Advisory

The Council of Ontario Directors of Education (CODE) is an advisory and consultative organization composed of the CEOs of each of the 72 District School Boards in Ontario; Public, Catholic and French Language.

Effective Use of Technology

What do I need to know about effective use of technology to support student learning?

In a recent survey, CISCO announced that "more than ¾ of top educational officials around the world believe technology can play a major role in how students learn and how teachers educate." [See Web Resources] Preparing students to compete in a global economy and expanding their ability to use technology wisely, competently, and effectively is now a major requirement for school boards. Changes in technology are occurring so rapidly and within such a range of contexts that it is very difficult for educational leaders to keep abreast of the effective use of technology and its broad scope to impact on student learning and teacher instruction. The Partnership for 21st Century Skills, 2006 [Web Resources] maintains that there is a gap between what students learn in school and the knowledge and skills they need for their future. As chief education officers, directors have a responsibility and a mandate to create a dynamic school system that uses technology to build engaging, media-rich learning experiences and enhance student-centred instruction.

What does the Ministry of Education stipulate about the effective use of technology?

In the summer of 2010, the Ministry conducted a Sector Snapshot of all 72 boards relating to current practices and challenges with digital learning and teaching. In February 2011, the Ministry used this information to identify six emerging themes:

1. Vision
2. Digital Citizenship and Literacies
3. Innovative Teaching Practice
4. Student Engagement, Culture and Achievement
5. Learning Environments
6. Parent and Community Engagement

The *Education Act* charges school boards with the responsibility of providing programs and instruction for students according to section 169.1. Schools have a requirement to integrate and use technology to further student learning, influence teacher instruction and develop the technical skills that students can use in their daily life and future careers. There are a number of curriculum documents which reference technology as a tool for instruction and a resource that impacts a student's ability to access, analyze and use digital information.

The Ministry provides e-Learning Ontario which is an online resource providing elementary and secondary teachers and learners with flexibility to reach their goals. Through e-Learning Ontario, the Ministry offers participating school boards ways to teach Ontario's curriculum and help their students succeed. School boards retain full responsibility for the delivery of courses and resources at the local level. E-Learning Ontario provides leadership, software tools and guiding policies. The major components of Ontario's e-Learning strategy can be found at http://www.edu.gov.on.ca/elearning/strategy.html.

Board Requirements:

Policies and Procedures

Boards are required to develop and review their policies/procedures for acceptable use of the Internet and should have an administrative procedure about the use of social media for staff. The College of Teachers has released a professionally advisory: Use of Electronic Communication and Social Media. [Web Resources]

Privacy of Information

Boards are required to adhere to privacy and information legislation and have an assigned privacy of information coordinator. As more data is stored and shared electronically, there is a need for focused training of all staff members about privacy issues and retention of electronic records.

Technology Plan

Each board needs to have an approved technology plan which guides, supports and directs the use of technology for the 21st century. These plans are the cornerstone of student learning focussing on socially-active acquisition of critical thinking, problem solving, and communication and collaboration skills. Components of a board technology plan could include: funding sources, links to board improvement plans, governance and policies, infrastructure, leadership development, capacity-building, student devices, teacher devices, digital resources, library transformations, digital citizenship, equity of resources, social media, pilot projects, and pedagogy progression. A sample technology plan that outlines many of these components is available by visiting the website for the Province of New Brunswick's plan, *Creating a 21st Century Learning Model of Public Education. Three-Year Plan. 2010-2013*. [Web Resources]

Supervisory Officers are required to:

Within the legislation, there are no specific requirements for supervisory officers in regard to technology and the use of technology in classrooms. However, in the broader context of the legislation, supervisory officers have the ultimate responsibility for implementing programs according to Ministry of Education legislation, policy and program memoranda, and curriculum policy documents. One of the essential components of these programs is the effective use of technology as a 21st century skill. A director should be knowledgeable about transient technology and Ministry priorities and expectations. Most importantly, the director is a role model for effective use of technology and demonstrates life-long learning. The director is a spokesperson to the board, teachers, parents, students and community, and an advocate who values technology, embraces it and promotes it. Leadership in technology is not only about what is required, but also about what a supervisory officer/director envisions, values and practices.

What are the key components for 21st century learning?

The key component that distinguishes learning in the 21st century is the movement away from passive acquisition of knowledge to socially-active learning. Higher-order skills include: critical thinking, problem solving, communication, and collaboration. The focus is not on technology, but rather on pedagogy that is enhanced through the use of technology and other active learning strategies which include:

Blended Learning

Blended learning mixes different learning environments, online and face-to-face. In a blended learning environment, teachers and students benefit from rich digital resources to complement traditional instructional practices.

Cloud Computing

Cloud storage involves storage of data via the Internet at a location away from the user's own computer. The benefits are that the data can be accessed from anywhere on any computer. Cloud applications are run from within an Internet browser and do not require the software application to be loaded on each computer.

Learning Management System (LMS)

A Learning Management System is a web-based application that provides a platform for teachers to create, share, and instruct students. Features include online discussion threads, multimedia objects, online assessments, and storage of resources. The current Ministry licensed LMS is called Desire2Learn, or D2L. Other popular systems include BlackBoard Learn, and a free open source system called Moodle.

E-Learning

Traditionally, e-Learning is associated with learning where the student is physically separated from the teacher and communication takes place completely over the Internet. However, 21st century learning is much more than e-Learning. E-Learning Ontario provides school board staff members with a learning management system for the delivery of online and blended learning courses. A key component of the free resources is the Ontario Educational Resource Bank (OERB). The OERB contains thousands of bilingual educational resources. Funding for courses is governed by 2010: SB8 Enrolment Reporting for e-Learning Courses. [Web Resources]

Social Media

Social media is the use of web-based technologies for interactive communications. There is an increasing use of social media by students and staff. The most popular social network site used by students is Facebook. Staff are using sites such as: Facebook, Twitter, Linkedin and Ning as a method of interacting with parents and the community.

What are the key principles to be examined when reviewing a board's technology plan and progress towards effective use of technology and learning?

1. Adding value
2. A pedagogical focus
3. Quality
4. Sustainability
5. Access
6. Scalability
7. Sharing
8. Choice
9. Continuous, lifelong learning
10. Customization

[These principles are outlined in greater detail on the Contact North website: http://www.elearnnetwork.ca]

What are the organizational priorities for other significant educational partners?

Learning and teaching for the 21st century is a shared responsibility for a number of educational organizations and this focus is woven through current policies and priorities for these organizations. The organizations are:

Council of Ministers of Education Canada (CMEC)

At their February 2011 meeting, the council discussed how provinces and territories are focussing on 21st century skills including: critical thinking, information literacy, collaborative learning, and new modes of civic engagement.

Canadian School Boards Association (CSBA)

The 2011 priorities include: Supporting the creation of policy to promote the integration of emerging technologies into teaching and learning in Canadian classrooms. The Association's 21st century learning initiative is "Canadian Students as Global Citizens".

Ontario Public School Boards' Association (OPSBA)

In 2009 the Ontario Public School Boards' Association (OPSBA) released a discussion paper entitled: "What If? Technology in the 21st Century Classroom". The discussion paper is intended to be part of developing a provincial vision and strategy for connected classrooms in Ontario. [Web Resources]

Canadian Education Association (CEA)

CEA is a national voice for change with a research-based transformation agenda. Several strategies focus on the use of technology to increase student engagement and change instructional practice.

Council of Ontario Directors of Education (CODE)

CODE is actively involved in supporting the six emerging themes by the Ministry of Education and will be furthering action in these areas through a number of approved projects. Further, CODE has identified the effective use of technology as an important area for supervisory officers' professional development, leadership and dialogue.

If as a Supervisory Officer, I require more information, what should I do?

- Contact boards that are implementing board-approved technology plans.
- Review the wide range of materials and resources on the web.
- Upgrade and expand skill levels in the use of technology.
- Build a network of technology leaders and become involved in CODE activities and projects to further the six Ministry themes (February 2011).