School District 22 – Vernon

Technology Plan Framework

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Introduction

Over the past 9 months, the primary focus of the IT department has been to complete outstanding tasks & projects, stabilize existing technologies in the district, and restructure the IT department. Appendix 'A' summarizes the tasks and projects and their current status.

Many of the outstanding tasks require broad based district input and ideally should be guided by education goals and activities. Given this, and for many other reasons, I think it is the right time to develop a 3-5 year strategic IT plan for the school district.

There are many good reasons to develop an IT Strategic plan but perhaps the biggest is to develop a consensus on how to ensure that our technology services line up with curricular goals and activities in the our schools and classrooms. The goals of the Tech Plan include the following:

Goals

1. To formally assess how technology services in SD 22 link to current and future curricular goals and activities. From a technology standpoint, we need to determine where we are now and consider where we want to be in the future.

2. To ensure that the technology infrastructure has the capacity to support curricular goals, now and in the future. Also, to ensure that technologies are delivered with industry best practices in mind.

3. To ensure that technology supports the business needs of the organization.

4. To look at ways to improve productivity, through technology, by challenging and revising learning and business processes.

5. To look at ways to improve cost effectiveness and quality of services by working with other districts and developing shared services.

6. To assess current administrative technologies to ensure that they are cost effective, of a high quality and meeting the needs of the district.

In conjunction with the goals suggested above, the following are suggested principles to keep in mind while going through the process of developing a long-term Tech Plan.

General Overarching Principles

1. Technical services, investments and initiatives should be derived from curricular activities, goals, strategies and pilots. Technology should not be randomly adopted and then dictate or restrict education.

2. While the Tech Plan is a momentary static document, ideally there needs to be an on-going and agile process for ensuring that the Tech Plan can 'live' and evolve continuously in response to changes in philosophy and in the education environment.

Process & Timelines

To ensure success of the Tech Plan, it is critical to collaborate with a representation of all stakeholders and end-users around the district. The following is a summary of the suggested steps and timelines.

Step	Notes	Timeline
Recruit and organize planning team.	This will include management, the District Ed-Tech committee and others as required.	Oct 31 2015
Solicit feedback from stakeholders based on the Framework document.	Management teams, Ed-Tech committee & other stakeholders need to consider questions contained in this framework document.	Nov 30 2015
Develop a detailed inventory of current technologies and assets.	Answer the question; where are we now with our current technologies and expertise around our technologies.	Nov 30 2015
Review and discussion of District curricular strategies and goals.	Answer the question; where would we like to be in the future in terms of curricular activities, goals and strategies.	Dec 15 2015
Preliminary Analysis of current technologies, strategies and goals. Draft recommendations.	Answer the question; what technologies do we require to facilitate our curricular goals.	Dec 31 2015
Draft Tech Plan budget for 2016-17	Based on a preliminary analysis of above, develop a draft budget.	Dec 31 2015
Finalize plan in time for Budget approval		Feb 28 2016
On-going review, update and communication of the plan.		Ongoing

The following section looks at key observations and questions across seven different areas. The areas include **Learning**, **Assessment**, **Teaching**, **Infrastructure**, **Productivity, Administrative Technology,** and **Research & Development**. Each area includes a brief description, observations, and questions.

The observations come from a variety of research sources and illuminate some of the current thinking in the area. Please feel free to add your own observations as you see fit. The framework document will be posted to our portal and provide everyone an opportunity to share their own observations. Once completed, we will have an excellent foundation to develop a *Vision Statement* and *Mission Statement* for the tech plan.

The questions also come from a variety of sources and will hopefully provoke some answers from you. Once again, since the Framework document will be posted to our portal, it will provide everyone an opportunity to provide input and discussion as they see fit. I will also post a few surveys to develop a baseline understanding of technologies used in the classroom, and overall level of tech skills and experience of educators. Once completed, we will have an excellent foundation to develop goals and implementation plans for technology services in the district.

Learning

Description:

In many respects, this is the heart of the Tech Plan. It includes an analysis of current and future curricular goals and how technology can help to facilitate these. It forces us to examine our current and future education applications and how to monitor and measure their effectiveness. The area also includes access to technology, FOIPPA, and internet safety.

Observations:

1. *Outside of school, students already have mobile access to information and resources; They participate in social networks, collaborate with people from all around the world, share ideas, and learn new things. Students are free to pursue their own interests and passions in their own way and at their own pace.*

2. *The challenge for education is to mirror this to create engaging, relevant and personalized learning.*

Questions:

    a.   Describe teachers' and students' current access to technology tools both during the school day and outside of school hours.

    b.   Describe the district's current use of hardware and software to support teaching and learning.

    c.   What are the district's current curricular goals?

    d.   What are the districts future curricular goals?

    e.   How can technology be used to improve teaching and learning by supporting the district curricular goals?

    f.   How do students acquire technology specific skills and information literacy skills needed to succeed in the classroom and the workplace?

    g.   How can schools and the district ensure appropriate and ethical use of information technology by all student and teachers?

    h.   How can the schools and the district ensure that teachers and students are trained to protect online privacy and avoid online predators?

    i.   How can technology be structured and implemented to ensure appropriate access to all students.

    j.   How can technology be structured and implemented to make student record keeping and assessment more efficient and supportive of teachers' efforts to meet individual student academic needs

    k.   How can technology be structured and implemented to use technology to improve communication between home and school.

Assessment

Assessment plays an important role in student achievement. Assessment is the process of gathering evidence of what a student knows, understands, and is able to do. It can also help to identify students' learning needs. Teachers use their insight, knowledge about learning, and experience with students, along with the specific criteria they establish, to make judgments about student performance in relation to prescribed learning outcomes for each subject or course and grade.

There has been much discussion in recent years regarding the use and effectiveness of different

types and approaches to student assessment. It can be expected that technology can play an important role in supporting current and future types of student assessment.

Observations:

1. *Districts and schools need new and better ways to measure what matters; diagnose strengths and weaknesses of students; involve multiple stakeholders in the process of designing, conducting, and using assessments.*

2. *Student-learning data can be collected and used to continually improve learning outcomes and productivity. For example, such data could be used to create a system of interconnected feedback for students, educators, parents, school leaders, and district administrators.*

3. *Need relevant data made available to the right people, right time, right form.*

Questions:

a. What are the current methods of student assessment used in SD22?

b. What types of assessments is the district considering in the future (e.g. summative, formative)? How can technology assist in future assessments?

c. What are the questions that need to be answered to better inform learning practices and activities related to student learning, achievement and assessment?

Teaching

Description:

Over the past 25 years, the world has changed faster and with more complexity than ever before. The most significant driving force is the advent of the Internet and the rapid advancement of technology as part of the digital age. Such a radical global transformation has demanded people learn new theories and knowledge that simply did not exist two decades ago. We need to find ways to evolve K-12 teaching approaches that are in sync with the evolving technological changes and competencies.

Observations:

1. *What are your thoughts about building the capacity of teachers by leveraging technology?*

2. *What does the model of connected teacher look like in SD22? How can we give educators access to resources and expertise to improve instructional practices?*

3. *Thoughts about providing educators with 24/7 access to data and analytic tools. What tools?*

4. *How can we strengthen & elevate the teaching community? What technical resources are required to give educators the ability to research & develop new approaches and models for learning?*

5. *How can technology assist in the building of online learning communities?*

6. *How can technology help to facilitate teacher skills development in a way that is collaborative and continuous?*

Questions:

a. Survey of teachers' and administrators' current technology skills and needs for professional development.

b. What types of professional development activities are needed for teachers in the areas of learning, teaching and assessment? How can technology improve the delivery of these activities in a cost effective way?

Infrastructure

Description:

IT infrastructure refers to the composite of hardware, software, network resources and services required for the existence, operation and management of an enterprise IT environment. It allows an organization to deliver IT solutions and services to its employees and students.

IT infrastructure consists of all components that together play a role in overall IT service delivery. In addition to hardware and software, infrastructure also includes the people and processes that deliver IT services.

Typically, a standard IT infrastructure consists of the following components:

- Hardware: Servers, computers, data centers, switches, hubs and routers, etc.
- Software: Enterprise applications, education applications, administrative applications, analytic data tools.
- Network: Network enablement, Internet connectivity, firewall and security.

In addition to the above, organizations need to develop comprehensive disaster recovery and business continuity plans.

 Observations:

1. *The District needs appropriate and comprehensive infrastructure for learning and administration so that students, educators, administrators have access to resources when and where needed.*

Questions:

a. Describe the existing hardware, Internet access, electronic learning resources, and technical support already in the district that will be used to support the Curriculum and Professional Development Components

b. Describe the technology hardware, electronic learning resources, networking and telecommunications infrastructure, physical plant modifications, and technical support needed by the district's teachers, students, and administrators to support future activities in the Curriculum and Professional Development Components of the plan.

c. Describe the District's replacement policy for obsolete equipment.

d. What will the schools and classrooms of the future look like? What types of devices will students need for learning? What devices will teachers need for instruction and assessment?

e. What is the role of BYOD in the future? What sort of instructional activities will utilize devices that are not owned / managed by the district?

f. Describe the district's plans and strategy for disaster recovery.

g. Describe the district's plan and strategy for business continuity.

Productivity

Description*:*

As districts face on-going budget pressures, it is important that we work together to improve productivity as we evolve our approach to student learning and assessment. Increasing instructional productivity by doing more with less is not easy to do, especially as expectations for students and school systems continue to rise. The following are some observations for consideration:

Observations:

1. *Technology can play a significant role in increasing productivity at every level of the education system.*
2. *There is an opportunity to rethink learning and assessment processes to help facilitate improvements in these areas.*

3. *Smart use of technology is primarily about allowing each person to be more successful by reducing wasted time, energy, and money. It is also about creating accessible learning opportunities for all students, including low-income students, English Learners, and students with disabilities.*

Questions:

   a. How can we utilize technology to reduce wasted time, wasted energy and wasted money in the delivery of education in the district?

   b. How can we collaborate with other districts to develop shared services for administrative, education and infrastructure services?

   c. How can technology assist in the streamlining of administrative processes to improve productivity?

Research & Development

Description:

While Canada's education systems are among the best in the world, there is still a need to engage in practical research and to develop innovative ways to do better. As a district, we need to develop a culture of innovation and allow ourselves to explore new ways to deliver education.

Observations:

   1. *There is a growing emphasis on how students learn, rather than only on what they learn. Young people need to learn to live together successfully in a diverse and connected world.*

   2. *The old commitment to equal educational opportunity is being replaced by a promise of optimal benefits for all young people.*

   3. *Schooling must ensure that all students are able to make the most of their potential: in today's world, all young people need the competencies that reflect the competencies required for the digital age.*

   4. *Leveraging technology and developing innovations at all levels of the system are opening up new possibilities and contributing knowledge about what works best.*

Questions:

   a. How can we initiate and incubate practical research and pilot projects to explore, develop and learn new and innovative ways to deliver education. How can IT help facilitate this research?

   b. How can we document the effectiveness of pilot projects to ensure that there is transparency across the district (or region), a business case for initiating a research project, and develop metrics to measure the success of the endeavor.

Administrative Technology

Description:

There are many technology services in the district that are primarily administrative in nature. While they support education activities in schools and classrooms, they are not directly linked to learning and/or assessment. Examples of Administrative technology include accounting systems, student information systems, library systems, device management applications, infrastructure technologies, IT support functions, and day-to-day business processes.

Observations:

   1. *Many administrative technologies are expensive to implement and support year over year. In many cases this is unavoidable. At the same time, they should be continually challenged and consideration needs to be given to ways that we can do things better, and more cost effectively.*

Questions:

   a. Many enterprise technologies are long-term in nature in that they affect a large number of stakeholders, are expensive to implement and expensive to maintain. What criteria do we use evaluate our enterprise technologies?

   b. What administrative district and/or school business processes could we improve by leveraging technology?

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