You could scatter gun and offer a whack or options but they felt the most effective PD is one on one in their own schools

8. **Does the current PD plan meet your needs?**
   - There was more PD in the past. There is not as much now. Also teachers just don't have enough time to attend.

9. **What PD do you and your teachers require?**
   - Teachers don't know what they don't know
   - Has been an implied perception in the district that administrators are supposed to do reading groups, but the principal does not have enough time to do this. If they have to than what should they stop doing?

- For technology, you need to figure out what is the best way to spend your money... where will you get the greatest return. This should e a whole staff discussion - what is important? How are we going to get there?
- Everything from keyboard to figuring out email to using SmartBoards
- SIMS – they indicated they could use some more PD for themselves on this
- Don't have school websites and would love to have one. If you don't have someone at the school to do it, it is then up to the principal to create and maintain it, otherwise it won't happen – is this the right thing to expect?

10. What do teachers need?

- Some are not ready to teach with it and some are. If they all were comfortable with a working knowledge than you could begin to embed technology into the focus of the district – literacy, numeracy, etc.
- If they believed that students would benefit from technology than the teachers will look for the PD to make this happen. It is driven out of student needs.
- They need to be more comfortable with it so they can see how they can use it.
- Teachers need strategies to use the lab – what if they need help, what if something is not working. What if you the student finishes first?
- Need to know how to design lessons using technology
- What are the security ramifications? Schools are selecting blogs, etc. The district needs standards on content (pictures, etc) and they need to set up standard tools that provide support that teachers and students need.
- They need a district portal
- Teachers need to understand what competencies they need wart technology – need to asses these and then offer PD to help teachers acquire them.
- Need to know how to use technology within the context of the curriculum
- Could you create a student mentoring program for teachers and offer student mentors community hours?

11. **Do you like how technology is being used? Is it doing what it can?**

- One said they liked how it is being used and another one said it has been a boondoggle to sell it and would rather the teachers became better teachers than spend the money on computers - kids are light years ahead of teachers and we are simply trying to play catch up
- The district has spent a lot of money getting them to where they are - did not spend the time on acquiring the skills to use it effectively.
- Would like to see more effective teaching strategies

Middle and Secondary School Principal Group Interview

1. **What are the top 3 reasons you are using technology:**
    - School management – timetabling, discipline, programming, budget, school operations – if it doesn't work you are completely 'hamstrung' without it.
    - Big part is communication with district, staff, parents
    - Research
    - Timberline – does not have a PA system – they post all announcement to staff and put it online.
    - Word processing
    - Carihi emails all communications to teachers
    - Too much email
    - Presentations to staff and parents
    - Organization – calendaring, school and personal lives

2. **What are the top 3 reasons your teachers are using technology?**
    - Same as administrators – admin uses, communication
    - varies based on teacher comfort level with technology
    - When asked if they see much use in terms of whole group and small group instruction with the technology, some indicated they are seeing an increasing use in math and science - in math requires laptop, projector and screen because they are using similar lessons but through powerpoint… using tablets with math and science – math is the one that technology is being used in the most
        - Wade Major has started to look at creating Powerpoint lessons – and teacher can customize them
        - The principal from Southgate talked about seeing a teacher use a 3minute animation off the internet on cancer and was doing a class activity – she would show the video, stop it, discuss continue on, stop discuss. At certain times the kids would then do another activity in the classroom. It was a great use of time … she was a master teacher before she had the technology and an exemplary teacher will make exemplary use of the tech... a bad teacher won't be better because of technology.
        - When asked why it was used the most in math, they told us that the district piloted a grade 11 math course that integrated technology and then it went to 10 and 12 and down to lower grades. It is also starting in science.
        - In English it is used for research and presentations
        - At Carihi they have carts that are mostly used by the social studies teachers – kids are using them to create presentations – they are doing research on a topic – from the humanities point of view, technology has replaced the text book. In math and science they are using it to enhance or augment instruction.
        - Within each school itself you will see this vary based on the ability. In the Math and Science areas they have access to online resources created related to the curriculum.

- We asked who the driving force was in the schools behind the use of technology. Often it is a particular teacher, i.e. Wade Major who is a teacher leader involved in helping teachers use technology in the classroom – he is a math/science teacher
- at Timeberline they have 10 projectors that are used daily

3. **What are the top 3 reasons your students are using technology?**
   - kids are doing word processing, Powerpoint
   - if they miss math class, teachers follow a day by day syllabus, they can go online, login and there is a teacher talking head and they can go step by step through the lesson. Any student in BC has this access. If a student was going to be missing three weeks of a term, a student could go to the website and follow the lessons online... can generate quizzes to check their understanding (LearnnowBC website)
   - SIMS– teacher connect, parent connect, - can see grades and attendance – teacher can post assignments that they miss – the web access is just rolling out… the admin / teacher part has been there for a while, the parent section is new
   - a lot of teachers will email students / parents

4. **What a challenges to all users face?**
   - Flavour of the month, this too shall pass
   - Time – the time that the teacher spends developing interactive lesson – where does this come from; time to learn the product and then finding out that they are moving to a new system; tech is changing at such an alarming rate that schools can't keep up, don't' move as quickly and fortunately the younger teachers grew up with it and are more likely comfortable with it; keep staff focused on is this going to help with student achievement
   - When the technology either breaks down or is not available it causes considerable concern for staff because if you move to this teaching style it is hard to change back
     - We asked how often they experience down time... it varies – at least monthly and it ranges and is not just one thing – could be server, station, internet, site. Could be theft.

5. **Is there a district/school vision for technology?**
   - No there is not a district vision for technology.
   - The question re. technology is what is the best thing for our kids? But they do not know where they want to be in 3 years... at a district level or even at his school level
   - Technology seems to be a money pit… when in doubt throw money at it., everyone seems to be afraid of falling behind
   - First sort of direction he has seen is the math focus – start with one grade and then grow it out. This is now moving to science
   - Good example of a vision that was created in the last three years is the commitment that was made to put a desktop computer on every teachers desk - it happened at a good time – good example of the district having a vision,

working through it and supporting it. Question is, is there a plan to replace these? It has helped teachers be on the same page using technology.

6. **Is there an educational technology plan?**
    - The last plan was to put workstations on desks
    - What is in the school is driven by the administrator – role is to be the anchor and to sometimes slow it down
    - Some schools are getting graphic tablets – might be wireless (Middle Schools have graphic tablets – the high schools have real tablets) - the LCD projector is coming back in vogue
    - How do you like the role of the principal to evaluate what is needed – are you comfortable with this?
        - At Southgate there were two classes with laptops – the decision was made by the previous administrator – 60 kids had laptops bought by the school. Last year the decision was made to go in a different directions, and the 60 laptops were pulled from the kids... the question is what do we do with the laptops … there has been a gradual picking off of them – some have gone to pods and carts – but the principal is being forced to make a decision about how to use this technology effectively – they are not comfortable but do not necessarily want someone else to make this decision either
            - if they need help on the decision they can get it from the IT department and work with them on the plan - you need protocols to follow but need to do your own plan
            - Neil from Southgate wants to remain master of his own ship – over breakfast Middle and Secondary principals meet to have these conversations about technology – the tech person will attend his school tech meeting and they will give advise on what is possible
    - administrators have laptops – Xenix machines … but Kim at Timberline just got a new Lenovo thinkpad
    - With respect to palmtops (PDA) – the VP at Southgate came from city council – he was given a Blackberry and it was supported. In the school district, have to get it yourself (school buys it); there is no support from tech, no uniformity of what was bought. They are using Principalm on it. would like these devices included in the support plan … should be a uniformity in terms of what they need and how they can be supported uniformly. There should be an admin kit that they get with what they need on it.

7. **What PD do you get as a principal? Do you require any?**
    - Isn't sure he would want someone to set the tone for him – he enjoys the relationship they have with the tech committee, he likes to be able to share with them what he would like and the committee helps him find it. He can tell Jeff what he is looking for and Jeff will help him figure it out and help to get a good deal. Need to customize the training to the individual

- However, for some things (SIMS is an example) it would have been nice if they took a ½ day when it rolled out to review the management system… had to learn it on his own. When you become an administrator, you need an intro to what admin needs to know. They do offer a yearly SIMS course (in the spring) that would be essential for them to take and the two new administrators are looking forward to taking it. Need to be able to ask specific training questions re. SIMS. They can call Moira and ask for assistance on a specific question…
- They questioned how many administrators really know how to use technology – how to build a Powerpoint?
- There is no known evergreening strategy – they buy… they replace as needed
- Key message is – kudos to tech staff – want to be able to check email from home in an easy way… the tech booked marked it on his favourites for him
- Opportunity to find out what I don't know... give me options and then I pursue this as I need to... don't know what I don't know… show me and let me pick what is right for me as an AO
- How much do you think your teachers require pd? The teachers that want it find it... very similar to principals... there is such a wide range. Need a way to meet their needs. As someone gets hired in the district, they should be given basic training on SIMS, how to access Novell, how to access GroupWise, how to use the desktop computer – right now the principal or teacher leader does it.
- With respect to Pro D – they need two levels how to use it and how to integrate it
- For the average teacher in the district that is doing their job and using tech they are pretty satisfied... for high flyers there is an insatiable feeling...
- Highest/ best use is middle school - high schools feel bound by provincial exams – middle school teachers appear to be the youngest ones.
- One major challenge in the middle schools that they are facing is the use of ipods, cell phones, etc. Is currently a policy that says cannot use ipods and cellphones unless there is as direct educational use
- In terms of Pro D need to address cyberbullying, chat lines, plagiarism, cut and paste, how do you deal with the information that kids have access to… safety on the net
- How do you bring the reluctant users on board - what strategies can you use; show the reluctant user what is in it for them.

Elementary School Student Group Interview

1. **What are the top three reasons you are using technology?**
    - To learn to use it better for when they are older
    - Use different sources to get info (other than books)
    - To find things faster
    - Easier to get information
    - They love using computers , why
        i. They make learning fun
        ii. Easier to do work with – i.e. broken arm but can still type
        iii. Can access almost anything with click of a button – anything across the web
            1. It could have downsides... can get inappropriate stuff on the web.
        iv. have more of a variety of info to choose from

2. **Are you good at getting information you are after?**
    - Depends on what he is looking for. There can be lots of information but on certain things you can't find enough

3. **Who taught you how to search**
    - Learnt it themselves
    - Parents
    - They feel they are better at finding stuff than their teachers; teachers are newer to computers than them.

4. **What does your teacher use technology for?**
    - Have typed stuff about report cards
    - Download images from cameras to computers
    - Getting hold of parents through email - some said yes, some said no - some said it was good as the teacher can email the student or parent to keep them on track – parents might email teacher about study and work habits; if a parent was helping with a project and they didn't understand they can ask the teacher; if there are problems at the school, etc.
    - One of the best things are teachers with their own websites – Mrs. Loma does that – it is great because you can find out when your assignments are due – they put up homework and worksheets – she had a chat board to ask questions - easier than using their agenda
    - In grade 4 one teacher used it in math – they are printing off stuff from the computer and photocopying onto acetate and using on the overhead projector
    - Will bring in the projector for them to do presentations on.
    - Some have never seen an LCD used
    - SmartBoards – used them in the library they are fun!

- Last year they had someone come in to show them a website that was a spy game that you could do math skills with – computers were old and the headsets jacks didn't work.
- At the start of last year they did tests on the computer
- For science the teacher went on a website and picked a room and you clicked on a drawer an you had to say what was being used – i.e. pulley, etc.
- When they are doing stories in school (in French immersion) hard to do accents when typing in French.

5. **How often do you get to use technology during a week?**
   - It depends on what they are doing - if they are writing reports they get to use it more - usually once a week for hour
   - Either once a week for ½ hour or not at all
   - At school teachers have to book the time in the lab or they use the old mac in their classroom which doesn't hook up to the internet (sometimes they use the teacher workstation)
   - Use it three or four times a week … but have to be able to book it. Sometimes can go down on your own but there needs to be a supervisor there. They can use the lab on inside days if there is a computer monitor.

6. **How often is it being used throughout the school in a week?**
   - The lab is in use most/all of the time

7. **What software are you using?**
   - Edubuntu – it is a program that you can go onto the internet with
   - When they go to the lab they do research, word processing, open office, smartnotebook, typing lessons, get to play games on the computer, tux math/paint/etc.
   - When they are done work in the lab, they get to play games.

8. **What software would you like to use?**
   - Video games; qbasic, kbasic (programming); games that help you learn science, social studies
   - Would like to have computers with French keyboards
   - Want more skillful games to challenge them
   - Right now they get to play majong, nibbles, hangman, card games, webkinz when they are done their work

9. **What challenges are students facing in using computers**
   - Have a hard time saving on the computer – and accessing files from home - some people seem to have a problem getting access to files from home
   - Have not told them their passwords so they cannot save anything – (at Pinecrest)

- Old headphones don't work – some schools let them bring their own headphones
- Some of the time (1/2 of time) computers are being fixed in the lab - only one student said this but the rest said they were working most of the time. After discussing many indicated that there are lots of issues
- Wireless internet in their classroom doesn't work (don't know the password) – he has a laptop that he can bring in but cannot get on the network
- They find the internet slow – especially when they play Webkins
- Often will do the work from home

10. **Is there a clear set of guidelines and policies students are to follow when using computers**
    - The students said that their parents have to sign a document to give them permission to use the internet and ensure it is used appropriately. In some schools student and teachers also must sign. Some kids with offenses cannot use the computers.
    - EDM did not seem to think there was something they had to sign
    - If they do something inappropriate you are not allowed on the computers for a certain amount of time depending on what you did - sometimes you are banned from playing games
    - 3 out of 7 said some kids are doing things they should not be; others said no.
    - Hotmail, Facebook, etc. are banned … kids did not seem to mind.

Middle and Secondary School Student Group Interview

1. **What are the top three reasons you are using technology?**
    - Math teacher uses powerpoint to give them notes – she hands out sheets (fill in blanks) and presents the powerpoint and they fill in the blanks on the sheets handed out
    - Grade 12 teacher has a tablet – he writes the notes on the tablet and projects them
    - Have a SmartBoard in grade 9 computer studies and in the library – teacher takes what he needs from notes and can write more and circle more on the notes
    - Sometimes they let the students interact with the SmartBoard – you can do your work on it – if the lab is booked for different classes it gets used for different areas... mostly computer studies and digital photography, sometimes for presentations by students
    - Do a lot of projects on powerpoint - use it for demonstration of knowledge – used it in biology
    - The island kids said they use the technology for research and word processing
    - Mostly do it at school but you can take it home?
    - At Southgate everyone has a student number and accounts that you log into and you can get to your files from home.
    - They mentioned a project they had done on the life cycle of a star and they prepared the report in dreamweaver
    - Grade 12 students can get notes from class if she misses classes – she emails teacher and he emails it back
    - Math class posts all the notes on the web at LearnnowBC
    - On the Southgate website a teacher posts all her notes
    - For the students in terms of how they us the technology, they listed the following:
        i. Using word or sending information to themselves
        ii. Use Photoshop to create stuff for the library
        iii. Use the internet a lot
            1. at school it is restricted – cannot play games, any personal use, no email unless it is for school – can use hotmail or something but need teacher permission (at least this was true at Southgate)
            2. At Carihi the librarian can watch the screens and she takes over if they are doing things they shouldn't
            3. some teachers use Facebook for school purposes

2. **What does your teacher use technology for?**
    - Use it to show videos about what they are studying – i.e. mitosis and meiosis
        i. they do it right in the class
        ii. at Timberline the teacher signs out the cart to do whole group instruction – but it depends on the teacher
    - use it with SmartBoards and projector and use it as a chalkboard (the students from the two high schools had never seen a SmartBoard used before)
    - At Cortez , the Smart Board is in the senior class

3. **Does your teacher use technology with the whole class, small groups, and individual?**
    - Depends on the teacher

4. **How often do you get to use technology during a week?**
    - For grade 12 at Timberline she has access once a day
    - If you don't have a computer class it is hard to get in… labs are fully booked – sometimes they use the data projector and teacher computer in class
    - Two kids from Phoenix are advisors in the computer lab and they help with slideshows for assemblies, create web pages, film and video edit, create digital photo,
    - If you are taking bio or physic less likely to use technology
    - At Cortez students can go into the computer lab as long as there is a teacher in available to open it up

5. **What software are you using?**
    - Word, Flash, Macromedia, Adobe Photoshop, html, Final Cut, Imovie Wikipedia,
        i. they are note creating their own wikis, not using blogs with teachers
        ii. math and science teacher at Phoenix posts notes on his blog and same in Southgate

6. **What would you like to use?**
    - Photoshop, music editing – Audacity, After Effects

7. **Describe what is not working well with respect to computers**
    - At Southgate the old lab is not working (Southgate), other labs only Windows 2000; library
    - Phoenix students said their labs could be better
    - Cortez said the technology is really slow and when there are a lot of people in the lab, the workstations crash
    - At Carihi there are not enough laptops
    - In the library computers at Timberline, some are still running on Windows 98
    - At Cortez only have two laptops and don't have enough computers in the lab for all students
    - The secondary school students interviewed felt that the middle school level has come a long way in their use of technology
    - They need more time on computers to complete their school work
    - Would like to see the teachers using web 2.0 tools more - would find it more engaging,
    - The Cortez students would rather have the teachers talking to them. Believe it needs to be a combo of both teacher led and computer supported

- One student recounted how they used live streaming to watch the hatching of eagle eggs over the course of a few days and this was mixed with the teacher teaching – it worked well

8. **If I could make school better what would I change…**
   - Every student should get their own laptop – two classes at Southgate at grade 7 tried it out for two years but it was scrapped - the students are not sure why.
   - For kids that bring laptops they want to be able to connect anywhere in the school – currently there are a few dead spots but they can get online
   - At Cortez, they would love the laptop idea – but suggested if that did happen some kids would need to learn to type faster.
   - More hands on things and field trips
   - Not a lot of project based learning – although they like to work on projects they all agreed that if you don't get to pick your group, it is not necessarily a good thing.

9. **Is there a clear set of guidelines and policies students are to follow in using computers?**
   - Do you sign an acceptable use?
     - yes at Southgate, no at Phoenix, and the high school students said not, at least not every year.
   - There are posters that remind them of the acceptable use policy.

10. **Are teacher's good users of technology?**
    - Some teachers are good
    - Ms. Babchuck is the best - she is a master and they said she was better at using the computers than they were!

Elementary Teacher Group Interview

1. **Describe the mandate of the committee:**
    - Three years ago did a tech review and were developing a vision for the district in the area of technology and a plan was made – the purpose of the committee is to ensure they are working towards a vision and the goals and actions plans of the tech plan
    - To make sure they keep moving forward with it
    - Where to go next
    - They monitor and adjust the plan – flexible enough to monitor and adjust the actions
    - Some members have been on the committee since the beginning – it has evolved. It used to be the Tech Management committee (who sponsored the first review). When they changed the name they put Jeff in charge of the committee. The review focused on the infrastructure. They have not addressed the educational use of it and the committee was expanded to include more representation
    - The chair of the committee is Jim Ansell
    - They meet monthly
    - They report to: schools through the school reps, the IT department and to senior management
    - Are responsible for the entire structure of the tech plan – they decide what it will look like in the school division with input from the rest of the school community. They the solicit input first and then develop the plan
    - They take plan to the board for approval
    - Most recently they have an annual budget that they have to work with- without a plan you can't ask for funds. Prior to three years ago there was no budget – which is why they needed the plan
    - They do have money for training – they are referring to in-service dollars
    - What role does the committee play in Pro D? Not much as the core Pro D committee does this and it is more site based
    - The Tech Planning Committee often receives individual requests for schools but the feeling is that they do not have a training plan and they want one. They need to be more clear with their vision.
    - They do have the CIT grants that this committee funds. The schools can apply for a grant, often a teacher in the school takes over the work with staff to train them on integrating technology into their teaching. This is a great idea but in practice it is tough as they are full time teachers and they struggle to fit this in – it amounts to about .05 of their time (1.25 hours / week). They can use this to go into the classroom to team teach with technology to help the teacher understand this. Some CIT's get drawn into tech support – this was identified as a challenge three years ago – they added personnel to the IT department to increase their time in school to free up teachers to do the education part. This has had a very positive impact. Could use more but it has helped.
    - In the secondary schools CITs get a block of time. The CIT looks different in every school and is dependent on the principal support and other factors. Should it be? It has to be based on the population of the school but you might be able to make it a little more standard. The role depends on the grant application - at the

middle school and secondary you do not apply – every school gets one block. At the elementary school you work with the leadership team to apply based on the needs of the school. Most of the elementary schools are not using CIT grants as they should and do not have enough tech support – feels that it is not being used as it should be. The committee is not sure why that is. Maybe because the schools are all are different sizes and the level of familiarity with technology and a lot of the time the local teachers can't fix the problems. In the past the elementary CIT rep did a lot of troubleshooting... many of the past tech people that used to act as CIT's have backed off and also the tech dept does not want teachers playing with the labs.

- IT continually monitor the up time on the labs and it is the 99% time. The technology is there now and working. So now, they are ready to focus on effective use. The CITs would be able to do this. Vince is alluding to when the apple labs were in place the local teacher was in charge of installing userids, etc and had less time for effective use. They are not needed to do this now.
- They used to have mentors in technology at the school level – it was a volunteer position and they also had technology resource teacher at the district position – there is a budget for that position - the reason to leave this vacant was to allow this process to complete before they fill it. Re. the MIT – the role has changed a lot and Nevenka is trying to do visioning around it.
- In the high schools teachers struggle to try new things because they have to stay on their schedule due to provincial exams
- There is no defined role for the CIT or the MIT. The MIT's tried to meet on a regular basis but it was ineffective as the role they play is very school dependent.
- There is no way yet for them to share information electronically.

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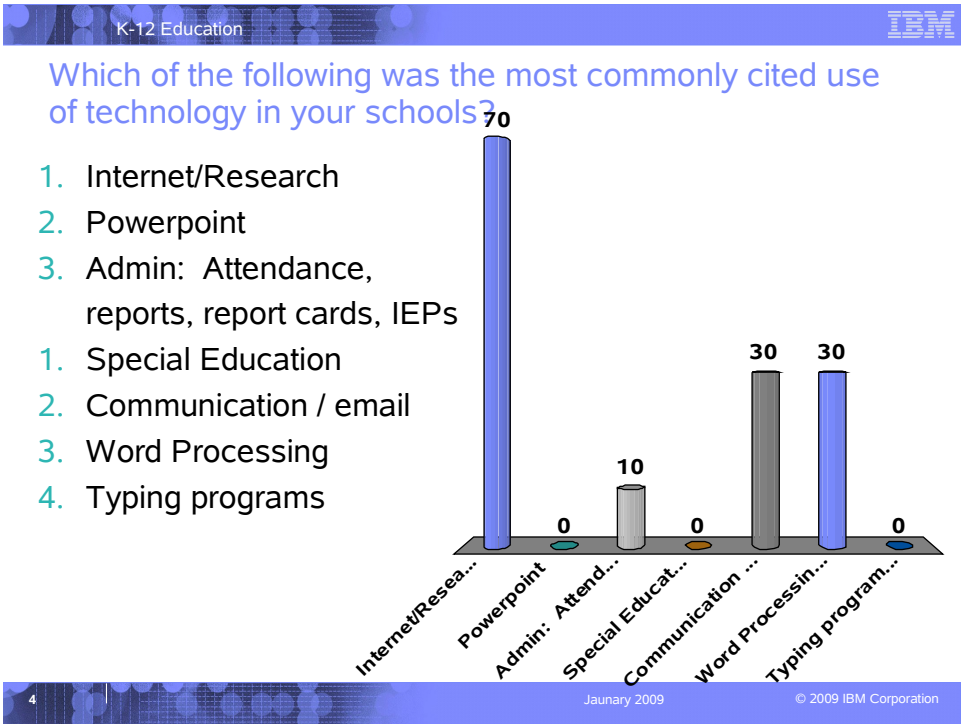
2. **What would success for this engagement look like to this group – what are they hoping to see?**
   - For the IT department, they would like to see some vision as to what services the district would like IT to provide – had a long list of things to do as part of the list of recommendations which they have almost completed. He feels that he does not have a feedback loop for plan do act- he is looking forward to new marching orders
   - Need to address success measures – i.e. in the Elementary schools; there is not measure of success for the CIT program. Typically with a grant they ask the teachers for feedback the processes are not formalized.
   - Would like to see the Tech Planning Committee becoming innovators.
   - The high schools are trying to find a way for teachers to know how to use technology to deliver value – what does that look like… now that the labs function how can they use it? They do not have time to figure this out on their own.
   - Make educational technology a priority – pull them out of their comfort zone - expose teachers to it
   - Rather than teach to an exam schedule (as is happening in the high schools) the hope is that they can get beyond this. Instead of focusing instructional practice around one snapshot they need to do work around learning outcomes and differentiate with technology and show teachers that it is easy to use.
   - Teacher leaders: the model is working well here. For instance the middle school teacher leader for math science will meet with the department and all of the math /science teaches will use the plans they develop

- Really start to use technology for special education students – those kids that are at risk; the belief is that this can really help them.

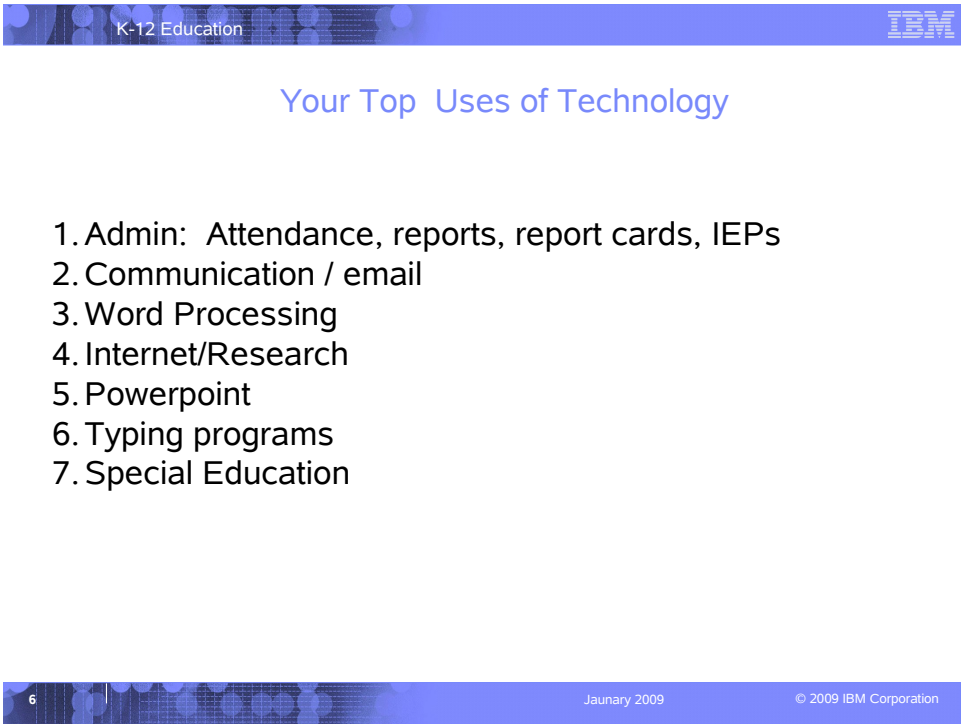
3. **What are your educational goals – open response**
   a. Success for all students – every student will leave the school system ready to enter whatever area they want to pursue - learning to be our best
   b. Literacy, numeracy, social responsibility and transition

4. **What are the top reasons CR is using technology today? - open response**
   c. Connect to the world
   d. Connect students in education to what they are doing at home
   e. Provide opportunities for kids – enter into partnerships to do this – evolved as needed to meet needs
   f. To increase student success and achievement – it is a tool that addresses different learning styles
   g. At the middle school you see kids accessing info and demonstrating what they know and to be able to have kids demo what they know that is not always paper and pencil based
   h. Remain current – prepare kids for the future
   i. To enhance instruction and make teachers jobs easier
   j. Administrative uses
   k. Communication
   l. Online learning – anywhere anytime anyplace – part of eblend and online support for science and math
   m. Technology provides opportunities
   n. Are time savings for teachers – efficiencies
   o. Data collection

5. Which of the following was the most commonly sited use of technology in your district? (done using Student Response System – group was asked to pick which of the 7 uses listed was the most common use).

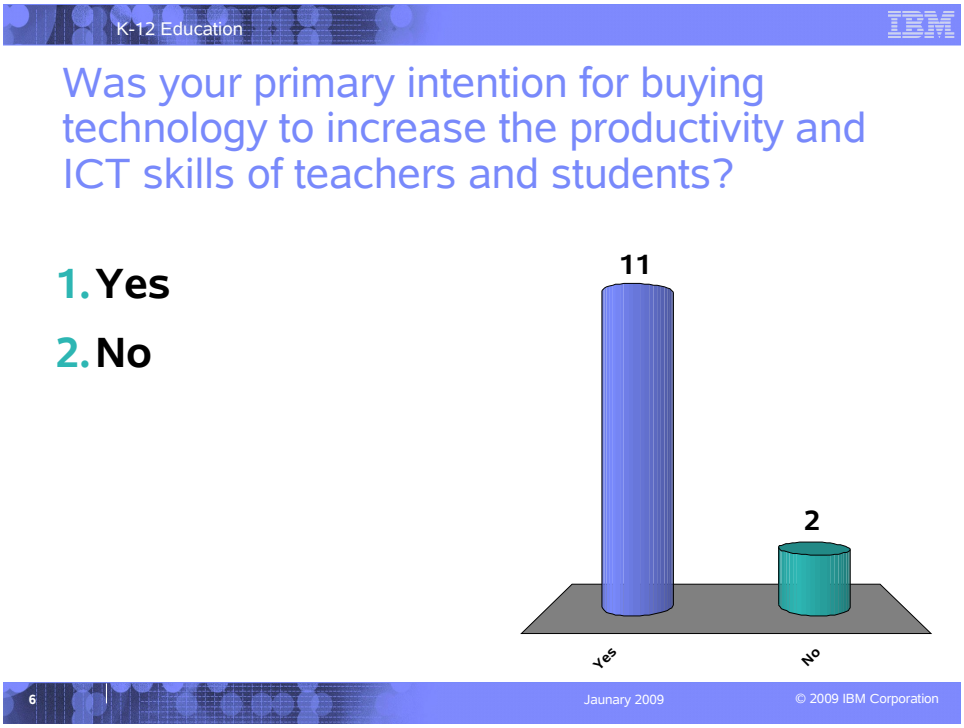


We then showed the group the list ranked by order of use in the district:



As consultants we discussed how we felt that this looked like they were buying it for productivity and ICT skills which prompted the next question.

6. **Was your primary intention for buying technology to promote ICT skills and improve productivity?** (Done with Student response system)



- They said yes those likely were the top reasons it was purchased but some felt that these two reason do support the learning achievement goals of the district as it makes them more productive in the achievement of district goals. They all agreed they needed to make teachers more comfortable with technology.
- It was suggested that to move use more towards teaching and learning you could you buy everyone an LCD projector, wireless keyboard and mouse
- Sometimes we lose sight of why we have technology – it should not be a goal unto itself –it is to hit on the all the areas that we talked about before
- If we took all the money around technology and put into the four objectives would we be better off – the point being made is that all investments should be made to support these four goals and this is the criteria that should be used when purchasing technology resources.
- As a librarian – still need to teach informational skills and ethical skills
- Dave Ell shared with us the philosophy of one his customers that used to say " Show me your budget, where you spend your money, and I will tell you what your goals are"

7. **We have seen the district educational technology plan dated 2006/7 to 2008/9 listed as draft 5 dated September 2006. We asked if this is the most recent educational technology plan for the district. If not, what is?**
   - The committee said that this is the latest one – It does not reflect the latest results of the plan.

   p. If it is, how has it been communicated to the district?

- Would the average teacher know about the plan – everyone should be aware of the plan – it is up to individual administrators of the schools to share with their teachers.
- Do administrators have a copy of the plan? It was presented to the principals but there has been a lot of change and it was presented a few years ago and has not been revisited on a regular basis. There was one member of the actual committee who had come back to the district in 06 and did not know there was a plan until he joined the committee this year.

q. Who owns the plan?

- The tech committee owns the plan

r. Who is responsible to ensure it is implemented / completed

- On the infrastructure piece they were listed in priority and have all been acted upon or not and reported back
- There was a newsletter that went out to everyone - given to the technology teacher in the schools and the IT dept communicated to principals
- Although communication attempts have been made, clearly some people are not hearing the messages. As with all thing, there is always more opportunity for communication. Email is only partially effective
- One of the IT techs is extremely frustrated as teachers do not know that changes occurred or the rationale for the changes … he has to deal with this even though the communications have gone out. He suggested that they need to close this gap – between committee, IT, principal and tech lead teacher

- **Where does technology fit in with the school goals?**
  1. The administrators need to know what is happening with the plan and any visioning taking place. From the principal feedback session this is not happening. .
- **How are you planning to do your next revision of this? What is your plan for evergreening this plan?**
  1. They are hoping that they will add on two more years – making it a revolving annual event – it should always be a three year plan
- **Who is in charge of technology for the district and can you explain the chain of command?**
  - Ultimately the Superintendent
  - The 'tech' side of IT (business support) is under Lyle but Nevenka owns the education. Only tech side is under Lyle (business support) education component is under Nevenka's direction.
  - Not sure teachers feel this way. They will look at what has happened in the past few years and will say that the focus is strictly on IT and that Jeff has been responsible for it.
  - This appointing of Jeff as Manager came from the review and so it is understandable that this is the feeling
  - Ultimately Nevenka owns the direction for how technology should be used in schools.

8. How is software selected?
    - Currently it is not selected – it is causing a very high level of frustration
    - From the elementary schools there is an issue with Linux especially with French immersion schools
    - A committee in student services was started for selecting software for special education - have made a district wide decision and provided training to the school special education teacher and did some training in the district Pro D days and then the software was installed across the network - combo of learning services and student services

9. Who's job is it to make sure that teachers receive training on the use and integration of the technology?
    - The District Educational Leadership Team