

ONTARIO NEEDS TO TACKLE FIVE MAJOR SOCIAL AND PEDAGOGICAL CHALLENGES IN ONLINE LEARNING

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As the new academic year starts, let's continue as a sector to boldly tackle the following five major social and pedagogical challenges in online learning in Ontario.

MAJOR CHALLENGE # 1: IMPROVING COMPLETION RATES FOR INDIGENOUS LEARNERS

The fastest growing population in Canada is Indigenous peoples. College completion rates for Indigenous and non-Indigenous learners are now equal at 23%, while Indigenous learners do slightly better in completing apprenticeships (12% versus 11%). However, for university completion, Indigenous learners are significantly below non-Indigenous learners (11% versus 29%)¹. Providing online support services, such as flexible learning, peer support, mentoring and coaching, could make a real difference in closing this gap in completion rates.

There is a growing consensus amongst faculty, instructors, academic administrators, researchers and professionals in the area of online learning that:

- A blended approach, which combines online and face-to-face learning, is the most effective delivery format for Indigenous learners.
- A navigator or elder, knowledgeable, not just about the content of the program of study but about the way in which the program works, can make a significant difference to outcomes, especially if they use learning circles to engage learners.
- Learners need help in ensuring they can fully use online learning technologies before they start to study – digital literacy is a real issue, as is access for some to quality digital technologies and bandwidth.
- It is important to engage the learner as a person with experience and to connect to the culture of the Indigenous learner's community.
- Online learning is an essential, not just a “nice to have” component. It provides flexibility, anytime access and helps “level the playing field”.

Additional Resources

- [What I learned from the ICDE World Conference on Online Learning](#)

¹ See <https://www.collegesinstitutes.ca/policyfocus/indigenous-learners/>

- [Using Open Education at Cape Breton University, Nova Scotia, Canada, to Engage with The Truth and Reconciliation Commission's Call to Support Healing, Dialogue, and Learning for First Nations](#)
- [An OER Implementation in Maskwacis Cultural College, an Indigenous College in Alberta, Canada](#)
- [The Use of Talking Circles in an Online Course on Aboriginal Literature at Memorial University of Newfoundland](#)

MAJOR CHALLENGE # 2: CREATING HIGHLY ENGAGING ONLINE LEARNING EXPERIENCES

There are many powerful ways of creating engaging online experiences finding their way into online courses. A quick perusal of Contact North | Contact Nord's [Pockets of Innovation Series](#) shows numerous ideas worth considering.

Video is now relatively easy to create, generally free and much easier to edit. Simulations can be built quickly using some proven and effective [tools](#). Learners can find quality learning resources through a simple Google search.

In many organizations, PowerPoint is now discouraged so more engaging and focused conversations can take place. New [collaboration tools](#), [tools for peer to peer learning and project work](#) and [chatbots to support student learning 24x7](#) are all becoming low cost (if not free) and easy to use, making learning a rich and fulsome experience.

Most learning management systems (LMS) have built in engines that provide creative opportunities for engaging learners. There are the adaptive learning engines within an LMS, which enable learners to explore different routes through a course based on their mastery of knowledge and skills.

There are also add-ins like [Active Textbook](#), which take existing text content and let you add video, audio or other materials to enhance the use of the textbook or material but also strengthen learner engagement.

Some LMSs are now adding [Artificial Intelligence \(AI enabled chatbots\)](#) to interact with the learner and answer their questions or support their learning in other ways. Adding a chatbot to Moodle or other LMS systems can secure 24x7 support for learners.

Studies from the National Assessment of Student Engagement, which [72 Canadian colleges and universities now participate in](#), illustrate learner engagement is a strong predictor of both retention and success. Engagement matters!

MAJOR CHALLENGE # 3: THINKING DIFFERENTLY ABOUT HOW LEARNING IS ASSESSED

As intelligent online assessment systems become more sophisticated, we can move past multiple choice as the only way of machine marking. New systems emerging can undertake [skills assessment with video](#) or [mark complex essays](#).

[TAO is an open-source assessment suite](#) designed for use for a variety of assessment environments, including higher education and professional learning. It supports a variety of authentic assessments, both formative and summative, and makes extensive use of state-of-the-art artificial intelligence technologies. While there are [challenges in the utilization](#) of technology-enabled assessment – faculty and instructors need to be engaged with the assessment process; the technology does not replace them. They can create opportunities to enrich the learning experience through helping learners understand not just their performance but what they need to do to improve. This point is well made in a recent book by Dianne Conrad and Jason Openo (2018) [Assessment Strategies for Online Learning](#).

There are many ways to utilize and incorporate peer-to-peer assessment as [this](#) summary suggests. Some very useful general suggestions are found [here](#), and [this](#) resource focuses entirely on the use of peer assessment in online learning.

More tools are available to support on demand assessment. Whether these are automated item generators, automated marking systems or intelligent supports for assessment, we are experiencing increases in their deployment and this is likely to grow in the coming years. These tools enable faculty and instructors to focus more on supporting learners and less on assessment and enable learners to be assessed when they are ready to be assessed.

Technological tools are also available for ensuring the learner being assessed is the learner who should be assessed – [facial](#) or [fingerprint](#) recognition and other biological tools. [Proctoring systems](#) for home-based students are also quickly emerging.

MAJOR CHALLENGE # 4: DEVELOPING AND DEPLOYING MORE E-APPRENTICESHIP RESOURCES

Around the world, in part due to shifting demographics and changing technologies, there are skills shortages, especially in a variety of trades.

Canadian jurisdictions are [expanding apprenticeship programs](#) and are seeking greater flexibility in how these programs are delivered, while at the same time looking to significantly improve completion rates. The

same challenges exist worldwide, as skills become a [major policy focus for governments](#).

We can already make significant use of [video-based assessment of skills](#) to reduce the time to secure skills, while increasing the veracity of assessment. Other forms of assessment – such as assessment on demand for skills – are also used more extensively in other jurisdictions where competency, not time served, is the basis for the award of the equivalent of a Red Seal or trades certificate.

The Canberra Institute of Technology in Australia is also making use of [smart video glasses](#) to offer mentoring and coaching to apprentices “on the job”. [Virtual and augmented reality](#) learning is increasingly used to accelerate skills development on campus. Some components of the college component of apprenticeship can also be taught through blended online learning.

Strengthening and expanding online learning for [apprenticeship training may provide an opportunity for more apprentices to study without leaving their place of work or home and could also lead to higher completion rates](#).

MAJOR CHALLENGE # 5: IMPROVING LITERACY FOR THOSE ENTERING COLLEGES AND UNIVERSITIES AND BEYOND

Literacy is a major challenge for Canada. A full quarter of those leaving college and university in Ontario do not have the language and mathematical skills they need for their careers, according to the [Higher Education Quality Council of Ontario](#). Less than one third leave Ontario’s system with superior literacy and numeracy skills.

Some 42% of those in work do not have the level of literacy skills they need to be truly productive and innovative – a real cost to the Canadian economy². An analysis using data from the OECD PIAAC study, by [Simon Wiederhold and Guido Schwerdt](#), found that improving the average literacy skills of a country’s workforce by just 1%, over time leads to a 5% rise in productivity and a 3% rise in GDP (the equivalent of an increase of \$54 billion for Canada)³, clearly illustrating literacy and numeracy skills matter.

The X-Prize Foundation recently awarded \$7 million US to two organizations which use smartphone apps to make a measurable and sustained difference to literacy⁴. [Learning Upgrade](#) and [People for Words](#) demonstrate real success in using apps to support the learning of essential skills. Runners up were [Cell-Ed](#), which is working in Canada.

2 See <https://www.theglobeandmail.com/business/commentary/article-canadas-shortfall-in-basic-skills-costs-us-all/>

3 See <https://www.theglobeandmail.com/business/commentary/article-canadas-shortfall-in-basic-skills-costs-us-all/>

4 See <https://www.xprize.org/prizes/adult-literacy>

Given many students need additional help, it is time to leverage mobile devices almost all students carry to support this key skill.

It is also time to look at other effective programs that can make a real difference. One example is [a skilling-up project](#), which showed an average gain in literacy of 26 points in a literacy evaluation after just 30 hours of learning – a significant gain. There are numerous resources available to support improving literacy skills – for example, through [ClCan](#). This challenge is urgent.

This catalogue of big challenges provides an opportunity to help faculty and instructors, instructional designers and academic administrators think about what they want to do differently in the 2019-2020 academic year. It builds on a list of the [Top Ten Wish List for 2019](#) released in December 2018, and leverages the success stories captured in the [Pockets of Innovation Series](#) available on [teachonline.ca](#) – 220 from Ontario, across Canada and around the world.

Ontario [leads Canada](#) in the deployment and delivery of online learning. There are [981 online certificate, diploma, undergraduate or graduate programs](#) involving some 20,000+ online courses. There are over 7,600 literacy and basic skills training courses – all built, delivered and available in Ontario.

The scale and success of these achievements demonstrates Ontario's higher education system has the talent to address the challenges and is ready to do so.