

Developing Autonomous Learners – Degree programs in education and digital technologies at the University of Ontario Institute of Technology

Opportunity

Within the EI (Education Informatics) Lab in the Faculty of Education at the University of Ontario Institute of Technology (UOIT), the professors share a vision of the need to move from a content-centred and teacher-directed design for education to a process-centred and learner-driven approach. Digital technologies applied to learning are central to this shift.

Degree programs have been set up in education and digital technologies using technology-enabled synchronous learning to develop students' capacities as autonomous learners who take responsibility for the content and direction of their learning and to create a sense of belonging and community.



UNIVERSITY OF ONTARIO
INSTITUTE OF TECHNOLOGY

Innovation

Master Degree Programs: UOIT offers both a Master of Arts (Education and Digital Technologies) degree and a Master of Education (Education and Digital Technologies) degree.

For the MA, the students complete a thesis, while for the MEd, they submit a project or a digital portfolio. All the courses are infused with digital technologies as both programs are offered entirely online using Adobe Connect software for weekly live web conferencing meetings, the learning management system Web CT for sharing of documents and a dedicated e-mail system. For blogs and discussion groups, systems such as Knowledge Forum and Mediawiki are used as offering easier functionality than WebCT. Wikis and podcasts are also being introduced in some courses, as is social media for discussion and idea sharing. Adobe Connect is accessible through PCs and mobile devices.

The course Learning with Technology, with Professor Roland van Oostveen, is structured for maximum student autonomy and collaborative learning. The weekly, synchronous web conference provides students with the same 'host' capacities on Adobe Connect as the professor to establish a community of learners; for example, all

students are visible through their web cams and on screen at all times during the large group sessions and able to text and control images. The 12-week course features structured problem-based learning centred around four themes: the computer interface; processing of digital information; computer-mediated communications; and knowledge creation considerations. Each of the four themes is addressed for three weeks during the course:

- In the first week, the link of the theme to learning with technology is outlined with videos, text, and discussion. The students create small groups within which they outline a problem related to the theme that they will address over the three weeks. Problems have included the environmental impact of technology and how game interaction impacts learning.
- In the second week, the student groups explore the problem they have identified, the knowledge and resources they need to address it, and how they might bring it to a conclusion. The groups meet in online breakout rooms, using Adobe Connect and other technologies, such as Google Docs, to work on documents, link to resources, and discuss in real time their approach to the problem. All the students then come together to share their discussions and benefit from the insights and suggestions of others in the class.
- The third week class starts with a short presentation by each group of the process of problem identification and refinement, investigation, and solution in a format of the students' choice. The students then discuss common ground, shared learnings, and work toward a synthesis of their findings.

Between classes, students use the capacities within the learning management system and social media to communicate and collaborate on their projects. Final marks in the course are based 50% on course participation, with the other 50% for a final paper, a review of another student's paper, and a response to the critique.

Bachelor Degree Program: The UOIT Faculty of Education is launching a Bachelor of Arts (Adult Education and Digital Technologies) program to meet the growing professional development needs in business, government, and organizations. During the first two years that the program is offered, graduates of relevant three-year college diploma programs in such areas as Business can apply, and students start in year 3 of the four year bachelor degree. In 2014, recent high school graduates will be eligible to apply for year 1 of the four-year honours program.

The program is being structured to reach potential students anywhere in the world in an online format that combines synchronous and asynchronous components available through laptops, smart phones, and tablets. For each of 12 weekly modules, each course will offer:

- 60 minutes of video clips with lecture information and vignettes available through YouTube and iTunesU, supplemented with questions to guide analysis of the clips at the beginning and others to encourage a synthesis after viewing is completed. The student does this viewing and reflection on a device of their choosing.
- 60 minutes of synchronous group activities and discussions using Adobe Connect software for web-based videoconferencing. With a Teaching Assistant guiding groups of 30 students, they will work through the problems and issues raised by the videos and the related questions.
- 60 minutes of independent work online each week, using discussion forums, wikis, Google docs, Twitter, Skype, and other connective and social media. This may be asynchronous or synchronous, depending on how the student work groups have chosen to work together to prepare their responses to the problems highlighted in the videos and tutorials.

Outcomes and Benefits

Master Degree Programs: Professor van Oostveen describes the course as “emancipation learning” in that students develop their own problems, their own ways of researching, presenting, and resolving them. Students work within a learning environment that supports their perspectives, enhancing student motivation and engagement and the relevance of the learning. The students take full advantage of the online multimedia environment as they multitask through talking, texting, looking at visuals, and adding links to resources simultaneously.

Bachelor Degree Program: In the first courses that have been offered in the program, the students have adopted and extended the collaborative learning as they have used Adobe Connect to discuss the problems as they watched the videos, originally intended for individual study. They develop their own communities of learners as many of the technologies that facilitate independent learning are used for real-time online interaction. They are creating their own content, determining their own directions and deliberations, becoming more autonomous learners.

The courses can be adapted for international learners by adding tutorials that are convenient within their time zones and building learner groups in these temporal regions.

Challenges and Enhancements

Some students have an orientation toward courses in which the professor provides the content and so are uncomfortable or dissatisfied with the structure of the course in which they have control and autonomy. The diffusion of innovation is also challenging as some professors are also uncertain about this approach to learning and, on an institutional level, issues include the course evaluation form which does not reflect the structure of an online problem-based learning course.

The fear of change is common for students, faculty, and institutions and the move to autonomous learning needs to be approached like any other change process in an organization. There will always be resistors but gradual progress is possible.

Potential

The broader potential for these courses is in demonstrating the creation of an online collaborative learning space and the pedagogical move from professorial authority to the creation of a community of learners. Professor Francois Desjardins suggests that Ontario post-secondary institutions should collaborate on bringing about this culture change. As education moves toward online learning and student reality becomes increasingly digital, institutions should focus on the development of autonomous learners and the adoption of pedagogies that are intrinsic to the digital age. A move towards more autonomous, technology-enabled learning could set Ontario post-secondary institutions apart from others in the world. Funding models would have to be changed to end the inter-institutional competition before any meaningful collaboration would be possible.

UOIT was established as a laptop university; senior management is now exploring the definition of a post-laptop university, incorporating such advances as the Cloud, mobile devices, and the growth of online learning.

Professor van Oostveen would like to talk with colleagues about supporting learning through technology without having technology become overwhelming. He is particularly interested in mobile applications and the one click access that apps provide to resources for just-in-time learning. He is encouraged by the UOIT move to a more technology-enabled university through supporting blogs and wikis that are outside of the LMS and not linked to laptops.

Professors Desjardins and van Oostveen are very willing to share their model of online pedagogy and to discuss the degree programs in education and digital media and their instructional approaches.

For Further Information

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