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**Hope High School (HHS) - A School Without Boundaries:**

***An E-learning Vision and its Strategies***

ETEC 520: Vice-President for a Day

Assignment #2

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Total Word Count (less title page & references): 3,496**Process, Core Values & Principles**

The Hope School District conducted a two-year strategic planning process, mapping out district goals and direction for the next five years, including a strategic plan for e-learning, with emphasis on a vision for e-learning at Hope High School (HHS).  This report outlines key strategies that the district and school can implement to become a state-of-the-art e-learning option for students within this school district and beyond.

The rationale for identifying and implementing new and innovative e-learning strategies were developed by the Hope School District’s Technology Management Committee, consisting of all the stakeholders: administration, teachers, and technology support, and chaired by the author of this report.  The committee believed that “clearly defined and measurable goals are essential to justify the high cost of using technology” (Bates & Sangrà, 2011, p.73).  To ensure systematic definition and refinement of these goals, the committee established core values and principles before the planning process began, as this “enabled points of conflict that had been identified to be addressed...provided a context and framework to guide decision making and recommendations and means of evaluating proposals in the plan...[and] enabled trust to be built with all the key stakeholders” (as cited in Bullen & Janes, 2007, p.54).  The core values and principles were:

1.       E-learning will be used to enhance and improve learning and teaching, and not to replace teachers.

2.      E-learning decisions specific to the department will be made by the teachers in that department and with consultation of technology committee.  This will ensure that e-learning will benefit the students and achieve their individual prescribed learning outcomes.

3.      E-learning will seek to not increase the workload of teachers, and appropriate technological support staff will both train teachers and help maintain the transition towards e-learning.

4.      E-learning will seek to stay cost-effective and sustainable.

         Goals and strategies to achieve these goals that came out of the committee process are outlined at the end of this report.  
  
**Rationale**

The committee identified four key reasons to move towards e-learning: increased access and flexibility to school programs; ability to maintain quality with fewer resources; improved quality of teaching and learning; and preparation of students for the workforce and post-secondary institutions.

The environmental scan conducted as part of the wider strategic planning initiative found that students in the district are demanding an increase in choice and flexibility in their secondary education.  Drop-out rates from HHS are increasing as industry lures students into high paying entry-level positions on the promise that they are “working towards high school completion.” Students are joining DL programs from other districts (which are only marginally meeting student needs) and going to work or pursuing recreational lifestyles while completing course work at alternate times of the day.

To serve its students better, HHS endeavors to become a leader in e-learning in its own school district, and carve a unique niche in e-learning within the province, given its commitment to a rather unique “blended reality” paradigm (explained later in the report).  As such, the district’s Innovation and Technology Department (hereafter ITD) will have a mandate to package and market expertise and on-line content from the blended reality teaching model to other educational institutions, seeking cost-recovery for investments made in this project.   The ITD believes that “monetary and geographical restrictions will be removed as a result of using technology and moving towards the blended or fully online model” (Bartley & Golek, 2004).

As part of its mandate, the ITD also reviewed provincial and global e-learning trends that would support and inform its decisions.  In the last decade, the government made numerous policy changes to allow the Boards of Education in BC to offer distributed learning (B.C. Ministry of Education, 2011). Hence, the learning model that HHS is aiming to accomplish is supported by the government.  In addition, any students in BC will be eligible to take the course at HHS and still be funded by the government. There is also a global trend towards Internet education with the market reaching $32.1 billion in 2010 and expected to grow to $49.9 billion by 2015 (Adkins, 2011).  Students in BC are also reacting to this with increased enrollment in distributed learning up from 22,480 in 2009/10 to 27,539 in 2010/11 (B.C. Ministry of Education, 2011).  It is evident from BC’s new Education Plan (released 2011) that there is a move towards more technology integration in classrooms and likely more blended and/or distributed learning models (B.C. Ministry of Education, 2011).

**Local Context**

HHS is the only secondary school in Hope, B.C. (population 6,250), and the only high school in the small Hope School District, which buses high school students from smaller communities within 50km of the school.  The school has 950 students, 50 staff (a principal, a vice-principal, 32 teaching staff, 1 half-time IT support technician, 3 secretaries, and 11 staff within the learning resource and counselling departments).  All students are currently learning in face-to-face settings, with technology integrated in the classroom or the computer labs.

HHS’s administrative staff is tech-savvy and have been strong advocates for technology investment and modernization.  The vice-principal has chaired the HHS technology improvement committee for the past six years, and chaired the district’s technology management committee for the past two years.  The vice-principal has been a champion for technology integration and technology infrastructure improvement in that time.   At HHS, there has been a “Lone Ranger” (Bates & Sangra, 2011, p. 138) culture of teacher-initiated e-learning in the school, with additional resources (release time, training, hardware and software) being made available to teachers to enhance the blending of innovative technology into course design and classroom process.  While these initiatives were authorized and encouraged by administration, they were loosely supervised and generally experimental in scope and delivery, resulting in highly successful technology integration in some classrooms, but limited application or disbursement of these successes throughout the school.

The school’s technology infrastructure includes two computer labs (1 PC and 1 Mac), a wireless network, Smartboards™ in one-third of the classrooms, and one classroom set of mobile devices (iPads) shared amongst staff for classroom use.  There is some blended learning happening in most subjects, with blogs, wikis, and teacher-created sites being the resources of choice.  The school does not have a supported learning management system, though the district’s ITD has hired a senior IT analyst with expertise in Moodle.

The high school staff’s competency and willingness to learn and innovate with new technology is above average, with half of the staff already integrating technology in a meaningful way, a quarter of the staff indicating a willingness to develop their technology skills and use more technology in their classrooms, and a quarter preferring traditional learning.  The staff and students have Web 1.0 and basic Web 2.0 skills in an instructional context, and most have advanced Web 2.0 skills for personal application (i.e. Facebook, Twitter, YouTube, Blogs).  The half-time IT technician is at the school every other day and provides basic professional development for staff, as well as most of the IT support for the school.

**Vision**

“Hope High School: a school without boundaries.”  In the next five years, the context of the school will start to change.  HHS students will be enriched by on-campus and off-campus learning experiences facilitated by trained and technology-gifted staff and state-of-the-art e-learning platforms and technologies.  Students will be given the foundational skills to collect, analyze, and publish digital information while developing proficiencies in face-to-face and online communication and collaboration, critical thinking, and discernment of their gifts and talents, both in relation to information technology as well as academic and vocational areas of interest.

HHS and the district’s ITD is engaged in a process to transform the school’s primarily face-to-face teaching paradigm into a “blended reality” teaching model, in which students have the *choice* of blending traditional on-campus learning experiences with e-learning, utilizing Moodle as the primary learning management system, and blending Moodle course content and delivery with the highly visual and interactive online virtual world, “Second Life™,” utilizing a conjoining resource called “Sloodle™” (software that allows for interactivity between Moodle and Second Life).  The ITD’s choice of on-line virtual worlds for use in course delivery was based on the work of Vogel et al, 2006.

           In order to realize the e-learning vision for HHS a number of district/general changes and school/operational changes are recommended, with a set of strategies provided to operationalize the recommendations.

**District/General Recommendations**

It is recommended that the district reallocate (or hire) administrative, teaching, support and technical staff to enhance the ITD, and embark upon initiatives to ignite a passion for the e-learning model at HHS amongst all stakeholders, through public presentations, staff/student/parent workshops, e-learning conferences, and policy & procedure development.

It is recommended that the district appoint a Principal of e-learning (who also serves as the head of the ITD), with a dedicated staff of one teaching liaison (who works with HHS teachers to define course objectives and content), one district IT analyst (responsible for Moodle, Second Life, and Sloodle platform installations, server management, data integrity, and collaboration with the HHS IT technicians), two content enhancers (who interpret and digitize course content into the Moodle/Sloodle environments), and a training and support facilitator.  The input and cooperation of this department will allow HHS to evolve beyond the “Lone Ranger” method of course development and delivery to the “Project Management” approach (Bates & Sangrà, 2011, p. 140).  This is required to ensure there is leadership and guidelines that will translate into consistent and systematic policy development, resource acquisition, training, support, financial planning/ tracking, and ultimately, excellence in teaching, learning, reporting, and refinement of the blended and fully-online courses.

**School/Operational Recommendations**

It is recommended that HHS deliver courses in three complimentary e-learning formats, utilizing Moodle, Second Life, and Sloodle.  The first option is face-to-face, with significant integration of technological classroom aids (SMART boards, electronic response tools, iPads, laptops) and some content delivery, testing, and reporting through the Moodle/Sloodle interface.   The second option is a “blended reality” option, where students experience a mixed-mode of face-to-face and distance education.  To accomplish this, classroom teaching will simulcast with Sloodle so that students in the classroom and students in the virtual classroom can interact (voice & video streaming for discussions, chat) and be taught by the same instructor at the same time (i.e. h[ttp://www.youtube.com/watch?v=XjrFphPcbf0](about:blank)). The third option is fully distant e-learning, with students learning via the Moodle/Sloodle interface exclusively and asynchronously.  Content delivery, communication between instructors and other students, assessment, and evaluation will be entirely self-contained within this format.

It is recommended that three distinct teaching cohorts are formed, recognizing the unique skills required by teachers within each of the e-learning formats.  The ITD’s training and support facilitator is charged with the design, planning, and delivery of training required by each of these cohorts, with an emphasis on cooperative and constructivist learning between teachers within the cohorts.  Training in Moodle/Sloodle will be common elements among the three cohorts.  The face-to-face teachers will receive intensive training in classroom technology tools (SMART applications; iPad/ laptop implementation and teaching programs; Web 2.0 for education) and classroom management and administration relevant to technology education.  The blended reality teachers will receive specific training in Second Life; methods of planning and orchestrating lessons and activities that they can successfully deliver to both face-to-face and virtual students concurrently; and strategies to engage both groups of students in meaningful communication and interactions.  These teachers will also receive training in webcasting, with insights into the technicalities of audio/ video streaming, lighting, pacing, clarity of voice, and managing hardware.    The fully distant teachers will have training focused on communicating with students within Sloodle and Second Life, building Sloodle modules, facilitating and animating their virtual learning experiences, and methods of effective assessment and evaluation of virtual students.

The three teaching cohorts will collaborate and share expertise with each other throughout the years in order for all teachers to develop expertise in all three types of e-learning.  This will allow *choice* for teachers of what they choose to teach and continual professional development.  As well, teachers will have renewed energy with teaching at least every few years to help build an even stronger e-learning program.  The role of the teacher will alter itself with each new appointment of a class, but because of the continual support and the continual professional development, teachers will feel comfortable and confident with technology in their classrooms, whether it is face-to-face, blended, or distributed.

**Strategies to Implement the Vision**

*“Projects worked best when they were part of a more general strategy for technology implementation that included training of instructors, and a focus on teaching and learning as well as technology infrastructure, administrative, or software developments” (Bates & Sangrà, 2011, p.110)*

For the five year plan, HHS has developed five main strategies to focus technology implementation towards.  The strategies may change in specific implementation, which HHS understands, but the focus of the strategies remains general and consistent with the vision.  
      
**Improvement of Technology Infrastructure**

Improvement of the technology infrastructure for students, faculty, staff, parents and other stakeholders is a fundamental goal of this initiative.  Starting fresh with Moodle 2.0 will give the vision an open-source (read comparatively inexpensive and flexible) LMS that is robust enough to incorporate currently implemented e-learning tools as well as afford a number of new avenues for course enhancement.  The Moodle/Sloodle interface is established enough that the top-down, project management approach being taken can establish clear standards of practice immediately to ensure timely and coordinated course design and development.  Nevertheless, costs and efforts will be front loaded on this initiative, as there is a need to bulk up the district’s server and network, enhance wireless access to ensure coverage everywhere at HHS, purchase hardware and software for both course development and course delivery, migrate existing digital content to Moodle, train staff, and integrate administrative functions (student information system, student records, provincial reporting) with the new systems.  The district must budget high for the first three years (as per financial estimate provided by the technology management committee), but will see a reduction in operational costs by year four of the five year plan, with some cost recovery through out-of-district licensing of Sloodle courses.

**Increased Accessibility to Technology**

The vision promises more interactive learning platforms for students, with anticipated improvements in learning outcomes.  However, the vision is premised on 24/7 online access off-campus, and stable hardware and Internet for all on-campus learners.  For this to happen, a focus on access to technology (by all stakeholders) must be a priority.

To ensure stakeholders access to laptops, tablets and the Internet, HHS should set-up a hardware lease and loan program.  HHS should enter into sponsorship programs with large computer and software suppliers to minimize costs.  Internet access at homes of low-income students should be partially subsidized through student curriculum funds that the district receives for enrolled student.  Training should be offered to all stakeholders to ensure readiness and manipulation of the chosen learning management platforms.  Peer-to-peer training amongst staff and students should be encouraged as part of the HHS constructivist learning culture.

**Improved Internal Administrative Processes Through the Implementation of Enterprise Resource Planning Systems**

It is evident that the public sector is generally less efficient operationally than the private sector (Curristine et al, 2007). Hence, to avoid the replication of current inefficient practices in a high tech medium, careful research of various e-learning models is required. One suggestion to improve the administrative processes is to use what is called the enterprise resource planning (ERP) system, a software that automates human resource, accounting, service and customer relationship management. The goal of this software is to connect all the internal administrative processes and help save on costs by eliminating unnecessary processes and reducing time spent on various administrative tasks (Newcomer, 2004). ERP implementation requires a technician that can program the software to the specific needs of the school, as well as a major restructuring of the current operational model.  To implement this correctly, a couple of administrative changes need to be made, including decentralizing the administrative process, improving human resource management strategies, and re-distributing funding based on performance to ensure that the ERP system will receive adequate funding (Curristine et al, 2007).

The use of the ERP system will likely change the roles of clerical staff and to some extent teachers. There needs to be a consensus between administrators and staff that the traditional roles of a teacher or clerical staff no longer apply to the e-learning model, with each staff needing to be relatively flexible in their roles to accomplish assigned tasks. The staff needs to understand the need to evolve together with the technology. Decentralization of the administrative process from the district to the school level is required to allow flexible management practices within the school, including the ability to manage their own human resources, allowing full utilization of the ERP system.

The other major part in implementing and sustaining the use of the ERP system is to come up with a viable funding system. The current funding model is not based on performance, as the funds generated through student enrollment is all passed back to the district and re-distributed to the schools based on the board’s decisions. There is a misconception that learning online costs less than face to face instruction, resulting in a lesser share of funding coming to e-learning schools, resulting in chronic underfunding. A performance-based funding model would help bring back the funds that were generated due to students attending the school, and improve the school’s ability to keep and attract students in the current competitive environment.

**Improve Internal and External Communication**

One of the goals of this new vision of learning is to create an opportunity to unite all aspects of the school into one system of communication.  Students, faculty, and staff can log on through the system and develop new ways to interact and connect through email, discussion boards, and video.  Today’s students are heavily connected to social media, and together with other asynchronous and synchronous communication, they will be able to engage in learning no matter where they are.  In order to organize an effective communication system, an ongoing and permanent structure to support technology integration will be created by developing a standing committee because “faculty in particular need to participate fully in decision making” (Bates & Sangrà, 2011, p.111). The committee will be made up of various members: faculty (one teacher from each department), staff, and students.  They will make recommendations for action, provide support and legitimacy for decisions, and enable better understanding of technical issues (Bates & Sangrà, 2011, p.113).  This will help create bottom-up innovations and continue to support improvement of both internal and external communications.   
  
**Expand and Improve Teaching and Learning**

Our goal is to bring positive changes to how students learn and how teachers teach through technology: “Young people see technology much the same way they see air and water - part of everyday life. It is natural then that they will see technology as a normal component of teaching and learning” (Bates & Sangrà, 2011, p.16).  The inclusion of technology in our face-to-face and online classrooms will increase access and flexibility of learning, as students will have a variety of choices in order to succeed: mobile learning, face-to-face learning with technology support, blended learning, and distributed learning.  Learning and teaching will become individualized to students and their prescribed learning outcomes.  Learning can also take place with the absence of the teacher and promote self-efficacy in students.  Despite the different approaches, the pedagogy remains the same as teaching remains learner-centred and constructivist.  With connections built through technology, support and training for teachers will allow for continual professional development, as there will be continued access to instructional design and technical support.  With this network, the clerical and technical demands are alleviated and teachers are able to focus on teaching.

**Conclusion**

With the introduction of e-learning into our school system, there will be challenges.  Despite the positive reception of e-learning, some teachers, staff, and students may feel overwhelmed by the changes.  Some parents may resist or be against the use of technology to educate their children. In order to ensure buy-in from the community, it will be necessary for the ITD to include the community in discussions and decisions, ensuring transparent processes.  Stakeholders must be given opportunities to voice their e-learning needs, and the ITD must assist in meeting these needs.  It is important to provide e-learning support for all stakeholders, especially at the beginning; the foundation needs to be strong in order for e-learning to maintain itself as a long-term vision.  Teachers must be supported and still be able to focus on learning outcomes without feeling overwhelmed.  This e-learning support includes fast and reliable support, on-going round-table discussions, and technology workshops.  This support will also encourage future developments in the vision and re-organization of the yearly plans in order to continue maintaining quality education. The key to success of this initiative is for everyone to work passionately towards the common goal of creating excellence in education through e-learning.

**References**

Adkins, S. (2011). The worldwide market for self-paced e-learning products and services: 2010-2015 forecast and analysis. *Ambient Insight Comprehensive Report*, Retrieved from<http://www.ambientinsight.com/Resources/Documents/Ambient-Insight-2010-2015-Worldwide-eLearning-Market-Executive-Overview.pdf>

Bartley, S., & Golek, J. (2004). Evaluating the cost effectiveness of online and face-to-face instruction. *Educational Technology & Society*, *7*(4), 167-175. Retrieved from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.100.5603&rep=rep1&type=pdf&ei=LVHcTvHvCKmOigLHiIyuCg&usg=AFQjCNHhFnaF0y-y1eEVkRNhUSCiclqaZQ&cad=rja

Bates, A.W. & Sangrà, A. (2011). *Managing Technology in Higher Education: Strategies for Transforming Teaching & Learning.* San Francisco: Jossey-Bass.

BC Ministry of Education. (2011). *B.C.'s Education Plan*. Retrieved from http://bcedplan.ca/theplan.php

BC Ministry of Education. (2011). *Distributed learning agreement*. Retrieved from website: http://www.bced.gov.bc.ca/dist\_learning/docs/dist\_learn\_agmt.pdf

BC Ministry of Education. (2011). *Student statistics-2010/11*. Retrieved from website:<http://www.bced.gov.bc.ca/reports/pdfs/student_stats/prov.pdf>

Bullen, M. & Janes. D. (Eds.)(2007). *Making the Transition to E-Learning: Strategies and Issues*. Information Science Publishing: Hershey, PA.

Curristine, T., Lonti, Z., & Joumard, I. (2007). Improving public sector efficiency: Challenges and opportunities. *OECD Journal on Budgeting*, *7*(1). Retrieved from http://www.oecd.org/dataoecd/41/20/43412680.pdf

Newcomer, B. (2004). Evaluating enterprise resource planning systems. *Adhesives & sealants industry*, *11*(3), 46.

Vogel, J.J., Greenwood-Ericksen, A., Cannon-Bowers, J., Bowers, C.A. (2006). Using virtual reality with and without gaming attributes for academic achievement. *Journal of Research on Technology in Education, 39*, 105-118.