

Winter 2010/2011

# Leaders & Learners

The official magazine of the Canadian Association of School Administrators

Association canadienne des administrateurs et des administratrices scolaires



## 21st Century Learning





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***“The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn.” - Alvin Toffler***

**W**elcome to the 2010-2011 school year, and to the second decade of the 21st century, where the focus for this year is, “21st Century Learning”.

As President of CASA, it is my honour and privilege to work with the CASA/ACAS executive members to provide engaging and research-based professional development opportunities for Canadian administrators throughout all regions of Canada. This issue of Leaders & Learners, the official magazine of CASA, highlights all of the exciting initiatives that are happening in our Canadian schools regarding 21st century learning, and I would like to express my appreciation to all contributors to this issue.

CASA has undertaken an important project this year addressing 21st century learning by asking the questions of, “What is 21st century learning?”, and “What should everyone involved in student learning be doing to address 21st century learning in Canada?” The students who will experience illiteracy in the 21st century as identified by Alvin Toffler, will not be the students who cannot read and write, but will be those students who cannot learn, unlearn, and relearn, implying that education in the 21st century is different for students, teachers, parents, policy makers and society.

According to Dr. Kellner at UCLA, 21st century education focuses on our technological revolution that will impact society in a greater way than the evolution from an oral society to a print culture. Students who are currently in kindergarten classes across Canada will be at retirement age in 2070. We can only imagine what the world will look like 60 years from now, considering the changes that have occurred during the past decade in technology, education, health care advances and the world economy.

A conversation is currently underway in educational circles regarding 21st century learning, and the skills required by 21st century learners in our schools across the country. Tony Wagner in The Global Achievement Gap identifies the following skills for 21st century learners: critical thinking and problem solving, collaboration

across networks and leading by influence, agility and adaptability, initiative and entrepreneurship, effective oral and written communication, assessing and analyzing information, and, curiosity and imagination. As Canadian educational leaders we acknowledge that these skills are essential for students to be successful now and in the future.

Therefore, as Canadian school administrators, we will continue to work on the development of a 21st century teaching and learning vision for all of our students. In the process of this development, we must be prepared to learn, unlearn and relearn, like our students and teachers to create positive, learning environments in all our Canadian classrooms, from kindergarten to graduation, embracing the 21st century, to support student success for all of our students.



**Lee Ann Forsyth-Sells**  
CASA President

**Students who are currently in kindergarten classes across Canada will be at retirement age in 2070. We can only imagine what the world will look like 60 years from now, considering the changes that have occurred during the past decade in technology, education, health care advances and the world economy.**

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## Twenty-first Century Learning

**U**nderstanding of the role and importance of technology in education is a very significant need for every senior educator today. No longer is technology just something that a few teachers learn to use; no longer is it something used occasionally to enhance a lesson. It is now an intricate part of learning and school and system leaders must understand and promote its importance.

There are two things I believe are most important for CASA members to accept about technology:

1. To understand and promote effective use, one does not have to become a “techie”. But it is important for every superintendent and director of education to understand what is effective use of technology to enhance program delivery. The senior administrator must be able to identify best practices and commend teachers for their use.
2. Education is what our students learn as they grow and become active participants in society. The lessons of the classroom are gathered from textbooks and resources and also from practical examples of what happens in our world. Some of the materials of curriculum are dull and just tasks that must be mastered; other materials are vital and actively involve students and provide information that becomes part of life. It is evident that young people learn quickly from the various media that surround them in society. Administrators have a responsibility to work with teachers to assess and adopt what works in the world outside the classroom.

If each of us develops an understanding of these issues, we will be more comfortable in leading education in our school districts and we will have a more significant impact on the learning process.



**Frank Kelly**  
Executive Director, CASA

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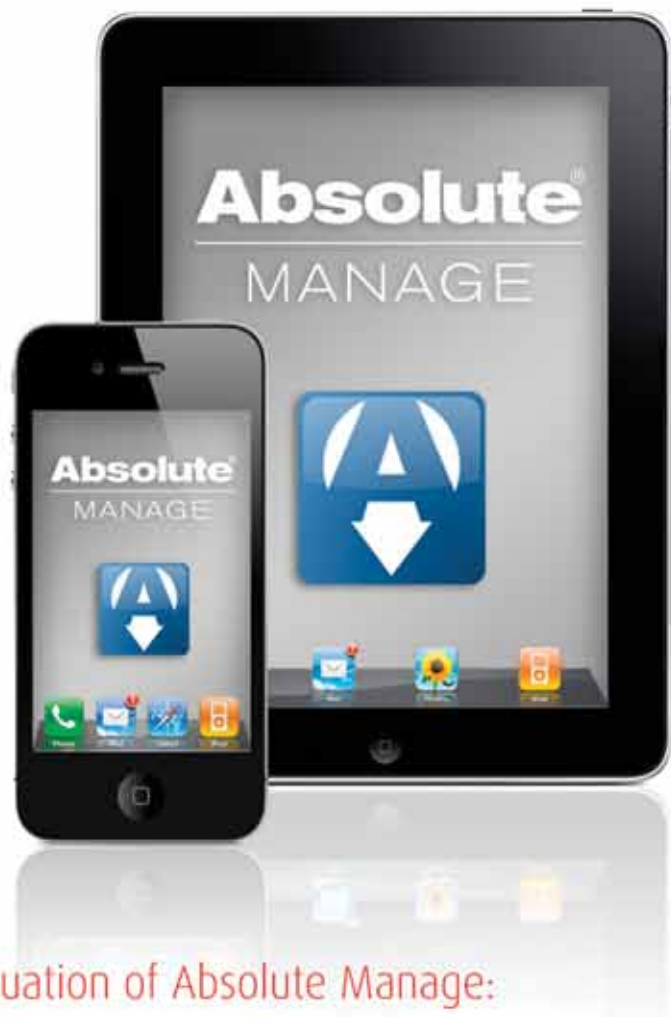
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# Education for the Future

The Hamilton-Wentworth District School Board has created six principles of secondary education that are essential in preparing students for their future in a digital, global and changing world.

By Sharon Stephanian

**A**s we think about education in the future, we must step out of the “old conditions” that have served us well and “prepare ourselves to move forward into a world that we may not understand, but must try to if we ever hope to prepare our children. (Attributes of Digital Learners, 2009) In May 2008, Hamilton-Wentworth District School Board (HWDSB) embarked on a collaborative project to define a “vision” for secondary education in the 21st century. The result was a broader vision for the future of education.

The Ontario Public School Boards’ Association asked, “How can schools continue to be connected and relevant in the world of the 21st century? (What if? Technology in the 21st Century Classroom, 2009); The Partnership for 21st Century Skills developed a “vision for 21st century student success in the global economy” (Partnership for 21st Century Skills, 2009); and Kelly, McCain and Jukes looked to ensure that there are “no more cookie-cutter high schools” as we refine “teaching for the digital generation” (Kelly, 2008). Educators and school systems have long been responding to changing needs in the classroom, however, the nature and complexity of the changes has never been so great.

### Did you know?

*The future is uncertain:*

- The U.S. Department of Labour estimates that today’s learner will have had 10-14 jobs by the age of 38; and

- Children starting school in 2010 will be retiring in 2069. Nobody has a clue what the world will look like in five years’ time. And yet we’re meant to be educating them for it. The unpredictability is extraordinary. (Sir Kenneth Robinson, 2006)

*The world is changing:*

- Our economy is shifting away from jobs based largely on physical skills or repetitive tasks to ones that require analytical skills and judgment. (Martin Prosperity Institute, February 2009); and
- Gone is the agriculture age when seasonal cycles dictated both curriculum and the calendar. Gone is the industrial age when assembly lines (and schools with rows of desks) created standard sameness for everyone. Gone is the information age when people passively consume large amounts of data. Here is the knowledge age: the rise of the creative class.

*The learner has changed:*

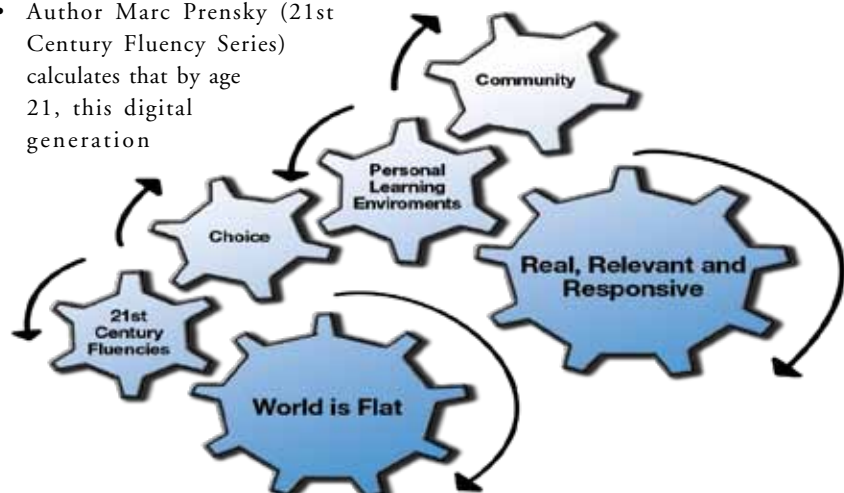
- Author Marc Prensky (21st Century Fluency Series) calculates that by age 21, this digital generation

will have: played more than 10,000 hours of video games; sent and received 250,000 emails and texts; spent 10,000 hours on phones; watched more than 20,000 hours of TV; seen more than 500,000 commercials; and spent less than 9000 hours at school; and

- Students today are digital learners who prefer active engaged learning; processing pictures, sounds and video before text; and
- It is evident that the future is uncertain and that our world and our students are changing. As a result, there is a compelling need to respond in a thoughtful and practical way. Within HWDSB, the adoption of *Education for the Future: Guiding Principles* is the foundation upon which we are building our ramp to the future.

### Education of the Future: Guiding Principles

Education for the 21st century in HWDSB is based upon six interdependent



*Education of the Future: Guiding Principles.*

principles. Taken together, the guiding principles define a vision for education.

### Principle #1: the world is “flat”

The digital age has connected our world like never before. This connectivity requires of us a solid foundation in core competencies of language, mathematics and information, and communication technology ability. However, it is the skills of the workforce that will determine the success of core knowledge...” (Rand Report, 2004) Collaboration and competition has moved beyond that of face to face. Forces that “flatten” the world need to be monitored and responded to.

### Principle #2: 21st century fluencies

HWDSB secondary school graduates will have developed 21st century fluencies (adapted from the 21st Century Fluency Project, <http://www.21stcenturyfluency.com/about.cfm>) as outlined below:

#### *Solution fluency*

This is the ability to define a problem, creatively generate solutions, try a solution, review the outcome and modify the plan of action if needed. One must be flexible, willing to alter the chosen path and be open to opposing ideas before working to a solution.

#### *Information fluency*

This is the ability to unconsciously and intuitively interpret information in all forms and formats in order to extract the essential knowledge, authenticate it, and perceive its meaning and significance. (21st Century Fluency Series) This also involves the ability to communicate face to face and digitally.

#### *Creativity fluency*

This is the process by which artistic proficiency adds meaning through design, art and storytelling. It regards form in addition to function, and the principles of innovative design combined with a quality functioning product.

Creative fluency extends beyond visual creative skills to using the imagination to create stories, a practice which is in demand in many facets of today’s economy. It is widely regarded by many successful industries that creative minds come up with creative solutions. (21st Century Fluency Series).

#### *Media fluency*

This is the ability to look analytically at any communication media to interpret the real message, how the chosen media is being used to shape thinking, and evaluate the efficacy of the message. Further, to create and publish original digital products, matching the media to the intended message by determining the most appropriate and effective media for that message. (21st Century Fluency Series).

#### *Collaboration fluency*

Collaboration fluency is team working proficiency that has reached the unconscious ability to work cooperatively with virtual and real partners in an online environment to create original digital products. (21st Century Fluency Series)

Working with others also requires one to be aware of their own role, circumstances and impact of their behaviour. One must practice life-long learning in order to ensure his/her readiness to participate in our changing world.

### Principle #3: choice

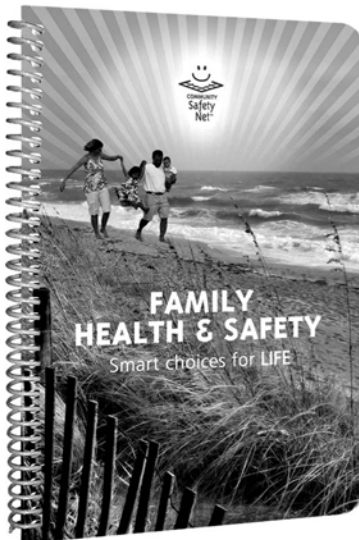
All learners have equitable access to programs that meet their needs, abilities, learning styles, interests, aspirations, career paths.

### Principle #4: personal learning environment

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collaboration and provides meaningful feedback on their progress. Learning in schools reflects that students think, learn, and socialize through a natural interface with technology.

**Principle #5: real, relevant and responsive**

Programs, staff and resources are focused on engaging the learner and responding to student voice.

**Principle #6: community**

Secondary school communities are defined by the population within the building and outside of the building—local and global, face to face and virtual. For the student population, learning is social in nature and interaction with all communities is essential. Community has a role within the school. Schools act as “hubs” for the community.

Isaac Asimov said, “No sensible decision can be made any longer without taking into account not only the world as it is, but the world as it will be.” (Asimov, 2010)

We have a moral imperative to make decisions and implement practices that consider the world “as it will be.” The future is full of opportunity and an education system infused with the *Guiding Principles of Education of the Future* is one that will be responsive to changes and will arm our students with the required skills for their life in the 21st century. ○

*Sharon Stephanian was responsible for the Hamilton-Wentworth District School Board Secondary Education of the Future initiative and is currently superintendent of leadership and learning.*

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# Supporting Systemic Change

Teacher professional development activity.

## Edmonton Catholic Schools goals and challenges of 21st century learning.

By Michael Carby

**W**hile naming and describing 21st century learning is not difficult, making it a reality in a larger urban school jurisdiction is a challenge. Schools and districts across the nation are re-examining their goals, practices and policies to ensure that they offer their students every opportunity to develop skills and understandings that will support their personal goal attainment in a rapidly changing world.

An Edmonton Catholic Schools learning statement is as follows: *Within a faith-based environment, we engage students in transformative learning, which develops deep and innovative 21st century thinking and problem-solving skills.*

Clearly, the use of technology by teachers and students inside and outside of our classrooms is one key ingredient to the attainment of this goal.

Edmonton Catholic School's progress on the journey to 21st century learning has been significant but there is still much to be done. Systemic change is complicated

and can be daunting and frustrating, especially when it comes to the use of technology. In the realm of educational technology, there are significant barriers to attainment of a school system in which the technology is ubiquitous but "invisible"—where the tools of learning are only that, the means through which learning is supported and achieved, not where the use of technology is the end goal.

In the past four years, we have witnessed some significant changes. There is now a web-based student information system with a parent portal so that students and parents can keep in touch with student progress continuously. There is a district SharePoint portal called myECSD, which is the mainstay in staff collaboration and sharing of information. Teachers are designing virtual classrooms that are used to keep in touch with each other and their students. All schools have their own public websites and private intranet sites. The number of "collaboration sites" on myECSD has increased dramatically as staff members discover the advantages of online, asynchronous resource sharing and communication. Wireless networks are on the rise, the use of portable computers has increased and in some schools students

are invited to bring their own laptops and other portable learning devices to access district web-based resources, and to stay connected with their teachers, each other and the world. Videoconferences, blogs, wikis, e-pals and increased use of Web 2.0 tools are used to create and to connect. There are computers and digital projectors in every grade one to 12 classroom, many with interactive white boards. Office Communicator is a new tool on the computers of all senior administrators and school principals. Amazing changes in a short period of time!

How did this happen, especially in these tough economic times? Edmonton Catholic Schools, like other school jurisdictions in Alberta have been given a number of opportunities by Alberta Education to be innovative and to receive grants to support innovation.

One grant proposal, the Emerge initiative, funded over three years, has just been completed. This grant was given to support one-to-one mobile computing. While the primary recipient of this grant was one elementary school, the lessons learned have been transported across the district. The initiative began with a grade five focus with five lead teachers, but grew to include

grades three to six. The staff development for the initiative included the entire teaching staff and ultimately many other district teachers. By year three, the school was close to a one-to-one computer-to-student ratio.

The following year, another project proposal was accepted and funded by Alberta Education's Stakeholder Technology Branch. The Senior High School Engaging Technology Integration project had the stated goal of successfully implementing a portal environment through focused, on-site, embedded professional

development, research into appropriate pedagogical models and the attainment of 21st century learning skills. The project included research on best practices in the exemplary use of technology, and increasing levels of student engagement in their high school education with emphasis on students considered at-risk of failing to complete high school.

Last year saw the implementation of yet another funded project proposal, this time a two-year project aimed at supporting the district's administrators in the implementation of technology use in classrooms.

The iLEAD Institute (Innovative Leadership for Educational Administrator Development) is a professional learning program focused on leadership, innovation and continuous improvement in the integration of technology in schools. The project was designed to foster systemic organizational change through a focus on building leadership capacity. A central goal of the project is to increase Edmonton Catholic leaders' understanding of Alberta's ICT outcomes, to develop their capacity to use a wide variety of technological tools to achieve those outcomes and to develop a culture in which district leaders will meet regularly in their own communities of practice to acquire the knowledge, skills and abilities to effectively move their schools and departments forward.

Preceding and concurrent to these projects, the Alberta Initiatives for School Improvement (AIS I) projects have channelled millions of dollars into the jurisdiction to support systemic change. The current round of these three-year grants include the following five projects: Literacy Strategies for the 21st Century, High School Completion, Inquiry Skills for the 21st Century, Leadership for ALL in the 21st Century, and Body, Mind, and Spirit. Technology skills and leadership development have been integrated into all five projects.

For the past three years, as well, Alberta schools have been the recipients of an Innovative Classroom Technology Grant. This grant targets further integration of technology into Alberta's classrooms. A baseline requirement is that all grade one to 12 classrooms be equipped with a minimum of a classroom computer connected to a digital projector.

The influx of technology has been a blessing and a challenge. It has provided a good beginning and foundation to the goal of district-wide equity of access for all teachers and students. On the other hand, the strain on the district and school budgets to support and install this technology has been great. Enthusiasm for what could be is paralleled with frustration about what is not yet. As expectations for technology use increases, so do the costs of supporting this use by already strained infrastructures and departments whose staff are supporting the installation, maintenance and professional development required to fulfill the demands



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and needs of students, teachers and administrators. As the dependency on technology grows, so does the need to ensure that there is sustained funding to replace aging equipment and to improve the student-to-computer ratio across the district.

Progress is evident despite the challenges. Innovation and ingenuity result in both district level solutions to the challenges as well as local school solutions to support the transformation of learning. Teachers voluntarily train to serve as school-based technology mentors. Students serve on SWAT teams (Students Willing to Assist with Technology). Schools apply for and receive site grants to support innovation.

While we are not there yet, we are working hard to attain Superintendent Joan Carr's description of our three-year education plan which, "Places a significant emphasis on developing the use of technology as a teaching and learning tool. Moving forward with technology in the classrooms helps develop student-focused, collaborative learning environments that increase our students' enthusiasm and love for learning while helping them develop into contributing global citizens. Our aim

is to create learning environments throughout our school district that reflect the learning styles and needs of 21st century learners." ○

*Michael Carby has a Masters Degree in Instructional Technology and 37 years*

*experience as an educator and administrator, including principalships of an online high school, outreach schools and a community high school. He is currently director of emerging technology in Edmonton Catholic Schools, a jurisdiction of approximately 33,000 students.*

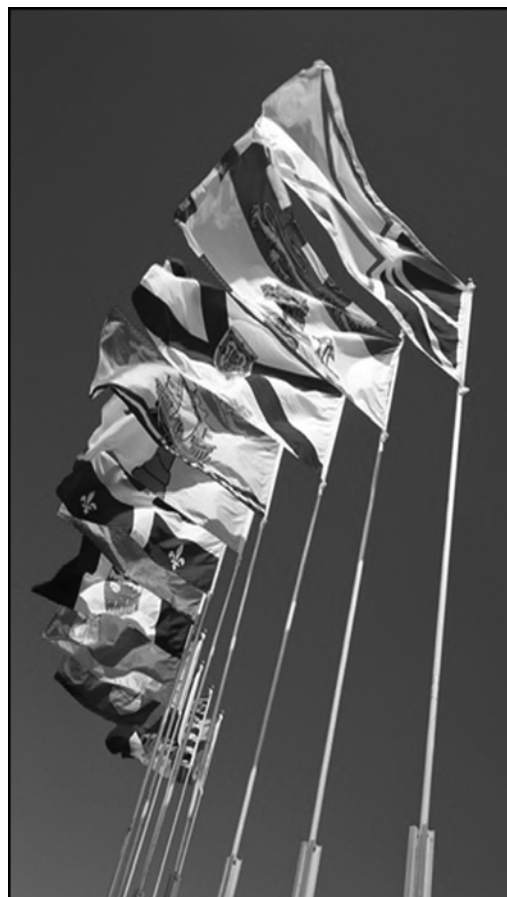


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# Back to the Future

## Bringing 21st century approaches to teaching and learning in Elk Island Catholic Schools.

By Dr. Margaret McVea, Maureen Duguay and Jeannine Bobrowsky

Since 2007, Elk Island Catholic Schools (EICS) has been on a very ambitious trajectory of change. The result has been a dramatic shift towards a culture of building positive relationships that significantly enhance student success.

If one were to “tweet” about EICS, it would read something like this: @EICS 6,000 students, 350+ teachers, 16 fully inclusive schools, four communities, state of the art, 2012 high school annual budget of \$58M dollars.

EICS has entered the 21st century with an enviable record. Over the past four years, by combining a well-rounded and robust learning plan with a culture of self-direction and inquiry, there have been significant changes in student learning, teacher autonomy and administrators’ motivation. What made this happen? Primarily a pervasive focus on personalized learning for both students and staff is responsible. This focus has been carefully aligned with provincial and local expectations. This, in conjunction with deliberate action research employing face-to-face focus groups and survey questionnaires targeting all division stakeholders, has assisted the change process. In affiliation with xLS, a local university-based research group, the division relies on continuous data collection and synthesis to inform their decision-making. Putting together this highly personalized approach, where all persons affected have a voice in their learning, has kick-started EICS into a division-wide just-in-time professional learning community.

### Then and now: what students and staff say

Today, EICS seeks opportunities to hear voices of all key stakeholders. They have committed to making a continuous practice of streaming information from all members of their division to inform and personalize



*Student engagement through technology.*

teaching and learning decisions. Now, the importance of parent, student and teacher input is paramount to the change process at EICS.

The Alberta Initiative for School Improvement (AIS) Cycle IV initiative provided the opportunity to listen to student voices. Focus groups of students from all grades provided further clear evidence that change was needed. The students clearly wanted more variety in instruction because “not everyone learns in the same way” and “would like to demonstrate their learning in a variety of ways.” Comments such as these were not evident with students four years ago.

While an emphasis on assessment for learning has been a focus within the division for the last four years, as part of the AIS, it has taken some time to recognize the efficacy of tying assessment and instruction so closely. Results from AIS Cycle III, have raised the need for much closer alignment of both practices. Entering Cycle IV, teachers are excited about working closely together across the curriculum to work on matching instructional outcomes with appropriate assessment strategies. A professional learning model has been implemented which organized schools into “quad” groups. This has provided multiple opportunities for collaboration and networking with teachers and administrators throughout the division, opening doors and minds.

### Substantiating the vision

“The strength of the response to change in the division has been the alignment of initiatives, collaboration of all involved and a willingness to see challenges as a means to exercise creative problem solving,” says Maureen Duguay, assistant superintendent, instructional services.

In the last five to seven years, EICS administrative staff members have applied for every available grant and partnership that has crossed their desks. However, as we all know, there is never enough funding to make significant change, especially to establish first class professional development. Fortunately, and thanks in part to the Technology Stakeholder Branch of Alberta Education, a variety of opportunities to ensure that school divisions can move ahead have been promoted in the last five years. One such project, The Technology and High School Success project (THSS), has raised the bar for high school teachers with respect to student success. Based on the International Society for Technology in Education’s (ISTE) “Essential Conditions”—shared vision, equitable access, skilled personnel and professional development—EICS has convened small core groups of employees to build vision, ensure access and train both in-house and beyond to gradually add new technologies and help our teachers adjust to the pedagogical changes.

“We know we are on the right track



*EICS participants in Leading Our Way Forward Leadership Conference in April 2010.*



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when we hear such comments as, “I can’t wait to start using that iPad with my students,” and, “When I got the SMART board, even students that I don’t teach were coming in to play with it. Now, in my classes there are more ideas than we have space for on the board,” and “I have students say to me that they ‘get’ this better because another student showed and explained it to them,”” says Jeannine Bobrowsky, Emerging Technologies Consultant.

The THSS project, plus division technology planning, has helped by providing wireless access and equipping division classrooms with technologies such as laptops, interactive white boards, tablet PCs, and access to video conferencing to help accommodate their 21st century skill sets. Effective teachers are the key to embedding and modeling rich content in this enabled purposeful learning atmosphere.

A second project, Supporting Innovative Classrooms, has also provided direction in developing leadership skills and distributing a shared division vision for personalized teaching. 34 school-based administrators, eight division consultants and five senior administrators have been connecting regularly in hands-on sessions and webinars focusing on effective practices based on the ISTE standards for pedagogy.

In 2009-2010, Project ITLT- Innovative Teaching and Learning with Technology provided some of the latest strategies to enhance learning. In partnership with the Faculty of Education at Concordia University College, administrators learned more about the internet, digital citizenship, interactive whiteboards and Web 2.0—many tools that teachers are using daily in their classrooms. Understanding how to use the tools and being able to assess their value in the learning process is fundamental to accepting and supporting teachers’ ongoing use of 21st century learning approaches.

### **Combining wisdom with risk-taking**

The current partnership with the Faculty of Education at Concordia University College of Alberta has meant a healthy exchange of ideas. Aside from the in-service sessions provided, a second strand of the partnership has been to deploy small groups of pre-service students to deliver professional development sessions to division teachers on media awareness and safe use of the Internet. Faculty of Education students shared

their ideas and perspectives on social networking concerns and invited teachers to ask probing questions.

“Blurring the professional credential boundaries was risky,” admits Dr. Margaret McVea. “But both parties learned from the experience.”

Despite their lack of experience and classroom wisdom, pre-service teachers are generally high risk-takers with technology and much more “native” in their usage than their in-service partners, most of whom are “immigrants” or even “strangers”. The partnership has provided a win-win solution for EICS and Concordia particularly due to the Moodle portal that was established to share research and resources.

### Back to the future!

Moving into the future for EICS has been partly a re-visiting of the past, a return to those successful measures that have motivated professional educators throughout their careers. A division renewed and invested with 21st Century tools and connections, personalized learning supported by rigorous feedback is smart and timely. It lends itself to self-direction, independence and excitement about the future. It calls for a re-tweeting of the original description of EICS: *@EICS Committed to thoughtful just-in-time learning using tools that enrich and enhance content powered by self-directed staff and students.* ○

*Margaret McVea, PhD, has spent 38 years in public education as an educator, administrator and professor of education.*

*Maureen Duguay is the assistant superintendent of instruction for EICS.*

*Jeannine Bobrowsky is the emerging technology consultant for EICS.*



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# A Place to Hang Their Hats



Heritage Regional High School is motivating students to focus on academics by providing innovative and educational extra-curricular options.

By Brian Seltmann

**H**igh schools have always strived to educate, stimulate and foster life-long learning and to graduate students in a timely manner. As students change, so does education, but one could argue they do not happen at the same rate. Numerous articles have been written about how schools are not addressing the students' interests and thus are losing many who choose to drop out. This is even truer of boys graduating from high school. The Quebec Ministry of Education, Leisure and Sport has made the improved success rate of boys a clear objective in its policies and thus school boards and schools have followed suit.

Trying to figure out the magic solution to keep students in school and lead them to graduate is not simple. We have brain research that is informing us about how boys and girls learn differently and what we can do to help. All this is ultimately to increase the graduation rates across Quebec. One school in Quebec is tackling this problem head on: Heritage Regional High School.

At Heritage Regional High School in St. Hubert, Quebec, they have developed strategies that are keeping kids in school and are helping them to achieve their full potential. The first strategy is offering concentration programs. In the last five years, Heritage has started a Sports Excellence and a Fine Arts Focus program. In the sports and fine arts program, the students have a compressed academic schedule and then do either sports or art from 2:00 to 4:00 everyday, Monday to Thursday, with Fridays being a regular school day. The school also boasts a successful IBO program. Students must keep high averages to remain in the programs and to be allowed to participate fully. These programs have motivated students to take their academics more seriously and have kept kids in school. Starting next fall, the iCan (Innovative Computer Applications and Networking) program, a technology concentration program, will be set up similar to the arts and sports programs, where students will learn programming, networking, web, graphic and 3D design. This program will be unique in Quebec and Canada, at the

high school level, and will become yet another program that will help kids stay focussed on their academics.

The second strategy to keep and motivate kids in school is providing a healthy student life program. By providing students with hundreds of activities each year including 44 intramural sports, fundraisers, monthly activities for all levels, trips, a house system and fun events, Heritage has seen a positive correlation between an active student body and keeping kids in school and their grades up.

In further analyzing the student body over the last couple of years and always striving for excellence, the Heritage administration realized that not all the students fit into the sports, art or IBO profiles. In 2009, through some experimentation with the computer labs, Heritage administration realized that many kids were drawn to the computer labs at lunch and that many of these were students who did not fit into other concentration courses or even the regular program. So, in 2009, through the hiring of some key people, technology became a focus for the school. Computer labs were upgraded and open every lunch, hardware like Smartboards, mobile labs, cameras and headsets were bought. Teachers were supported with professional development. The infrastructure was improved and also supported. By adding yet another level of support and service to the student body, Heritage was able to keep more kids active and motivated to come to school.

Aligning ourselves with the Ministry and school board objectives to increase the graduation rate, Heritage Regional High School has seen a positive correlation between offering students extra curricular activities and increased attendance rates and higher overall grades. In a school as rich as ours with sports excellence, IBO and fine arts programs, our focus on technology is allowing even more students the opportunity to shine and excel! ○

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*Brian Seltmann, B.Ed., M.Ed., is the vice principal of Heritage Regional High School.*

*For information about Heritage Regional High School, please visit <http://www.brhs.rsb.qc.ca>.*



# SMART Inclusion Enhances Student Achievements

The London District Catholic School Board has found success by integrating SMART technology with assistive technology.

By Janice Long and Cheryl Cameron

**S**MART Inclusion originated at the Upper Canada District School Board (UCDSB) during the 2008-2009 school year. The UCDSB reported significant improvements in the areas of student achievement and participation. The London District Catholic School Board (LDCSB) implemented the SMART Inclusion Project in 11 classrooms throughout the board during the 2009-2010 school year and was able to replicate the findings from the UCDSB.

The SMART Inclusion project at London District Catholic School Board examined the use of interactive whiteboards (i.e. SMART technology) integrated with specialized software/assistive technology, framed within best practices from education and speech-language pathology to support communication skills and participation for students with significant communication impairments.

## Process

Eight schools (total of 11 classrooms) participated in the SMART Inclusion project. Each classroom had at least one student with pervasive/extensive support levels.

The students' exceptionalities included: Autism Spectrum Disorder (ASD), Developmental Disability, Mild Intellectual Disability and Language Impairment. In May of 2009, these students were identified as eligible for a Ministry of Education Special Equipment Allowance (SEA) grant to purchase equipment. This equipment included a SMARTBoard and appropriate assistive technology. This equipment was deemed

essential to support the students' communication skills and achieve the goal of meaningful educational and social participation, which is the goal for all students. Extensive training and coaching was provided for classroom teachers, educational assistants and resource teachers on the theory behind SMART Inclusion and the technology.

## What is SMART Inclusion?

*The theory... "Inclusion without participation is not inclusion at all."*

The SMART Inclusion project provided school teams with the theoretical underpinnings and strategies of Universal Design for Learning (UDL) (Turnball et al., 2002), Differentiated Instruction (DI) (Tomlinson, C.A., 1999), and the Participation Model (Rosenberg & Beukelman, 1987; Beukelman & Miranda, 1998), along with the technology support necessary for successful inclusion of all students.

The Participation Model (PM) is a speech-language pathology model that provides a framework for supporting academic and social participation. This model captures those students who fall through the UDL and DI net by addressing how to identify the barriers to participation that exist, despite UDL and DI, so that even those students with severe communication impairments are able to participate at some level in classroom activities. The philosophy behind the PM is that students with special needs, including those who use assistive technology and/or alternative and augmentative communication tools, can participate in the same classroom activities as peers while still meeting their individual learning needs and goals. Programming for students with

special needs, within the PM framework, is collaborative. The process includes teachers, educational assistants, speech-language pathologists and parents in setting academic and social goals.

## The technology

Some of the students in the project were already using assistive technology. However, the technology was frequently used by an individual student in isolation, resulting in minimal opportunities for academic and social participation.

The use of interactive white board (IWB) technology allows for the use of computer technology in small and large group instruction. This results in a UDL approach to instruction; namely, multiple means of representation, expression and engagement. Use of multiple formats for representing concepts and text is made easier, including auditory (e.g. voice, speech output from computer, sound effects), visual (picture communication symbols, printed words, graphics) and kinesthetic modalities (e.g. touching, adding to and moving information on the IWB).

To achieve SMART Inclusion, the student's assistive technology was integrated with the IWB during group instruction. While assistive technology was originally deemed essential for one student, many students within the classroom benefited from its use; therefore it was found to be "necessary for some, good for all."

## Evaluation

Pre and post-data was collected on the 11 students for whom the SEA claim was pursued, as well as an additional five

students with special needs in those SMART Inclusion classrooms. The data sources included surveys (completed by school teams), speech-language assessments, review of IEPs and report cards, and interviews with teachers and principals. Qualitative and quantitative data was gathered on academic participation, social participation, communication skills, behaviours, learning skills and inclusion.

## Results/Implications

### Implications for students with special needs

- The “achievement gap” between students with special needs and peers was narrowed;
- IEP goals were met resulting in increased learning expectations in the classroom; and
- Students with special needs became more active social participants.

### Implications for the whole class

- All students were more engaged;
- Assistive technology was being used for whole class instruction;
- “Digital natives” (students growing up in a digital world) were able to pull along the “digital immigrants” (adults) in terms of familiarity and integrated use of the technology (Prensky,2001); and
- More teaching and less behaviour management

### Implications for the school community

- The Participation Model has been expanded beyond the SMART Inclusion classrooms;
- Principals are implementing SMART Inclusion theory and technology into other classrooms; and
- Revisions are being made to school success plans to include the participation model and assistive technology.

## Results/Data

The following results are based on the surveys completed by the school team. The surveys provided pre and post measures for students with special needs in the areas of engagement, independence, communication, behaviour and academic and social participation.

### Engagement (See Figure 1)

Pre: Students were engaged in the classroom activities 57 per cent of the time.

Post: Students were engaged in classroom activities 82 per cent of the time.

### Independence (See Figure 2)

Independence was measured using two scales. The first measure examined the percentage of time that direct assistance was required for the students to understand the tasks (Pre: 86 per cent of the time; Post: 64 per cent of the time).

The second measure examined the amount of direct assistance required to complete tasks (Pre: 82 per cent; Post: 57 per cent).

Great decreases in the direct support required were found.

### Communication (See Figure 3)

Significant increases in successful communication attempts (Pre: 54 per cent; Post: 76 per cent) and successful social communication attempts (Pre: 44 per cent; Post: 78 per cent) were documented.

Standardized speech-language assessments also revealed improvements with receptive language, expressive language and social language skills.

## Behaviour

Behaviour incidents were recorded for seven of the 14 participants at the time of the pre-survey. A behaviour incident was defined as an outburst that required the removal of the student from the classroom.

After the implementation of SMART Inclusion, five of the seven students had a decrease in behavioural incidents by at least 50 per cent.

## Academic participation/Social participation

The Participation Model was used to identify levels of academic and social participation (academic participation levels are on a continuum: “none”, “alternate”, “curriculum overlapping”, “modified” and “same”.) Initially, 10 of the 14 students had academic participation levels ranging from “none” to “modified” (four students were found to have the “same” academic participation as their peers). Following the implementation of SMART Inclusion, six of the 10 students increased their academic participation by at least one level. The social participation levels range from: “none”, “passive”, “non-influential” and “influential”. The most significant findings in this area is that all students are now involved with a peer group and most students have improved their social participation to the “non-influential” level.

## SMART Inclusion: what next?

The LDCSB is excited to expand the SMART Inclusion project during the 2010-2011 school year to include School to Community Pathway Program classrooms in five secondary schools. ○

*Janice Long and Cheryl Cameron are speech-language pathologists for the LDCSB. They are the project leaders for the SMART Inclusion project. You can contact them at [j.long@ldcsb.on.ca](mailto:j.long@ldcsb.on.ca) or [c.cameron@ldcsb.on.ca](mailto:c.cameron@ldcsb.on.ca).*

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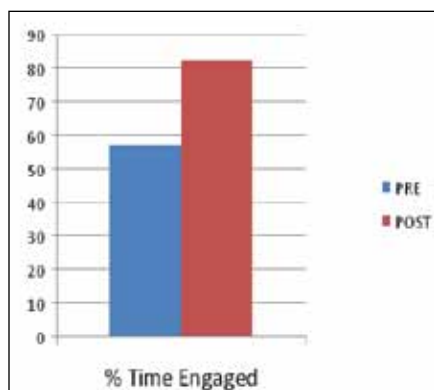


Figure 1.

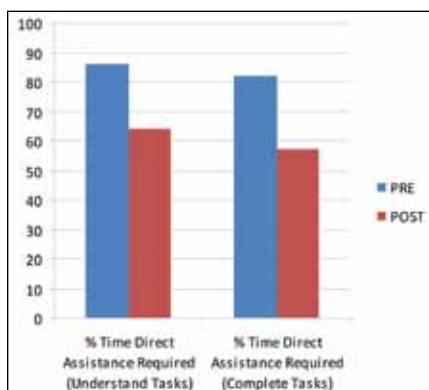


Figure 2.

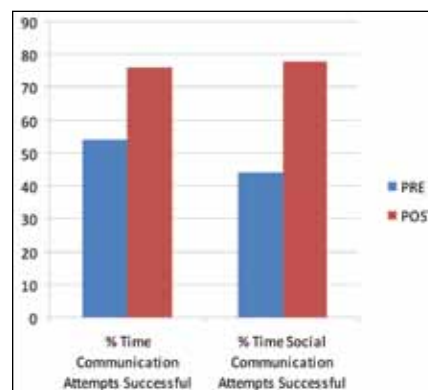


Figure 3.

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The Ottawa Catholic School Board is transforming learning by embracing the use of new technologies.

## Millennial generation

Today's students are different from the students that our schools were created to educate. The new digital learners are immersed in technology and they expect to use digital tools as part of their educational experience. Brain-based research provides evidence that today's generation of students are "wired" differently than previous generations. The question educators need to consider is not about what equipment to purchase or install, but rather what skills do our students need to succeed. Students deserve to graduate from a learning environment that espouses 21st century skill sets and tools.

In order to structure a learning environment that engages students, the Ottawa Catholic School Board (OCSB) is in the process of removing procedural barriers, updating infrastructure, introducing new tools, creating professional digital learning communities and building leadership capacity.

## Tipping point

The annual Media Technology Monitor (MTM) survey examines the media habits and technology usage of Canadians. The findings indicate that household penetration of broadband services continues to grow in Canada. In the United States, Project Tomorrow's "Speak Up" 2009 survey of more than 300,000 students from 5,700 schools provided evidence that students are using technology to take responsibility for their own learning. The same survey highlighted students' increasing use of technology to communicate and collaborate with teachers

By Tom D Amico

and students as a means of enhancing learning experiences.

## Statistics

The Inter@ctive Reid Report, which tracks Canadian's usage of the internet, found that for the first time ever, the weekly internet usage of Canadians has moved ahead of the number of hours spent watching television. According to Internet World Stats, there were 361 million internet users in the year 2000. As of June 2010, there are over 1.9 billion users accessing over one trillion unique URLs. There are over 87 billion searches on Google each month and over two billion YouTube videos are watched daily. According to a study by the Radicati Group, there were over 247 billion emails sent per day in 2009 and this is expected to reach 507 billion messages per day by 2013. Blog Pulse indicates that there are over 147 million blogs available on the internet with over 60,000 blogs being added daily. There are over 500 million people with Facebook accounts where 30 billion pieces of content (web links, news, blogs etc.) are shared each month. There are over five billion mobile phone connections worldwide. More than a billion mobile phone connections have been added around the world in the last year and a half. Around the world there are now three times as many phones as personal computers. The increasing prevalence of

Smart Phones is creating opportunities for learning both in and out of school. The iPhone came out in 2007 and after just three years, there are now over 250,000 apps available, many of them educational and many of them free.

## Core priorities

Technology within the OCSB is viewed as a tool to support research based instructional strategies. The core priorities of success for students, success for staff and stewardship of resources, within a Catholic framework, are enhanced by digital learning.

## Governance

A supportive board of trustees and a visionary director of education are important elements in order to retrofit an entire system for 21st century learning. In 2010, the board passed an Electronic Social Media policy, one of the first such policies for school boards in Ontario. The policy recognizes the use of social media by staff as a viable means to involve colleagues, parents and students in academic dialogue. At the school level, the use of mobile devices by students for instructional purposes is encouraged. Restrictions to sites such as YouTube have been removed. Teachers are encouraged to teach the appropriate use of social media and safe online activity. Staff can bring devices home to continue

**Priorities 2010-2011**  
*Schools to have faith in*

**21<sup>ST</sup> CENTURY LEARNING**

**Success for Students**

- Build faith-filled communities that support Catholic Character Formation
- Develop critically literate learners
- Deepen mathematical literacy through inquiry
- Respond to diversity amongst all learners

**Success for Staff**

- Build Catholic collaborative learning communities through shared leadership
- Provide opportunities to deepen adult faith
- Differentiate professional learning

**Stewardship of Resources**

- Align human and operational resources to support and close gaps in student achievement
- Enhance parental and student engagement, parish and community partnerships to support Board priorities
- Promote environmental initiatives that respect God's creation

**CATHOLIC GRADUATE EXPECTATIONS**

*The Ottawa Catholic School Board is actively embracing 21st century learning as part of its board priorities.*

environment with high speed bandwidth. Teachers should have a laptop or other device that will allow them to personalize learning and instruction. Teachers and students should have access to an LCD projector and an interactive whiteboard for display and engagement purposes. In the Ottawa Catholic School Board, all 15 high schools now offer a wireless environment and by 2012 all elementary schools will also be wireless. This year all high school teachers were provided with a laptop and elementary teachers will receive laptops over the next two years. The board of trustees approved the use of board reserves to help off-set a portion of the costs of these initiatives and to provide additional support to Children Support Schools. Devices for students and staff such as netbooks, document cameras, response systems, iPods, etc. will supplement core resources as funds become available.

their learning by accessing just-in-time online learning modules. The Board Information Technology department has been moved to be part of the Student Success department and is now called Student Success – Learning Technologies. This change is a signal that the focus is on student achievement and not on technology or any particular device.

### Infrastructure

Network stability and increased bandwidth along with electronic tools are seen as critical support systems. The infrastructure supports the board's key priorities and, as such, must be kept online with minimal disruption. At the classroom level, teachers and students need access to a wireless

### Instructional practice

Teachers continue to transform from a practice of providing facts to a new focus on higher order thinking skills. Assessment strategies that focus on memorization and recall are changing to new assessment strategies that

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focus on higher order thinking skills such as evaluating and creating. Student use of digital tools and social media will provide them with the opportunity to engage in higher order thinking skills. A focus on 21st century learning skills including: communication and collaboration, creativity, problem solving, and critical thinking are at the center of these changes.

### Building capacity

OCSB leaders from all generations model the effective use of information technology skills. Learning technologies coordinator, Rob Long, and manager, Francis Liu are both tasked with ensuring that in-service opportunities are available to all staff in a variety of formats including: face to face, online, and blended learning. The Board's Leadership

Journey includes topics such as, "Developing 21st Century Leaders", "An Overview of 21st Century Learning", and a complete online course entitled, "Teaching and Leading in the 21st Century."

### Catholicity

Safety within digital environments, cyber-bullying prevention and healthy relationships are all components of the Religious and Family Life courses. Teachers will continue to create learning activities that require students to apply value based judgments and to critically analyze and validate facts and arguments. The Catholic Graduate Expectations will have an increasingly important place in the preparation of students.

The Catholic Graduate Expectations are inherently higher order, focused on

communication, collaboration, creativity and lifelong learning.

### Toward 2020 and beyond

The Ottawa Catholic School Board has a clear focus on student and staff success. The board continues to innovate and adapt to reflect the changing needs of 21st century learners.

As the second decade of the 21st century unfolds, the board will continue to adapt to meet the needs of today's millennial generation. ○

*Tom D'Amico is the superintendent of Student Success – Learning Technologies with the Ottawa Catholic School Board. The board has 85 schools serving 39,000 students.*

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# Energizing Student Learning

The District School Board of Niagara is creating conditions where student motivation and engagement increases and job embedded professional learning occurs.

By Dino Miele and Shirley Scott

**T**he District School Board of Niagara (DSBN) is among the leaders in technology use inside and outside the classroom, with one of the largest computer networks in the Niagara Region. Technology has become an integral part of teaching and learning, in addition to supporting all unified communications and business operations.

Progressive programs for all students are delivered by dedicated professional staff and are trade-marks of this system, focused on literacy and numeracy achievement. As we create an environment where all are working and learning together, we are cognizant that we are teaching students who are 21st century learners, whose needs are different in many ways than before, thanks to the wide range of technology at their fingertips.

Assistive technologies, digital projectors, interactive white boards, wireless devices, response systems, desktops, laptops, netbooks, scanners, personal mobile technologies, tablets, multimedia resources, video streaming, video conferencing and green technology initiatives are among the varied resources used to support the learning environment in schools at the DSBN. Virtually everyone on at the DSBN from the director of education, to our approximately 39,000 students and over 4,700 employees has appropriate access to a variety of technologies which include computer hardware, unified communication systems, software applications, Internet, and professional development and training programs. This includes district-wide administrative and educational hardware and software, databases and student information systems. Additionally, our technology embedded programme enables students to remain energized and engaged

throughout the learning process. Our wide-area network and pervasive wireless access in all schools allows for real-time, on-demand access to online resources and teaching materials for both teachers and students.

Supporting the end-user's technology needs includes a high-speed, wide-area fibre optic network (WAN) that is shared with the regional municipality, hospitals, university and other local school boards. This network connects our 119 schools, board office and all other board services to each other and to the Internet. This building-level local and wide area network connects the 23,000 plus end-user computers, printers, wireless/mobile devices and peripherals to cutting edge file servers and a data storage center.

Intentionally infusing technology into the curriculum allows classrooms to become transparent and creates conditions for higher order thinking skills to occur as well as innovative ways of using technology in our differentiated learning and universal design framework. This shift has resulted in classrooms that are globally connected, and always engaged. It creates conditions where student motivation and engagement increase and job embedded professional learning occurs simultaneously for teachers.

To increase the comfort, confidence and use of digital learning technologies, our board embarked on a very progressive technology enhancement programme which included the installation of a robust technical infrastructure, a five-year technology allocation plan and a team-based technical training and support programme. Teams comprised of curriculum support teachers and computer technicians visit schools on a regular basis and provide embedded technology training so that teachers can realistically support the use of digital technologies in the classroom. This allows for cutting edge tools to co-exist



side-by-side with project-based learning that is non-technical in nature. The outcome is an understanding that the bells and whistles of technology will not replace existing learning strategies but become an embedded or supplemental part of, and for, learning. An online web-menu is available allowing for customized training for teachers with their classes or for groups of interested staff; training that can be tailored to the skill level and interests of the individuals involved.

The only constants in technology are evolution and change, which happen quickly. At the DSBN we have re-conceptualized our methodologies to meet this evolution so that teachers are encouraged and supported as they expand their technological skills working with our 21st century learners.

The future is @ the DSBN. To learn more about how we are sensibly incorporating today's technology in our schools read our e-zine at <http://www.dsbni.org/energizingstudentlearning>. ○

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*Dino Miele is the chief information officer and Shirley Scott is a student achievement leader with ICT responsibilities for the District School Board of Niagara in beautiful southern Ontario.*



# Public Health Services in Schools

A unique partnership is promoting healthy active living in the Hamilton-Wentworth Catholic District School Board.

By Ann Tyrrell and Jackie Bajus

**T**he City of Hamilton's Public Health Services (PHS) has found success collaborating with school partners. Services align with best practices, community needs, government mandates, available resources and stakeholder preferences. To support streamlined communication, school board liaison Public Health Nurse (PHN) assignments were created in 2005.

## Background

The link between health and learning has underpinned the services provided to schools by Hamilton PHS. However, with the Ontario Ministry of Education's focus on literacy and numeracy, PHS initiatives tended to be regarded as "add-ons" to demands made on schools.

Health promotion is the foundation of public health practice. The terms 'comprehensive school health', 'health promoting school', and 'healthy school' are used interchangeably. The Canadian Consensus Statement on Comprehensive School Health refers to a multifaceted approach including teaching health knowledge and skills, creating health enabling social and physical environments and facilitating links with parents, local agencies and the community to support optimal health and learning. In 2007, the Foundations for a Healthy School document was created. PHS has an important role supporting a Health Promoting School Model.

## Meeting student and family needs

In October 2005, responding to a HWCDSB Task Force Report, the Hamilton-Wentworth Catholic District School Board (HWCDSB) requested a list of PHS services offered to inner city schools. The PHN, manager of social work and a representative principal collaborated to identify the health related needs of students and

families and the PHS programs and services that would best meet those needs.

Subsequent meetings brought together two HWCDSB superintendents, two PHS school program managers, the manager of social work, the representative principal and the PHN. Agenda items included listening to HWCDSB needs, reviewing the Ministry's Mandatory Programs and Services Guidelines, reviewing the Health Promoting School Model and examining barriers and solutions to service delivery in schools.

The needs of all HWCDSB schools could not be met using the Health Promoting School Model due to limited PHS resources. Finding solutions, the superintendents identified the 10 elementary schools with the highest percentage of socio-economically disadvantaged students. These 10 schools and all secondary schools would be the PHS Partnership Health Promoting Schools. Identified schools received full PHS services. All other schools received regular Healthy Kids Newsletters. They also had access to the: PHS teacher website; PHN by telephone; teacher resources in the PHS resource centre; support delivering the healthy growth and development curriculum and anaphylaxis education. The PHN also created a community directory for schools containing information on community services for students and families.

## Meeting principal and teacher needs

The PHN helped educators understand the PHN role, PHS resources and who to call to meet needs. Roles and mandates were shared and ideas for enhancing a working relationship were discussed.

PHS also created:

- Revised teacher guides outlining PHS curriculum supports by strand;
- Revised administration guides detailing who to call about topics such as immunization programs; and
- School support services charts for

elementary and secondary schools, categorized according to the Ministry of Education curriculum strands, with PHS contact information.

One reward has been the annual September principal HWCDSB/PHS presentation entitled, "Working with PHS." Principals engage in learning how to access PHS resources while competing to find answers using available resources. For example, The Foundations for a Healthy School contained the answers to the activity, "Are you smarter than last year's principal?" Feedback is always positive.

Other achievements include:

- Asthma and nutrition policies;
- An anaphylaxis education program;
- Reproductive health, growth and development and special needs curriculum resources;
- HWCDSB First Class website linked to PHS teacher website: [www.hamilton.ca/healthyschools.ca](http://www.hamilton.ca/healthyschools.ca); and
- A proposal for a healthy schools policy developed by HWCDSB, Diocese of Hamilton and PHS.

## Conclusion

The partnership has been a result of proactive communication, trust and ongoing relationship building. Commitment to sustain this partnership continues in the form of regular communication, sharing mandates, continuing liaisons and problem solving around priorities and developing user-friendly resources. Working together for students and families has proved to be a mutual and rewarding goal. ○

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*Ann Tyrrell RN., CCHN (C), BScN, is the public health nurse in the school program with the HWCDSB liaison assignment.*

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# Futures Forum

The WRDSB is preparing students for the future.

By Mark Harper

**I**n a time of technological change, innovative and engaging practices are occurring that contribute to improved student learning. However, such practices often lack coherence, conflict with established procedures and are seemingly distracting or disconnected from ministry, board or school goals.

In the Waterloo Region District School Board (WRDSB), there has been an ongoing dialogue about systemic change to more effectively integrate technology to support learning. This requires thinking critically and creatively about using new information technologies to create worthwhile and workable educational futures, rather than relying on a “blind faith” in technology.

“Futures Forum” is one strategy to integrate technology at a classroom level while maintaining a “board-wide” perspective. The Futures Forum is an inquiry-focused, project-based, integrated approach to learning. It is focused on the development and implementation of an integrated grade 10 English, careers and civics course where students earn Ontario Ministry of Education credits.

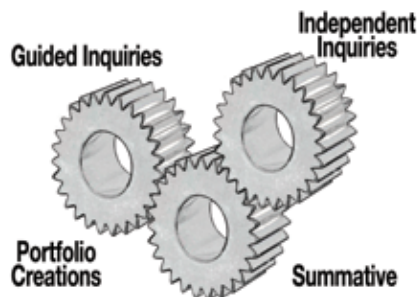
## Implementation

Students will commence earning credits through the Futures Forum program in February 2011. The collaborative implementation of the project commenced in April 2010, when seven of 16 secondary schools from across the board, represented by a teacher, vice principal lead and central staff, volunteered to participate in the development of the Futures Forum program.

The program development addresses different aspects of the “instructional core”—curriculum, teacher and student.

While the initial focus in developing the program begins with the curriculum, it extends to the other two aspects of the instructional core. The overall curriculum expectations in the grade 10 academic English, civics and careers curriculum policy documents are addressed through the following components:

1. *Guided Inquiries* – These involve opportunities for students across participating schools to use technology to interact and work together.
2. *Independent Inquiries* – These self-directed tasks provide students with opportunities to meet course expectations independently and tailor learning based upon their interests and readiness.
3. *Portfolios* – Portfolios allow students to engage in learning of interest to them and supports sharing with “authentic” audiences.
4. *Summative Project* – Students demonstrate mastery of civics, careers, and English expectations; independent inquiry, personally relevant learning and the use of technology as an effective collaborative and communication tool.



While there is an emphasis on the effective use of technology, the compelling considerations in developing the program include a clear focus on effective learning and the alignment of the instructional goals of the Ministry of Education, the school board, the school and the classroom. These goals primarily focus on high levels of achievement for all students and closing the achievement gap.

An important outcome of the project is to better understand and improve the capacity of the system as a learning organization. The metrics being considered to assess this goal include the perceptions of students and staff regarding the effectiveness of collaboration to change instructional practices (including structures, use of technology, instructional leadership, approaches to

shared learning and networks to promote sharing).

Work is underway to ensure that participating schools/classrooms have access to the hardware (i.e., various hand held devices) and applications used by students that complement learning. This includes support for teachers in helping students utilize these tools to facilitate learning that is more flexible, personalized and collaborative.

## Observations

The initial focus and motivation in the Futures Forum project was on the transformational potential of technology. The focus has shifted to the potential transformations associated with collaboration to improve instruction and help students demonstrate the skills, knowledge and attitudes required to meet curriculum expectations. The shift involves identifying digital tools to facilitate the development of desired skills, knowledge and attitudes

Observations such as, “Giving up the idea that the pace of change will slow down,” “The necessity of mobilizing social attractor’s such as moral purpose, quality relationships and quality knowledge” and “Coherence making is a never-ending proposition and is everyone’s responsibility,” resonate as the implementation of this project proceeds. Greater effort, particularly by staff at the board level, will be required to bring coherence, integration and a supportive context for schools to achieve improved student and educator learning. Work occurring through this project to enhance multi-level capacity for change will also be necessary to achieve the potential learning outcomes represented in the Futures Forum. ○

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*Mark Harper is superintendent of learning services with the Waterloo Region District School Board (<http://www.wrdsb.ca/>) located in southwestern Ontario. He was the recipient of the Ontario Public Supervisory Officers Association 2010 Distinguished Leadership Award.*

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# Green Initiatives

## Fostering Learning and Innovation

The Hamilton-Wentworth Catholic District School Board is implementing a rainwater harvesting system, wind turbines and solar panels to reduce their carbon footprint.

By Morris Hucal

In order to foster the concept of stewardship of creation and sustainable development, The Hamilton-Wentworth Catholic District School Board supports and encourages their employees, students and school communities to promote programs, practices and initiatives in the areas of environmental literacy, waste management, purchasing, food services, energy efficiency and conservation.

We have taken advantage of new Ministry of Education Energy Funding initiatives which have led to upgrades to lighting systems, improvements to the insulation in roofs, and the replacement of inefficient equipment in many of our schools and board offices. Moreover, we have hired an energy service provider (Trane Inc.) to conduct energy audits at various other facilities. These audits will identify additional major building components for repairs and upgrades in order to increase the energy efficiency of our schools.

Through a program called the Green Schools Pilot Initiative, Plant Controller David Morrissey and I applied for and received funding to install a rainwater harvesting system at Our Lady of Mount Carmel in Carlisle, Ontario. Manufactured by Green Turtle Technologies, the Reflo rainwater harvesting system will allow this rural school to collect and reuse water from the roof runoff to operate its toilets and urinals. Currently, potable water is trucked in from Hamilton to the school four times a week. Since 90 per cent of the school's water usage is flushed down toilets and urinals, we wanted to reduce the school's carbon footprint by installing the rainwater harvesting technology. Besides

saving money, it will serve as an educational tool for our students to learn about the importance of conserving water.

Through the Ministry of Education's renewable energy funding, we received funding to install six vertical axis wind turbines (3 kW) and two hybrid vertical axis wind turbines (0.4 kW) with solar panels. The turbines are being supplied by Brian Kennelly of K4 Green Tech (Daisyenergy.ca). The larger turbines will be installed at six of our Catholic high schools. Our board recently built a LEED certified elementary school (St. Matthew) and we are excited to add one of the hybrid turbines to go along with the solar technology that is also part of the school.

The other turbine will be placed at a new elementary school being built in the inner city of Hamilton - Holy Name of Jesus. Roy Drysdale (Plant Dept.) has played a major role with respect to the planning and installation process of these turbines. Energy created from the 3 kW turbines will go back onto the grid. Monitoring of the energy being created by the turbines will be available to all our staff and students via the Internet. Our main focus is to use the vertical axis turbines as an educational tool to support curriculum

links and connections to environmental education.

It is the link to learning that is really driving these energy initiatives in our board. For example, St. Mary Catholic Secondary School is currently offering a specialist high skills major (SHSM) program in energy. This is the first in our area and is a very relevant pathway for our students, especially as the Ontario Power Generation (OPG) and Ontario Hydro are in a situation where many of their employees are nearing retirement and newly trained employees will be needed.

St. Mary Catholic High School has been able to put up two 120 W solar panels as well as a 0.3 kW wind turbine donated by K4 Green Tech to support the energy SHSM. Under the direction of teacher Andy Hanta, these experimental devices will allow students to evaluate optimum conditions for use and the effects of various factors on energy production.

The power of these technologies will also be felt in many other departments throughout the school. For example, the math department will be able to use the data from the energy produced to graph relationships. Hanta also intends to coordinate the energy production and usage with the technology department in placement of solar panels and wind turbines for home and industrial applications.

We are excited about the possibilities that these new green initiatives will have, not only for our school board but for all students across the country. ○

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*Morris Hucal is a principal of programs for the HWCDSB. Hucal has been leading and supporting green pilot/energy initiatives for the board at various schools in the system.*



*A 300 watt (0.3 kW) vertical wind turbine, which is supporting the Energy Specialist High Skills Major course at St. Mary Catholic Secondary School.*

# Learning Differently Because Students Learn Differently

Holy Spirit Catholic School Division is engaging the 21st century learner by engaging teachers.

By Lorelie Lenaour and Christopher Smeaton

**H**oly Spirit Catholic School Division is determined to meet the needs of the 21st century learner. Through our AISI project entitled, “Engaging the 21st Century Learner,” we are fundamentally changing the way teachers deliver instruction. Our approach has been to focus first on our instructional leaders throughout the division.

We have developed a shared understanding that technology alone does not equal effective 21st century learning. As we examine and debate the merits and pitfalls of different models of learning, we become more precise and intentional in meeting the needs of all of our learners.

During our first year, Ian Jukes, presenting to system and school leaders through video conference, contrasted the learning styles of digital learners with the practices of traditional teaching. Our leaders reflected on how these preferred modes of learning impact the need for teachers to teach differently. With the understanding that our default teaching mode is that we teach the way we were taught, we are

committed to our AISI project motto: “Teaching differently because students learn differently.” Our professional development experiences are changing with the understanding that in order for teachers to teach differently, we need to experience learning differently, and thus our professional learning motto has become, “Learning differently because our students learn differently.”

Within our “Developing Technology Leadership Capacity” project, the Learning Leadership Team (LLT) consisting of principals, associate principals and central office administrators along with our school-based lead teachers, have been engaging in learning like 21st century learners. This has included data driven professional learning, attempting to differentiate content based on self-identified needs and working in smaller learning groups that facilitate more open discussion and deliberation about the ideas being explored. Social networking and online discussions have become an integral part of our LLT learning format through the use of the Moodle environment. Administrators have been involved in reflective blogging about the use of Web 2.0 technologies in the classroom, as well as online collaboration, idea sharing, brainstorming and discussion around a multitude of topics. At a recent LLT meeting, administrators engaged in a geo-caching activity with the learning goals of investigating effective instructional strategies, being physically active and collaborating while utilizing GPS technology. In addition, we are reviewing the teaching quality standards to be able to more fully identify high yield 21st century teaching skills.

Strategies incorporated into adult learning in our school division are, in fact, being incorporated into classroom practice. Teacher-created Moodle courses, classroom blogs and wikis and the immediate demand for students to borrow and use the GPS units are evidence of the quick turnaround time that we see in teachers wishing to incorporate effective and innovative practices into their classrooms. Response has

been positive from teachers creating classroom projects through our Engaging Our Students (EOS) project. The goal of EOS teacher created projects is to encourage and support innovation in teaching and learning in our schools.

Teachers are being challenged by Barrie Bennett and Carol Rolheiser’s “Beyond Monet” approach to examine and refine their “instructional repertoire” to include becoming “conscientiously skilled” in how and why instructional decisions are made. Ken Kay, president of the Partnership for 21st Century Skills, reminds us that our students need knowledge and skills that will prepare them to negotiate constant change and reinvent themselves for new situations. Our list of 21st century skills that we are attempting to address includes creativity and innovation, critical thinking, problem solving and inquiry, communication and collaboration, student self-directed learning and 21st century literacy skills. In Ken Kay’s words, “These skills are no longer “nice to have” but are “must have” and are essential for ALL students.” (Kay, 2010)

In Holy Spirit Catholic School Division, we are continuing to challenge ourselves to move away from traditional informational “sit and get” types of meetings and professional learning experiences. We are working towards experiencing “learning differently because our students learn differently.” The results are encouraging as we witness administrators, teachers and most importantly students fully engaged in new and different types of learning...21st century style! ○

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*Holy Spirit administrators involved in a geo-coaching activity that reviewed the teaching quality standards to be able to more fully identify high yield 21st century teaching skills.*

# By Each - For All

The importance of learning (and leading) by each - for all at Dufferin Peel Catholic District School Board.

**“The welfare of each is bound up in the welfare of all.”  
- Helen Keller**

All learners who enter our publicly-funded education systems do so at a point in their life narratives—narratives of living and learning which will be influenced and impacted by all experiences of and relationships within school. Similarly, learning leaders are continuously being shaped by the myriad influences upon them and, in turn, their own personal narratives. As learning leaders, we explore an added dimension actualized through our rapport as critical friends and the effects of this rapport on learning narratives.

As a school principal and district assistant superintendent, our team is committed to the concept of each being open to all possibilities in supporting learners and, along the way, celebrate learning narratives. In our reflections on our shared experiences, we have come to appreciate the importance of learning (and leading) “by each - for all,” so that our reflective inquiries provide meaning within and outside of our individual spheres of work and influence.

Our work settings intersect as we share responsibility for the school’s highly specialized class for students with an autism spectrum disorder and the dialogue about the class has informed our “school to district” and “district to school” inquiry. Recently, one student’s transition from this highly specialized setting to secondary school caused the school/district team to reflect on how transition processes may/may not be meeting unique transition needs and how these needs/processes may inform (more broadly) at the district level. We reflected:

- What are the living and learning narratives (to date) of all involved in this transition?
- How might we, through our school/district team, learn more about the student’s story? Is it appropriate that we do so? Why; why not?
- In what ways might the support of the broader community connect and intersect to support learning and well being for all?
- In reflecting on school/system supports, how might developing the notion of the importance of the “by each – for all” approach sustain and enliven shared discernment and interventions?

The perspective of various stakeholders including student, family, staff, trustee and the district/school team supported this learner’s learning narrative and impacted district response in planning future individualized student transitions.

Dufferin-Peel Catholic District School Board’s Associate Director, Ralph Borrelli, identifies with the concept of a personal learning narrative as connecting the individual student to the school, community, district and greater society. His personal story, that

By Shirley Kendrick and Max Vecchiarino

of an Italian immigrant entering a 1960s metropolitan Canadian classroom for the first time at age 12, only to find that he would be “left sitting at the back of the class, not understanding a word of English, for an entire year.” Borrelli reminds us of the importance of questioning how individual schools and districts respond to the lived learning narratives of each and every student. Further, how do all system leaders draw upon and build on personal narratives to support all learners in living their learning with dignity and respect?

Each of us requires the support of all in order to be a meaningful witness to each and every learning narrative, so as to co-construct an authentic “commitment to improved student learning, achievement and overall well-being for all learners.” (Dufferin-Peel Catholic Board Learning Plan, October, 2010, p.4) Associate Director Borrelli posts a possible approach, represented graphically as Figure 1, (R. Borrelli, personal communication, July 5, 2010) suggesting that responses always be directed to and driven by the very real needs of the individual, undertaken in the context of aligned systemic priorities. In reflecting on intentional and purposeful relationships, a keen awareness of all learning narratives enables individual educators and critical friends, to be open to all that all have to offer.

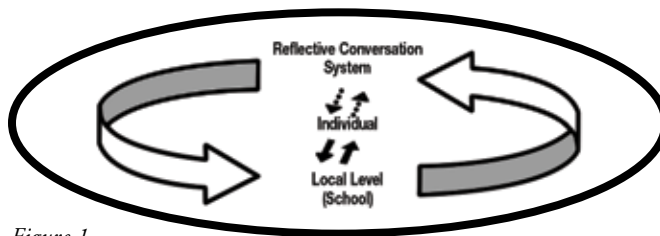


Figure 1

Through our “by each – for all” approach, we continue ongoing conversations to promote our openness to possibilities (Vecchiarino, 2006, pp. 96-97.) Ultimately, it’s all about authentic relationships for and with students and other members of the community. The conversations, evidenced at all levels, inform and enrich our thinking, individual and shared processes and, with hope, our system as a whole. ○

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## Foundational principles of instructional coaching at Limestone Professional Learning

Limestone Professional Learning offered an Instructional Coaching Institute with Dr. Jim Knight on October 14 and 15 in Kingston, Ontario. Participants from across Ontario learned about the foundational principles of instructional coaching. The institute provided a foundation upon which a solid, effective instructional coaching program is built within the context of the broader professional learning facilitated by schools and districts. Knight is a research associate at the University of Kansas Center for Research on Learning. He has spent more than a decade studying instructional coaching and has written several books and many articles on the topic. Knight has presented and consulted in more than 35 states, most Canadian provinces and in Japan. He has a Ph.D. in Education and has won several university teaching, innovation, and service awards. Participants will have the opportunity for further learning with Knight and networking with colleagues on April 18 and 19.



Instructional Coaching Institute.

This event was organized by the Limestone DSB and sponsored by Ontario ASCD, Eastern Ontario Staff Development Network, Ontario Principals' Council, OPSOA East, and the Ottawa Office of the Ministry of Education and was attended by professional developers such as school administrators, school leaders, instructional coaches, supervisory officers, system professional learning consultants and teachers and other educational professionals who are interested in learning about how to accelerate professional learning in schools and districts.



Dr. Jim Knight, research associate at the University of Kansas Center for Research on Learning, with Superintendent of Education, LDSB, Norah Marsh.

### New School (Education) Act to be tabled in spring 2011

Alberta has experienced two years of initiatives regarding the future of education in our province. There has been community and sector consultation to determine the Competencies of an Educated Albertan. It has included *Setting the Direction for the Future of Special Education in Alberta*, *SpeakOut: The Alberta Student Engagement Initiative* to engage the students we serve and the community consultation for *Inspiring Education: A Dialogue with Albertans*. They are coming together in a new act that should be tabled in the spring of 2011.

Renamed the *Education Act*, the legislation will be enabling and provide a framework to power a complete policy and regulation review. The latter is expected to take a year with proclamation expected in the fall of 2012.

### Legal Expense Insurance

The College of Alberta School Superintendents has been engaged in expanding member services. We have engaged Aon Reed Stenhouse to provide Legal Expense Insurance to our members. Aon has partnered with DAS Canada, the leading Legal Expenses Insurance provider across the globe, to provide Legal Expense Insurance to our clients. This is available to other professional organizations by contacting Chris.Hamel@aon.ca.

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**Fort Erie schools get “Face” time with social media expert**

Students and their families in Fort Erie received a crash course in social media safety on Tuesday, October 26, when recognized Facebook authority Chris Vollum presented his “Facebook 101” workshop at Fort Erie Secondary School (FESS). The presentation, delivered to more than one hundred thousand students across Ontario, is designed to teach young people how to effectively protect their privacy and promote positive experiences using Facebook and social media.

“Social media has become an increasingly popular way for students to communicate, collaborate and share information with one another,” says Mike Cockburn, FESS principal. “This workshop will empower students and parents to better protect their personal information and make informed decisions when using Facebook and Twitter.”

On Tuesday morning, Vollum presented his “Facebook 101” workshop to the students of FESS and the grade seven and eight students of Fort Erie, General Vanier, Rose Seaton and Garrison Road Public Schools in two separate sessions. In the evening, parents and community members were able to participate in the workshop. Following the presentation, parents got to ask questions during a panel discussion featuring Vollum and DSBN officials.

“People 35 and older make up the largest growing demographic on Facebook. The evening session will provide parents with support, tools and tips to effectively manage their own Facebook presence and become more aware of their children’s online activities,” says Norbert Kuebeck, FESS vice-principal.

Vollum is a parent, who became interested in social media when his daughter joined Facebook. As Chris researched Facebook’s philosophy toward both user privacy and the handling of user-posted content, he was shocked at the level of wide-open default security and privacy settings that the social networking site exhibited. Chris established “Facebook 101” to educate parents, teachers, administrators and students on how to engage with Facebook in a secure and positive fashion.

**OPSOA and OCSOA mentoring new appointees**

Mentoring programs for newly appointed supervisory officers in Ontario are offering positive support to new staff in OPSOA and OCSOA. The programs take advantage of the experience and expertise of veteran administrators and help new appointees with the challenges of their roles.

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### EICS' Public Portal live at end of November

Real-time, current information about your child's education at your fingertips—when parents want it! That's what PowerSchool Public Portal starting providing when it went live at the end of November. Public Portal is located at <https://powerschool.eics.ab.ca/public>. Junior high and secondary students and their parents will have real-time access to information such as:

- Current grades;
- Assignment and grade history;
- Attendance history; and
- Teacher comments

A unique feature of Public Portal will allow parents to configure regular email updates containing the grades and/or attendance of their child. Other advantages of Public Portal, which is replacing the Students Achieve program and Parent Portal (used at ABJ last year) include:

- Higher security – To ensure a secure transmission of data the new portal is being secured by an SSL certificate, similar to that in use by many banks and online vendors; and
- Single sign on – Parents who have more than one child enrolled in EICS will be able view requested information at the same time, even if the children attend different schools.

For more information please view the Parents and Students area of <http://www.eics.ab.ca>.

### OCSOA Director of Education retiring

Michael O'Keefe, director of education for the Simcoe Muskoka Catholic District School Board, has announced his retirement effective January 31, 2011. O'Keefe will be assuming the role of coordinator of OCSOA's Mentoring and Coaching program for new Catholic directors of education effective February 1, 2011. Brian Beal, presently the executive superintendent of program and services for the board, has been selected as the incoming director of education.

### Full-day kindergarten at Niagara Catholic District Schools

The Niagara Catholic District School Board is very excited to be providing 17 full-day kindergarten classes for four and five year old students in various schools in the board. Full-day kindergarten for four and five year olds is part of the Ontario Ministry of Education's plan to support early learning and child development. By 2015 all schools in Ontario will have fully implemented full-day kindergarten. Information can be found at [www.ontario.ca/childergarten](http://www.ontario.ca/childergarten).

In 2004, Niagara Catholic began implementing full-day kindergarten in schools and is now very pleased to be providing full-day learning with teachers and early childhood educators, working together to support children in a play-based educational program, supported by the Ontario Ministry of Education and the Niagara Catholic District School Board. The program has been welcomed by parents, principals, teachers and early childhood educators in the board, with students benefiting from programs, supporting the development of literacy and numeracy skills in all early learners, and providing a solid foundation for future learning, with a smooth transition to grade one.



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**OCSSOA heading to Boston**

In a model of effective tri-level leadership, OCSSOA has organized a contingent of 22 directors, supervisory officers, principals and ministry of education officials who will be attending the International Leadership Association's Conference in Boston from Oct. 27-30, 2010. The 12th Annual ILA Global Conference will forge new connections between leadership theory and practice and provide unparalleled learning and networking opportunities through 200-plus state-of-the-art presentations, panel discussions, workshops, case studies, and roundtable discussions.

**CASA EXL award recipient**

Director of Education John Mackle, in the Peterborough Victoria Northumberland Clarington Catholic District School Board, was honoured on Thursday, April 22, 2010, by the Canadian Association of School Administrators (CASA) with its 2010 EXL award. The EXL award was instituted in 2002 to recognize excellence among members of senior school system administration. Active members of CASA who demonstrate outstanding ability and leadership are nominated for this award by their provincial affiliate. The award is sponsored by Xerox Canada Ltd. and CASA. Congratulations to John!

**Special needs under review in Quebec**

On October 25, 2010, the newly appointed Minister of Education, Line Beauchamp, held a one-day summit to reflect on the future of special needs education. 100 individuals representing teachers, administrators, parents and community groups gathered in Quebec City to discuss what is working well in Quebec schools as well as the challenges currently being faced by the education sector. Current statistics indicate that 61 per cent of students with special needs are included in community schools, a figure that has teacher unions concerned about the increasing numbers of students who required specialized supports. The government will study several proposals over the next few months which may focus on the role of parents and community, guidelines for successful integration and improving the success rates for students with special needs.

**CASS professional learning**

Over the past three years, CASS has had a turnover of more than 30 per cent of superintendents of schools. To address the needs of incoming superintendents, a CASS Induction program has been developed. Part of the program was a CASS Mentorship Training program in September, an induction handbook and ongoing learning opportunities. It is a combination of one-on-one mentorship and cohort discussions. The program is competency-based with the foundations of the *CASS Framework for School System Success* and *CASS Practice Standard* with an emphasis on Dimension 8: Chief Executive and Chief Education Officer Leadership.

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