Online Learning in Canada at a Crossroads

Five potential ways to build a better future

A Keynote Address by
Maxim Jean-Louis
President – Chief Executive Officer
Contact North | Contact Nord
To
CNIE-RCIÉ 2012 Conference
Canmore, Alberta, Canada
May 15, 2012

Contact North | Contact Nord
Ontario's Distance Education & Training Network
Le réseau d'éducation et de formation à distance de l'Ontario

www.contactnorth.ca | www.contactnord.ca

Introduction

This session is billed as a keynote.   And I am very sure that some of the things I will be saying, and the conclusions we will reach together, will be key to building Canada's position as a leading nation in the practice of flexible distributed learning. I want to make this session more interactive – more of a brainstorm about what actions we can take together to make a difference to our competitive position in the world.

Indeed, given the urgency of the need to accelerate innovative approaches to post-secondary education in Canada, and to increase completions, success and relevance, we have to have a serious discussion about the future – others are coming, some will claim, to "eat our lunch".

Some of what I will say may sound "alarmist" to some, but I am being pragmatic and a realist. I genuinely believe that Canada is at a tipping point in terms of online learning and that we have a real and strong opportunity to lead in several areas of online learning development, but only if we act quickly, effectively and nationally. We have real strengths to build on, but we need to focus to make a difference.

The mandate of the Canadian Network for Innovation in Education (CNIE) is very much in my mind as I begin this presentation and dialogue. As a "national organization of professionals committed to excellence in the provision of innovation in education in Canada", my theme is how we can foster innovation in a way that connects innovators more strongly and in a more focused way to make a difference for learners.

Canada takes pride in its provincial focus for education. It means that a strategy for post-secondary education can be designed to meet local social and economic needs while leveraging best practices across the country. In this presentation, I want to suggest that this patchwork approach to education, which serves Canada well for some aspects of our ambitions, needs a new component for Canada to compete in the global knowledge economy and in the competition for students.

That new component is a focused, national strategy aimed at not just staving off globalized competition for students, but also aimed at making Canada a leader in open education resources for learning, imaginative approaches to credit transfer and flexible learning.

Key Developments

There are five major developments in online learning in the world that we need to be aware of. These are, in no particular order of importance:

1. Mobile learning or "m-learning" and the development of learning "apps".

    By the end of 2012, tablet devices will begin to outsell personal computers as the device of choice for a large number of people. The functionality of tablets and smart-phones is expanding while the price remains relatively stable.

    The market for m-learning is expected to grow at a compound annual rate of 13.7% over the next five years.

    One feature of this growth is the development of "apps" for learning and the use of simple systems, like iTunes University, for distribution. Apple alone has available 560,000 apps for its iPhone and iPad devices, adding 10,000 each month.

    Some 15% of these apps have a learning related purpose, with language learning, essential skills and math being amongst the most popular.

    iTunes University has close to 400,000 individual learning items, much of them free to use, ranging from video to full courses and self-study materials.

    Canada has real strengths here – we make the BlackBerry and Desire2Learn has developed a suite of learning management resources to support mobile learning. Yet many of our institutions do not support tablets for learning or communication, and our schools are banning smartphones from classrooms.

2. Credit granting for open learning, prior learning and work-based learning.

    Open education resources (OER) are becoming abundant. These are courses and programs made freely available by their developer under a commons license for non-commercial use by others. There are thousands available in iTunes University, but also thousands on other sites from around the world.

    Several organizations have recently been created to capitalize on a simple idea: start offering credit for those who study OER courses in their own time. They include the Peoples University in the US, the OER University, Coursea, UDaCity, and edX. Let us look at each of these in turn.

    The Peoples University, known as UoPeople, is a non-profit corporation based in the US which seeks to provide credit assessment for students studying specific courses or programs available in OER. Courses are free and the University has the support of Yale, New York University, the Clinton Foundation and many other corporations and non-profits. It has students around the world, including in Afghanistan, Cambodia, Ecuador,

Finland, Kyrgyzstan, Malawi, Portugal, Sri Lanka, Uzbekistan and Zambia as well as UAE.

It currently has more than 1,400 students from 130 countries, with 56% enrolled in the Business Administration program, and 44% are studying in the Computer Science program. Students range from ages 18 to 72, with an average age of 32.

The OER University is a consortium of institutions, including Canadian, US and Australian organizations, which have agreed to pool a small number of courses (two from each) and then undertake assessments using prior learning assessments.

Students can chose which member of the consortium they wish to be assessed by – a student taking an Athabasca University course can be assessed by Thompson Rivers University in British Columbia. Formal processes will be announced in 2013.

Coursea is owned by Stanford, Princeton, the University of Pennsylvania and the University of Michigan and funded with $16 million from venture capital sources. The new company will make extensive use of online testing and peer review to grant outcome-based credit. It is worth remembering that venture capital investment is usually based on a 140% return on initial investments within thirty-six months. The owners clearly see OER and learning analytics as a potentially lucrative profit stream.

UdaCity is a private venture designed by Sebastian Thrun, well known as the founder and head of Google X, which is home to projects like the Google self-driving car and the recently announced Google Glass. Sebastian is also the Stanford professor who co-taught an open, online, Artificial Intelligence course to more than 160,000 students. He has now started a new higher-education model through Udacity, which is striving to bring free college courses to the world. He is offering six courses, which has attracted some 200,000 students.

edX is a non-profit partnership between Harvard and MIT. They are seeking to leverage their OER content, which is substantial, for free-to-use courses. Students will be assessed, but will not be awarded credit – they will get a certificate of completion. Assessments will be undertaken by a combination of online testing and crowd-sourced assessment of learning by peers. The two institutions have invested $60 million in this new venture and see it as transformative in its strategic intent. While Harvard and MIT are current co-owners, they expect others to join them in the near future.

 This thinking is not new. There have been attempts to do similar things before. In 2001, the University of Chicago, Columbia University, the University of Michigan and others launched Fathom, which had similar intentions. Yale, Princeton and Stanford collaborated in the failed venture ALLearn which both launched and collapsed in 2006.

What is different is that this work now has both government backing in the United States and significant venture capital. Led by the US Departments of Labor and Education, a $2 billion development program offers $500 million per year for the development of openly licensed materials that must carry the Creative Commons license, which permits their free derivative use for both commercial and non-commercial

purposes. This is a massive stimulus for OER – essentially a government subsidy to kick-start an industry.

In addition, Pearson has liberated some $3 billion in capital to engage in a market in which they provide educational services which leverage their own and free-to-use materials. They are offering a personalized education service and system which, as we will see, carries the power to transform the delivery of education beyond school.

Finally, venture capitalists now see "fixing" education in the US from K to PhD as a profitable opportunity. Big name institutions from the IT sector and the Bill and Melinda Gates Foundation are in the game. They intend to dominate the sector through innovation leveraging technology, OER and new ways to assess for credit.

Many institutions now offer prior learning assessment (PLAR) and there is a growing acceptance of work-based learning credit (WBL). Imagine a situation in which, in addition to teaching some courses, credit granting divisions of brand name institutions accredit OER learning as PLAR or WBL. This changes the game.

One key feature of these emerging markets for learning is the minimizing of residency requirements. Canada's agreed standard is that 50% of a program should be taken at the "home" institution. Many of the emerging organizations are reducing this to one or two courses – something Middlesex University in the UK does for their work-based Masters and PhD programs. The argument is quality. Yet, a student who completes OER courses from Oxford, Yale, MIT, Stanford and Harvard could be denied a credential from a Canadian university on the basis of a time served model of quality.

We need to think about learners and learning here.

3. Public: private partnerships.

A movement to abandon time-based indicators of learning (the Carnegie unit) as a basis for determining the appropriateness and quality of a program is behind the Kentucky Community & Technical College System (KCTCS) "on demand learning[1]" partnership with Pearson. The partnership enables students to call for a course at any time (over 45 start dates a year) and call for assessment when they are ready to be assessed.

This outcome-based approach to learning sees time as unimportant when compared to mastery and assessed competence. This is one option for students, who can also choose paced online learning or a traditional classroom approach. Courses were co-designed by KTCS faculty and Pearson, accessing the vast resources of the largest educational publisher in the world. The on demand program is the fastest growing segment of the market for college learning in Kentucky.

---

[1]   See http://learnondemand.kctcs.edu/

Pearson has also co-developed GED courses for college level activity and is at work on other partnership projects. They offer a free-to-use LMS and significant learning analytics which are then used to track progress. Learners can work at their own pace to secure a credential. As funding systems move from "bums in seats" to results-based funding (something the Government of Alberta is committed to doing), rethinking the Carnegie unit becomes an essential tool in securing revenue.

Major jurisdictions are also moving to adopt digital textbooks as a requirement - California and Texas are amongst them. These jurisdictions argue that this is about environmental well-being, as well as helping learners become familiar and comfortable with digital technology. But, this is creating the opportunity to rethink textbooks.

Course Smart was founded in 2007 by Pearson, McGraw Hill, John Wiley & Son, Macmillan Higher Education and Cengage Learning. It is creating machine intelligent textbooks which track student learning through embedded testing and then use smart analytics to change content and sequence of material in line with the students learning. Indeed, Pearson recently bought the machine learning analytics company Knewton to aid this kind of development. The textbook is now interactive, immersive and customizable.

Course Smart isn't the only player in this field – there is also Aplia, founded in 2000 by a professor at Stanford. His course support resources have already been used by over 1 million college and university students at over 900 institutions.

The perception is that the major developments here are occurring in the US or Europe, with Canada being seen as "an also" player. Yet we were the creators of WebCT and Desire2Learn. If we are to be a leading jurisdiction in online learning, we need to invest in learning innovation to make the next step possible. Yet in most reviews of innovation policy at both a provincial and a national level in Canada, technologies and design for learning are not regarded as holding the potential for growth. Wrong. Globally, online learning is a major industry and we should be positioning Canada to reap the benefits of the growth that all forecast for the sector over the coming decade.

4. Rapid growth of simulation and gaming.

   Serious games, also known as "immersive learning", and the use of simulation is expanding, especially in those disciplines which require a great deal of hands on learning such as health professions, vocational education, engineering, science for example.

   Games that can be played synchronously with peers around the world and simulations that provide endless opportunities for the practice of skills, especially in e-apprenticeship programs, are powerful additions to the learning experience of students.

Immersive Technologies from Australia is the leading oil, gas and mining simulation and immersive technology provider in the world, with offices in seven countries, including two in Canada (Calgary and Ottawa). The company focuses on technical skills training for trades in mining, oil sands, gas extraction and coal and diamond mining. It dominates the market and it does so because of its ability to rapidly develop meaningful and mindful simulations. Here in Alberta, where we are meeting today, it is the most used industry immersive technology for training. Yes, there are Canadian companies playing in this space, but an Australian company beats us in our own back yard.

WILL Interactive, founded in 1994 by Sharon Sloane, Lyn McCall and Jeffrey Hall, is a woman-owned business based in Potomac, MD. In 1998, WILL Interactive invented and patented a behavior change and performance improvement methodology where users become the lead character in an interactive movie simulation. Users make decisions, see consequences of their choices, alter storylines and experience outcomes.

Since the release of its first product, WILL has become a force in the interactive training market. WILL Interactive is the pioneer for a new genre of education and entertainment media known as the "virtual experience" or more commonly immersive learning. Its products include learning experiences for health care, education, police and military as well as ethicists and leadership. WILL was amongst the first in this space. This company is used by most of Canada's police forces in their training and development. It's not Canadian.

We do have some Canadian companies in this space. Indeed, the Canadian Space Agency commissioned a K-12 math program from Project Whitecard, a company based in Winnipeg. It won the prestigious Gold Medal at the 2011 Serious Play Awards. But, the company is a start-up based in a business incubator for high tech companies. Our immersive learning industry is young and in its infancy. We need to encourage its growth and development and more companies like it.

5. A focus on student engagement as the basis for learning design.

   Student engagement and professorial satisfaction with their working conditions are the two best predictors of learning outcomes. New designs for engaged learning focus on problem based learning, so-called "twenty-first century skills" and challenge-based activities as the basis for learning designs.

   The professor/instructor acts less as a content expert and more as a coach, guide and mentor for the serious work of solving problems. Academic materials are provided as a digital resource library to support the work of faculty and students.

These five major developments call for a Canada-wide strategic response from colleges and universities and Canada's innovation networks and systems.

If we want to be competitive and innovative, we need to focus and align our investment of energy, time and money on those things which will build jurisdictional advantage. It makes little sense for each of us to work alone, in the dark with few resources when we face real competition for our students, our faculty and our expertise.

We Have Much to Build On

You may think, listening so far to this keynote, that I am pessimistic about Canada's position here. I am not. Indeed, my view is that with the right kind of leadership, projects and investments, Canada could take a significant leadership role in the next phases of the development of online learning. This is because we have much to build on.

Allow me to list five of our strengths in no particular order:

1. There are approximately one million post-secondary course registrations in Canada in a fully online course each year and this number is rising. 500,000 of these registrations are in Ontario.

2. Using online catalogues and recruitment portals as a basis for an estimation, we estimate that Canadian institutions have some 75,000 + online courses available to college and university students and over 2,000 fully online programs from certificates to PhDs. Ontario has 18,000 courses and 1,000 programs.

3. Canada has dedicated R&D capacity in online learning, both within our universities and colleges (over 150 in Ontario), at the National Research Council and through provincial innovation funding. Athabasca University, just to give one example, secured $7.65 million from the Government of Canada's Knowledge Infrastructure program, itself a $2 billion fund, and $5.9 million from Western Economic Diversification's Community Adjustment Fund, aimed at supporting innovation.

4. Canada has public sector experience and private sector investment holding out the potential for public: private partnership. I mentioned Research in Motion and Desire2Learn earlier, but both are partners with public colleges and universities and both see public: private partnerships with respect to learning development as key to their future, but so do many other firms. Given that post-secondary education in Canada is predominantly public, we need to leverage the private sector to spur innovation in the service of quality, affordability, access and equity.

5. Canada generally has great infrastructure for online learning. One conclusion is that we have all the jig saw pieces in place for a world-class online learning system, but we are missing the vision and strategy which would leverage the assets we have in place. But, we have the assets.

   In Ontario alone, we have, in addition to Contact North | Contact Nord:

   - OntarioLearn - is a consortium of 24 Ontario colleges who have partnered to develop and deliver on-line courses. Each partner college selects courses from the OntarioLearn.com course inventory that will complement its existing distance education offerings. This partnership approach has allowed member colleges to optimize resource use, avoid duplication and, more importantly, increase the availability of on-line learning opportunities for their students.

- Independent Learning Centre (ILC) - is mandated by the government of Ontario as the province's designated provider of distance education and GED Testing. The ILC offers Ontario credit courses in English and French for Grades 9 to 12, as well as the Ontario Secondary School Diploma (OSSD) and the GED Testing Program. In addition, the ILC has English-as-a-second-language courses, and a variety of student services.

- The Ontario Research and Innovation Optical Network (ORION) – is an ultra high-speed fibre optic network that connects Ontario's research and education institutions to one another, and to partners and colleagues throughout Canada and around the world. A key component of ORION's work is to support innovative uses of technology for learning, both in the classroom and online.

- Ontario Council for University Life Long Education (OCULL) - is a professional association for administrators and practitioners who develop and deliver degree and non-degree continuing education programs in Ontario universities. OCULL is an advocate for adult learners at Ontario universities, a collegial network, and a vehicle for professional development for its members.

Online students are successful. Online learning is growing, supported and of increasing strategic importance to our institutions. The next stage is to accelerate this growth and to leapfrog as a nation into a leadership position world-wide.

Building for the Future

Here are five potential projects that we could jointly explore that would promote both collaboration and innovation. They could consolidate a Canadian strategy for learning in the modern world.

1. An annual "cross-country check-up" on the state of online learning in Canada.

    The Sloan Consortium undertakes an annual review of the state of online learning in the United States and has done so now for a decade. These annual reports have had a tremendous influence on policy makers, legislators and academics and have helped spur the growth of innovation.

    In Canada, we have no such process, though Contact North has just released a document which could provide a starting point for this work. The key here is that such a report would be an impartial, focused look at online learning growth and the nature of development for Canada. Right now, there are no secure and reliable sources of data about the offer, take up, success and growth of online learning in Canada.

    I am pleased to use the CNIE conference to launch the first cross-country check-up in recent times entitled, "Online Learning in Canada: At a Tipping Point". Copies have been distributed to you and will be available as of next week for download from our website at www.contactnorth.ca.

Imagine, if we extended our work internationally and collaborated with other jurisdictions such as Australia, the European Union, and the United States to compare our respective national check-ups and learned from one another? I can share with you that there is a strong interest from Australia in comparing notes with Canada.

2. Innovative work taking place in colleges and universities across Canada.

CNIE members could be encouraged to develop and share examples of the innovative use of learning technologies from their own institutions across the country and CNIE could facilitate online communities of practice around the examples.

In Ontario, Contact North launched a project called the Pockets of Innovation Series where we showcase the innovative work taking place in colleges and universities across Ontario in the areas of technology applications, course development, student support services, marking, exams, and many other aspects of online and mobile learning.

There are currently 33 innovative examples on our website at www.contactnorth.ca/pockets with a goal of fifty by this fall.

The goal of the Pockets of Innovation Series is to share these examples and encourage collaboration amongst the colleges and universities where institutions can benefit from each other's innovations.

3. A database of researchers in online learning in Canada.

There is innovative research work in online learning taking place in colleges and universities across Canada.

There are currently 33 innovative examples on our website at www.contactnorth.ca/pockets with a goal of fifty by this fall.

Contact North completed a study last fall where it identified over 160 faculty members researching online learning in colleges and universities across Ontario. We have assembled this information in a database for sharing with the sector.

This project could be expanded across multiple jurisdictions and showcase the richness of online learning research taking place. If Ontario is any example, we're richer than we think, to borrow a Scotiabank slogan.

4. A Best Practice Centre and Clinic for Online Learning.

Canada needs a place where faculty and administrators can receive a world-class education in how to design, develop, deploy and deliver online learning and blended

learning and they need to see what excellence looks like.

Ontario has some 18,000 courses and over 1,000 programs fully online with significant growth occurring in British Columbia, Alberta and the Maritimes. Indeed, our estimate is that, across the country, there are some 1 million course registrations in online learning annually and rising.

But, many of the available courses are designed as instructor-centric and content heavy. In the new kinds of designs for engaged learning, we need new models and prototypes to share and see as models. We also need expertise we can call on for problem solving.

While this could be a provincial resource, think how powerful it would be if it were cross-jurisdictional – a national centre for learning design and development. As an example, think about sharing nationally all that we know that works with respect to online learning.

5. The development of an X prize for learning apps.

Why not use a public: private partnership to challenge the "app" community in Canada to develop apps to transform literacy in this country. Literacy is a major obstacle to success in post-secondary education, both for those already admitted and for those who do not have the competencies to be admitted.

Even a 5% improvement in Canada's literacy level would have a massive impact on our economy, our society and our education system.

This is just one example – we could think of other areas. The idea is not to RFP an opportunity, but to use challenge and incentive to spur innovation.

These five suggestions are provided to kick off a conversation about Canada's opportunity and how we can leverage our assets as one of the leading jurisdictions in the world for online learning – how can we take our success to the next level?

But, they represent an opportunity for the online learning industry to position itself as just that: a growth industry which could have a transformative role in our own country, as well as many others.

Conclusion

We could define the challenge of the online learning sector in terms of growing the share of learners who study and complete online – which is what we have traditionally done.
Or, we could get really serious and see the challenge in terms of using online learning as the basis on which we can transform in many ways the Canadian post-secondary education system.

I have spent a large part of my working life on, and am accountable for, the first of these options, but the future lies in the second. "The future is already here, it is just not widely distributed yet" said William Gibson. He might have been talking about the online learning sector.

Clayton Christensen has suggested that transformation and disruption is the opportunity. Looking at the US, he notes that, according to the 2010 Sloan Survey of Online Learning, approximately 5.6

million students took at least one web-based class during the fall 2009 semester, which marked a 21% growth from the previous year. The Harvard Business School Review points out that this figure is up from 45,000 in 2000 and experts predict that online education could reach 14 million in 2014.

More significantly, he suggests that what is most critical now is to "move beyond today's time-based rules — those policies, regulations and arrangements that hold time as a constant and learning as the variable, which inhibits the ability to move to a competency-based learning system." He sees technology + excellent learner support as a recipe for a disruptive transformation.

We can see this in action. Norman Nemrow teaches accounting at Brigham Young University. His online accounting course is being taken by several hundred thousand students in America right now. Harvard Business School has stopped teaching undergraduate accounting, and instead, requires their students take his course online .

And then there's Walter Lewin at MIT - his Intro to Physics course has been taken by over 5 million people .

So it's time to be both strategic and innovative. Strategic in the sense that we create the components we need for a nationally-focused system for online learning development, and innovative, in the sense that we leverage the public and private resources available in Canada to achieve remarkable things.

I can end with a simple idea. We can either react to the future or determine it. I chose the latter. What about you?

2 See http://thenextweb.com/insider/2011/11/13/clayton-christensen-why-online-education-is-ready-for-disruption-now/
3 See http://books.google.ca/books?id=ukItNVRRSp4C&pg=PR10&lpg=PR10&dq=Walter+Lewin+at+MIT,+whose+Intro+to+Physics&source=bl&ots=yXc88xVUCX&sig=RUM-uUJ9xVzt-pIBXe-

DAY5S-piM&hl=en&sa=X&ei=5GqxT776Cae0iQKFjN3yAw&sqi=2&ved=0CGMQ6AEwCA#v=onepage&q=Walter%20Lewin%20at%20MIT%2C%20whose%20Intro%20to%20Physics&f=false