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BEYOND COURSE CONTENT: TEACHING CORE SKILLS ONLINE

Best Practices in the Use of Technology to Integrate Core Skills into Course Content

Students learn most effectively by moving between the abstract areas of general principles and content, and the concrete in which knowledge is applied and skills are developed. Among the skills that can be developed through this interchange of theory and practice are what have been called 21st century skills, soft skills, and essential skills. We refer to them as core skills, by which we mean the skills that are the foundation of effective workplace performance, personal interaction, and lifelong learning, such as communication, critical thinking, and information literacy.

To be effectively taught, these skills are not separate from the content of the programs in which students are enrolled; rather they are embedded within each field of study.

The use of technologies for learning, whether in fully online or blended courses or in classroom- based applications, offers particularly effective opportunities for incorporating core skills into content learning.

Our purpose is to offer examples of the use of online technologies for the teaching and learning of core skills, using the Contact North | Contact Nord Pockets of Innovation series to illustrate how core skills have been integrated into online course content, delivery, and/or assessment.

CORE SKILLS

The core skills are seen as what college and university graduates need in order to work in businesses that are part of the world economy, succeed in knowledge-based industries, adapt to and take advantage of evolving circumstances, and work effectively in geographically and culturally diverse workplaces. Among the skills that are most often cited are:

- Teamwork and collaboration;
- Critical thinking and problem-solving;
- Independent and continuous learning;
- Communications;
- Innovation and initiative;
- Information and Media Literacy;
- Intercultural skills.

EXAMPLES OF THE INTEGRATION OF CORE SKILLS INTO ONLINE LEARNING

The examples from colleges and universities in Ontario listed below are summaries of the longer descriptions found in the Pockets of Innovation descriptions on the Ontario Online Learning Portal.

The complete description of each Pocket of Innovation provides additional context and commentary on the benefits and challenges of the

various approaches being utilized in Ontario to foster learning

outcomes related to Core Competencies for the 21st Century identified by the Conference Board of Canada. Links are provided for each example.

TEAMWORK AND COLLABORATION

In Digital Education Strategies at the G. Raymond Chang School of Continuing Education at Ryerson University, a wide variety of teaching and learning tools were developed, one of which is Lake Devo. In this highly adaptable online role playing environment, users can create their own scenes and characters and interact in real time, using text communications. The live role play is compiled into a 'movie,' edited by the students, and posted for general viewing and analysis by the role-play team.

The Bachelor of Arts (Adult Education and Digital Technologies) Program to be launched at the University of Ontario Institute of Technology combines independent and collaborative learning by offering weekly modules incorporating 60 minutes of video clips and questions for independent viewing and reflection with 60 minutes of synchronous discussions, with groups of students working through the problems and issues raised by the videos.

CRITICAL THINKING AND PROBLEM-SOLVING

Working with partners in education and emergency services, Centennial College developed a pilot online emergency preparedness course for students in nursing, medicine, paramedicine, police, media, and health administration. In real-time online games, students are divided into teams to handle security, safety, health, and psychosocial issues as they respond to a disaster by discussing and choosing responses to evolving crises. The situations do not have right or wrong answers, but require problem solving and teamwork to formulate responses.

At Loyalist College, an online simulation of a border crossing allows students to take on the roles of border security personnel, question travellers, examine their documents, and even search their cars for contraband. Each traveller presents unique challenges to student/Border Services Officer, requiring observational skills and immediate responses to situations. The role plays takes place in class time, using voice communications, and were then discussed by the whole class.

The use of a peer assessment tool, peerScholar, in a first year psychology course at the University of Toronto involves the students in providing feedback on short papers by other students, as well as receiving feedback on their own ideas and arguments. Students' critical thinking is enhanced by providing comments on strengths and areas for improvement in the papers of others, assessing and selectively applying the comments from peers on their own work, and performing a critical assessment of the benefits of the process for their work.

INDEPENDENT AND CONTINUOUS LEARNING

In the Faculty of Music at Wilfrid Laurier University, Voice majors use e-portfolios extensively, not only for submitting assignments and receiving feedback from the professor, but also for reflections on progress and challenges, successful techniques, detailed practice logs, lists of repertoire, critical thinking and writing – all habits and skills that support reflective and independent learning that will serve them well throughout their careers.

Students on co-operative education work terms at the University of Waterloo take online courses to support the development of workplace skills such as communications, conflict resolution, teamwork, and project management. The courses in the Waterloo Professional Development Program are structured so that the lectures, theories, and best practices are provided online, while the active learning is through practice, participation, and reflection in the workplace. The content of the courses and the practice of active learning in the workplace support lifelong learning habits for the students.

As part of the Scholar Practitioner Program, which leads to a BSc Nursing from Nipissing University, students spend the majority of their time in practice-based settings. Each student develops an individualized learning plan and uses an e-portfolio to record learning processes and resources, including not only health related content but also skills in inquiry-based learning, interdisciplinary practice, and knowledge networking. The program graduates will be the next generation of leaders, self-directed learners who are open to thinking differently.

COMMUNICATIONS

All students at Mohawk College take at least one Communications course, often adapted to fit their specific field of study. For example, in academic year 2012-2013, students in the Manufacturing Engineering Technician - Automation program are using iPads as part of a pilot study, in which most of the course materials and apps used by professionals in their field are on the tablet. In their Communications course, students will use the iPad as a research tool to help with their writing. They will find articles to review to improve their critical thinking, writing, and revision skills.

George Brown College has been conducting action research projects to extend classroom language learning by designing and testing mobile-assisted language learning initiatives. One project integrates eight mobile language learning tasks that included audio dictionaries, idiom definitions, scavenger hunts requiring communication with people on the street, on-the-go podcasts, and learning reflections posted to voice-based blogs.

INNOVATION AND INITIATIVE

As working professionals, students in the Technology Innovation Management graduate program at Carleton University were experiencing difficulties in attending classes regularly and working collaboratively on

projects. To address this, they worked with Carleton faculty and staff to develop their own innovative solution to the problem, collaborating online to create a powerful tool for online learning. Students analyzed their own needs as learners and worked together to shape this knowledge into a new product called BigBlueButton, an open source web conferencing solution that is now used for online classrooms, presentations, collaborations, text chatting, and other educational, administrative, and communication purposes at educational institutions around the world.

The Digital Media Zone at Ryerson University provides a creative, dynamic learning environment and workplace for young digital entrepreneurs, where they innovate, collaborate, and market their services. The Zone provides the framework for their learning and business activity, such as open flexible workspace, equipment, utilities, business plan counselling, mentoring, workshops, networks, and industry showcases at no cost to the user. The entrepreneurs access the resources and the mentoring according to their needs, as they move their ideas from prototypes or research to a digital business product or service.

INFORMATION AND MEDIA LITERACY

At Durham College, a course in Social Media and Society looks at the impact, flexibility, and applications of social media in business, government, education, and the economy. Students are engaged in exploring, analyzing, and creating materials – learning by being immersed in the world of social media. The resources and assignments involve social networks, photo and video sharing applications, podcasting, blogs, Wikis and virtual worlds. The course has been adapted as a required course for all business students.

The Queen's University course in Digital Media Theory and Trends is open to the public and students from other universities interested in learning about clear, effective, and professional communications online and the design of digital media texts. The fully online course integrates webinars, blog posts, threaded discussions, Facebook, YouTube, Twitter, and other online tools and apps as sources of learning, analysis, and communications.

INTERCULTURAL SKILLS

In the Department of Geography at York University, an online course on Global Environmental Change is being offered to students at York and refugee students on the Thai/Burma border. The students work on intercultural joint assignments, collaborating, negotiating, and incorporating each other's perspectives. Through this interchange, they learn about the international issues of climate change, as well as the difficulties and benefits of intercultural communication in addressing them.

At the University of Toronto, an online program has been developed to help internationally trained graduates of medical programs better understand the cultural context and patient-centred care offered in Canada. Starting from video vignettes that offer choices of responses to

cases, students are given feedback on their choices, reflection exercises, commentaries on case interpretation, and links to resources. The cases presented have no 'right' answer but stress ethical problems, culture, and communications.

MATCHING CONTENT AND SKILLS

The new pedagogy highlights the idea that content is the means to an end, with this end being the development of core skills within the relevant field of study. As it is now impossible to teach all of the content in any field, with much of it at risk of being out of date in a few years, the core skills provide students with strategies for keeping current, finding essential information, communicating, functioning effectively, and collaborating in diverse workplaces.

The development of these skills requires practice, supplemented by feedback, in a carefully constructed series of steps towards increasing competence until mastery is achieved. The technological tools and applications inherent in online learning provide a particularly supportive environment for the cycle of practice and feedback necessary for skills development. As well, many of the core skills are directly related to capacities for research, organization, and communication and the methods used in online learning replicate what graduates will need in their future work places in a wired world.

The examples provided are illustrations of how college and university professors in Ontario have taken on the challenge of teaching and assessing core skills online. Some of the questions you might ask yourself as you look at the possibilities of integrating core skills in your courses are:

- Which of the core skills could be most effectively highlighted in your courses?
- How might students develop and practice these skills, particularly using online learning?
- How might you assess students to take account of these skills?

Many colleges and universities are looking to more formally integrate institution-wide learning outcomes that stress the need for students to acquire skills beyond the curriculum. For example, the University of Guelph, recently adopted five learning outcomes for all its degree programs – critical and creative thinking, literacy, global understanding, communication, and professional and ethical behaviour. The Government of Ontario is also encouraging colleges and universities to identify learning objectives that capture the broader learning of students and prepare them for the workplace and international competition.

Online learning and educational technologies offer an enhanced opportunity for the integration of core skills into the teaching of knowledge and content, providing an environment that supports learning, practice, and mastery of skills for lifelong learning and career success.