



Vancouver School District
Strategic Technology Plan Overview

April 20, 2012

The purpose of this paper is to outline current and proposed technology related directions and initiatives in the Vancouver School District in support of learning, teaching and working, and to identify challenges, opportunities and strategies in relation to achieving those initiatives.

It is our goal as an organization to provide equity and access across the district. In a diverse and large organization like the Vancouver School District this will present challenges, in terms of our financial and human capacity to meet this goal.

We believe that all students and staff need access to:

- a secure wireless network
- adequate internet bandwidth
- hardware
- applications and e-resources
- professional development and learning networks
- technical support
- provision of governance structure and procedures for the acquisition and uses of technology.

Student engagement, learning, and success are at the core of any initiative in the Vancouver School District, and it is a district staff priority to provide technology supports and resources to students and to school-based teaching and support staff.

At the same time, the VSB is an employer of 10,000 staff members and has associated responsibilities in regard to business and administrative activities such as purchasing, finance, payroll and benefits. Very few new initiatives are introduced into the organization which do not involve some implications for the use of technology in the school day or work day for students, staff and employees.

Our challenge is that we have limitations on the financial and human resources available to support these new initiatives. We are trying to provide supports to the system needs, with essentially the same or fewer staff than in the past, and within budget constraints. We need to identify and limit the number of initiatives, and to look at new strategies for effecting the necessary changes, particularly in relation to administrative and business systems.

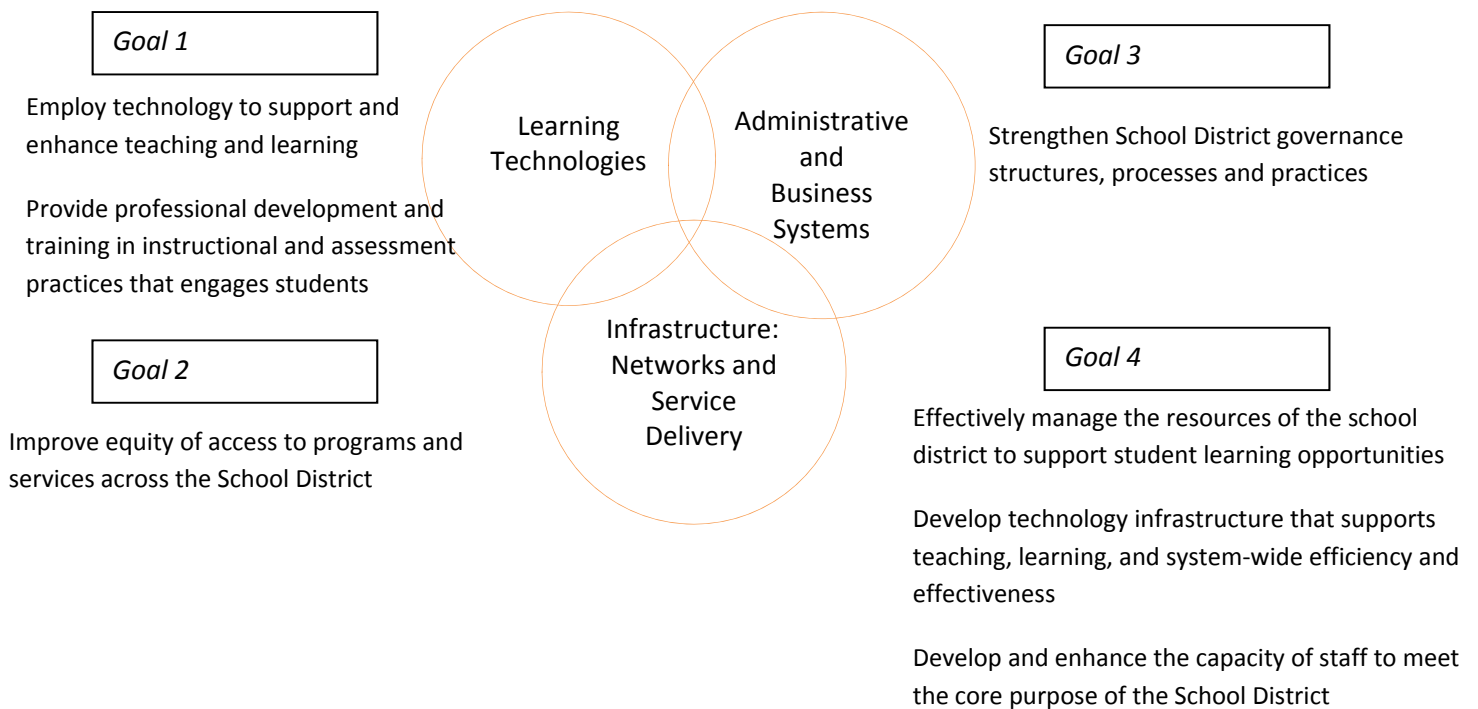
We have the in-house expertise to support learning but require more staff, through the proposed Learning Technologies mentor teachers, to deliver that support to the classroom setting, alongside the District Learning Services curriculum support teachers, and the District Teacher Librarian mentor, under the guidance of the District Principal of Learning Technologies. We need to put hardware/devices into the hands of students, and to create a funding plan that will support this direction. We will continue to leverage our membership in the Educational Resource Acquisition Consortium (ERAC) to participate in this model and gain best pricing on quality recommended resources.

DISTRICT STRATEGIC PLAN

In outlining a direction for technology planning and management in the Vancouver School District, the VSB's [Strategic Plan 2011-16](#) serves as an organizing guide. The Strategic Plan 2011-16 was developed through a collaborative process and is organized around three themes, *Engaged Learners, Inclusive Schools, Caring Communities*, and four key goals.

1. *Students are fully engaged in learning.*
2. *All students are included and have the opportunity to succeed.*
3. *Our communities, families, and educational partners are effectively engaged in supporting student success.*
4. *Our school district is effective, efficient, and sustainable.*

District Information Technology services are organized under three areas; each of which can be related to specific strategies under one or more of the four goals.

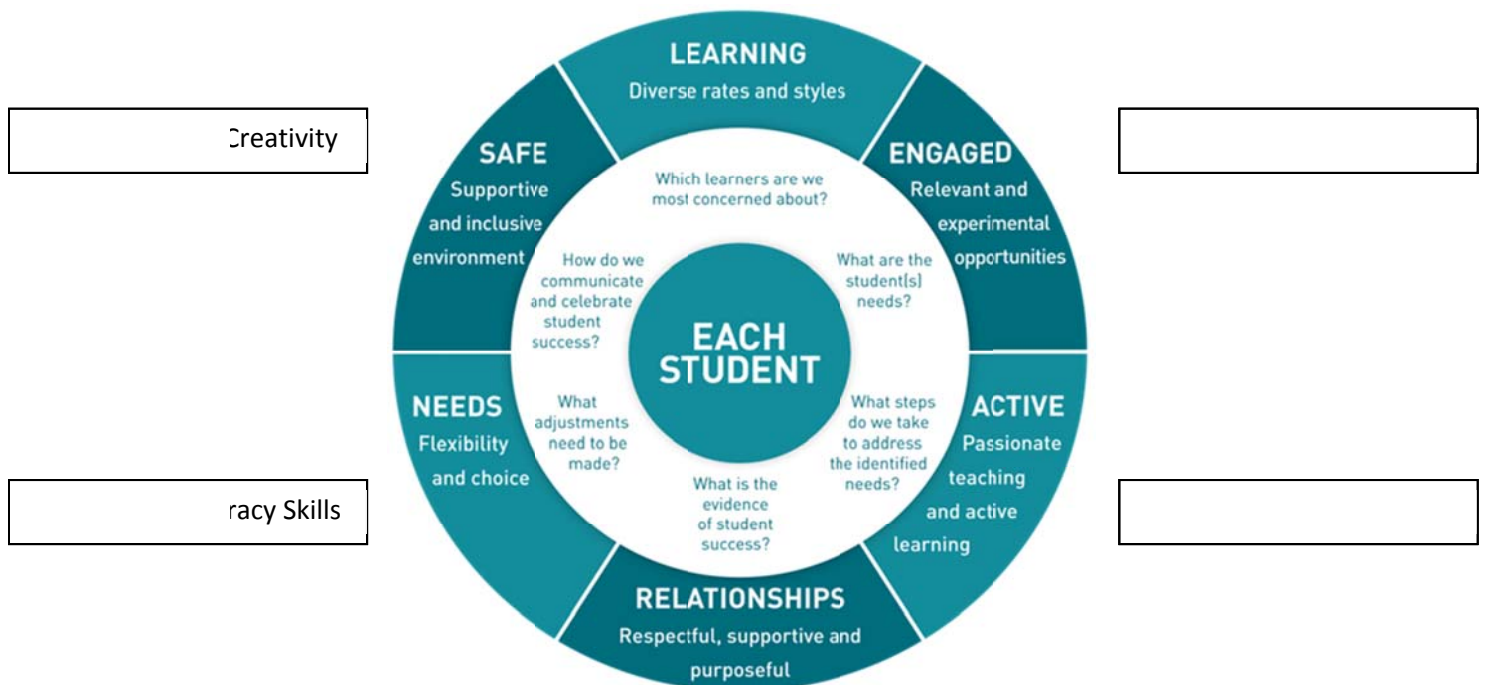


SUPPORTING LEARNING: THE VISION

We envision a learning environment where teachers and students would be supported by having access to quality age-appropriate learning resources, both material and digital...a device from which to access the content...a means with which to collaborate and communicate with others... and secure, timely access to internet based communications and resources.

(For a sense of what this future learning environment might look like, visit this link from the Educational Resource Acquisition Consortium (ERAC): Digital Learners: A vision for the future <http://youtu.be/8pqLv1K72Q0>)

The Information and Communication Technology (ICT) Advisory Committee began to develop a working paper on digital literacy and learning through the 2010-11 school year. Due to the job action response to the collective bargaining process during 2011-12, the work of the committee has been stalled. A high level overview was presented to Committee 1 on April 19, 2011. The ICT Advisory Committee had organized its work around the LEARNS framework and identified four areas of focus for student learning; innovation and creativity, digital citizenship, information literacy skills, and ICT literacy skills.



The committee was also considering the ways in which technology affects:

- Personalization of Learning...*flexibility, choice*
- Student Voice...*engagement, ownership*
- Learning Environments...*implications for new buildings and seismic upgrades*
- Relationships, Roles and Responsibilities...*implications for teaching, teachers, student/teacher relationship*

In considering the learning and teaching agenda, it is important to recognize that success in this regard is dependent on having both the human resources and the technology infrastructure in place.

ENABLING ACCESS AND EQUITY IN SUPPORT OF LEARNING, TEACHING AND WORKING

1. INTERNET CONNECTIVITY

The WAN is connected by the Provincial Learning Network (PLNet) <http://www.bced.gov.bc.ca/plnet/> service which provides “a secure, managed, high-speed connection to Government, to the Internet and to relevant educational programs and subject matter across British Columbia and the entire world”. The level of connectivity at VSB schools ranges from a DSL (Digital Subscriber License) telephone line level of connectivity at some elementary sites, to high speed solutions of 100 mg fiber optic connections at some secondary sites. Upgrades to connectivity are scheduled through PLNet and an annual list is provided to the VSB, based on submissions made by the district to the provincial group. The speed and capacity of bandwidth to schools is crucial to enabling student learning, and access to e-resources particularly at the later grades.

Strategy: To work with the Ministry of Education to gain improvements to current PLN connections for schools and the District.

2. WIRELESS PROJECT

The installation of a wireless network has begun over the March 2012 break at John Oliver and King George Secondary schools.

Strategy: To complete the wireless installation within the 2012-13 school year.

3. ADMINISTRATIVE AND BUSINESS SYSTEMS

Because it is a priority to protect services to the classroom, the district has tended to postpone investing in the business and administrative systems. This has placed the district at a significant risk in terms of data security and system failure around crucial tasks such as meeting payroll obligations. Some of the applications we currently use are at risk of failure due to lack of ongoing upgrades, and may receive limited support from vendors for this legacy software. The stand-alone nature of current HRIS and FIS systems means that we are missing an opportunity to have better integration between systems, increasing our access to quality data for planning and organizational purposes and reducing the possibility of financial loss. These projects require careful planning, to ensure that these critical business applications are maintained during any upgrade or change process. They also require large expenditures for the initial implementation process, and an ongoing infusion of funds.

Strategy: To seek innovative and alternative funding solutions for **the replacement and upgrade of administrative and business systems to minimize budget impact.**

4. HARDWARE RENEWAL CYCLE

There are over 11,000 units of hardware in the district, including desktops, laptops, tablets, and mobile devices, and that inventory is increasing. In 2009 there were 6,000 desktop units replaced using one-time only monies, for student lab use and for teacher use. Schools are also purchasing their own hardware through PAC or grant monies. Additionally, the district inventory of mobile devices, particularly iPADS, has increased significantly over the past two years and is at over 550 units and growing. The district has developed standards for hardware purchases and these need to be clearly communicated to schools.

Although we anticipate that once we provide secure reliable wireless access in schools more students, and perhaps even staff, will bring their own devices into the classroom, there still will be a need for the district to provide baseline levels of hardware to enable equitable access.

The district has made a substantial investment in hardware, and this will need to be sustained and renewed, in support of learning and teaching.

Strategy: To develop a hardware replacement policy and procedure including guidelines for selection and acquisition and a cost-effective funding approach.

5. SOFTWARE AND E-RESOURCES

The IT Services Delivery Team has identified over 13,000 applications or versions currently being used across the district. This presents challenges and creates inefficiencies in supporting end-users with use of the applications, and in troubleshooting issues that arise because of software and hardware incompatibility. The ICT Advisory Committee was in the process of reviewing this list to make recommendations developing a core set of applications but that work has not progressed this year.

The increase in the use of mobile devices has also presented different challenges in terms of licensing fee structures, tracking of licenses, installation and upgrades. While there isn't an obvious or immediate solution to this challenge, we will encourage more use of web-based resources when the wireless installation is in place, and continue to work with vendors to create more supportive licensing models.

Strategy: To identify and implement core sets of productivity applications for office, administrative purposes and educational purposes for September 2012, with an emphasis on web-based resources where appropriate.

6. E-RESOURCES AND DIGITAL MEDIA

The district is poised to support schools around the transition from a predominantly paper-based and analog resource system to an e-resource system. The success of this transition is contingent upon schools having:

- wireless access
- sufficient bandwidth
- access to hardware.

The district currently provides online database access to all schools for research purposes through licensing opportunities with ERAC (Educational Resource Acquisition Consortium). Vancouver schools recently have been involved in pilot projects involving the e-streaming of video resources. Staff in the Media and Library System Technologies (MLST) department has been working with the Kaltura application, which is a video publishing system, to support the storage and publication of school and district developed video resources. Identifying some key resources, which would be of use to all students and staff at specific grade levels, would create a focus for professional development and learning project support.

Strategy: To identify and fund pilot opportunities for schools around the use of e-resource content, with the intent to select a resource or resources for district-wide use in 2013, likely at the secondary and/or late intermediate level.

7. PROFESSIONAL DEVELOPMENT

Support to schools, students and teachers this year has been provided at a staff level through the Teacher-Librarian mentor teacher and through grass-root teacher to teacher interaction in face-to-face and online environments.

As well, the District Principal of Learning Technologies has been providing support to schools, both formally and informally, ranging from strategic planning through classroom modeling and mentoring, to being the point person for general inquiries on mobile device purchases and troubleshooting. Additional staff resources are needed to support teachers with effective use and integration of technology.

School staffs also have access to funds for collaboration which they might choose to use in support of developing their expertise around integrating technology into the learning. The Learning Technologies mentors and other curriculum specialists from District Learning Services would be valuable supports for these collaborative activities.

In-service opportunities are made available to Support Staff on training days, to participate in workshops related to department specific business applications. These plans are developed in consultation with the specific employee groups. At times, it may be more strategic to access outside

expertise to assist in providing skill upgrading for our staff, particularly in relation to specialized applications.

Strategy: To provide support to teaching staff through district professional development initiatives and learning services. To continue to work with employee groups to maximize opportunities for in-service related to administrative and business systems.

8. PROVIDING TECHNICAL SUPPORT

Every initiative that is undertaken at the district or school levels in terms of learning projects or administrative and business systems ultimately relies on the speed and stability of the network system, and of the hardware upon which it runs. Every area of the district has core applications upon which the day-to-day operations are completely dependent. The more dependent our learning, teaching and working becomes upon the availability of technology, the more important it is to have a robust, reliable infrastructure in place, and the IT staff available to maintain the infrastructure.

In addition to supporting the projects which are ongoing, the IT department teams are often called upon to find solutions and strategies in response to district and school based actions related to new technologies and software applications. This reactive approach means that the 'field' (i.e. schools, staff) are often frustrated with the response time and level of support from the district IT teams, while the IT teams are unable to maximize their effectiveness due to having their time and attention pulled in several directions. Effective support cannot be provided in a reactive manner. The district needs to clearly describe priorities for IT supported initiatives to provide direction to the field and to the IT staff.

A new Helpdesk application and Incident Management process is in the implementation stage. This will create an increased ability to enable incident management strategies, troubleshoot problems remotely, and to gather better data on the types of issues and frequency of requests that are being received through the Helpdesk. This information can guide future planning in terms of hardware selection, software implementation, and training needs for field techs and end-users in the schools and district departments. Reducing the amount of time that field techs spend handling individual hardware units will enable more time to be spent in supporting schools with educational initiatives.

Strategy: To implement the new Incident Management system for summer 2012.

9. GUIDELINES AND GOVERNANCE

In a system the size of the VSB, there will always be a tension between a model of centralization and decentralization. A challenge we face is that, over the years, the district has not put a governance structure into place that provides standards and clear guidelines around the selection and acquisition of hardware and software. This has meant that schools have tended to go their own way in making purchases.

There are efficiencies to be gained by creating standards around hardware and software acquisition. The District can realize savings through consolidated purchasing of hardware. Limiting the range of hardware platforms and models would enable District IT staff to spend less time troubleshooting and more time in supporting schools with proactive initiatives. Having more consistency in software applications would mean that teaching and support staff have the same tools available to them, as they move between school sites.

District staff will develop the governance structure and provide guidelines for planning and purchasing related to IT, including hardware, peripherals and software/online resources, and to communicate these clearly to the field, so that schools are clear on processes and standards, and are assured of having supports in place when they undertake new initiatives.

Strategy: To provide guidelines and processes for the development of projects and expenditures which require IT support and resources.

SUMMARY OF STRATEGIES

- to gain improvements to current PLN connections
- complete the wireless installation
- replacement and upgrade administrative and business systems
- develop and fund a hardware replacement policy and procedure
- develop core sets of productivity applications for office, administrative purposes and educational purposes
- pilot and purchase e-resources
- provide in-service and professional development opportunities for staff
- implement the new Incident Management system
- develop governance structure for IT related projects and expenditures