

**THE FUTURE OF HIGHER  
EDUCATION**

**A CANADIAN VIEW**

ACCESS • INNOVATION • COLLABORATION

## Evolving Context

This is a time of change in higher education in Canada.

David Agnew, former Cabinet Secretary for the Government of Ontario, current President of Seneca College, and Chair of Colleges Ontario, drew attention to the changes occurring in Ontario in a speech to the Canadian Club in October 2015<sup>1</sup>. Some of the changes occurring in Ontario and across Canada increase access to, and success in, higher education for many who would otherwise not have been able to go to college or university. Other changes are not so positive, as Agnew also observed. Some colleges and universities are struggling to survive while others appear to be thriving. Understanding the current and future dynamics of the higher education system is important, especially for those leading the system or developing the policies which guide it.

To look at just one example of change, we can look at online learning. In the United States, it is now the case that more than twice as many students now take a class online than those who attend at a face-to-face course on campus. There are more undergraduate students enrolled in an online class than there are graduate students enrolled in all Masters and Ph.D. programs combined. At the current rate of growth, half the undergraduates in the US will have at least one online class on their transcripts by the end of the decade<sup>2</sup>. This is the new normal. The situation in Canada, so far as we can tell, is basically the same. Online learning is part of the standard mix of program and course offerings across Canada, with very few higher education institutions not offering online learning to some degree.

Students are using digital options to make colleges and universities work for them – they are showing by their behaviour what flexible learning looks like. Online classes are no longer surprising, or experimental, or rare. By adopting them, students are telling us what they need our institutions to become. This is one of the changes which has occurred in a short period of time – just over twenty years – but which have a significant impact on pedagogy, programs and resources.

Let's explore together what is happening in higher education in Canada – key trends and developments – and look at the future, with a strong focus on online learning. Our intention is not to offer a definitive view of what the future holds, but to create the basis for a focused and inspired conversation about the future, which is informed, evidence-based and provocative.

While the focus is on Canada as a whole, an understanding of Canadian developments need to be contextualized in terms of developments in higher education globally – Canada competes and collaborates globally in program offerings, student recruitment and research.

## Seven Trends and Patterns Which Will Impact the Future for Colleges and Universities by 2030

When we look at the future of colleges and universities across Canada, seven major trends and patterns suggest the future is likely not to be a straight line from the past. We look briefly at each of these challenges and suggest their most obvious implication(s).

1 A text of the speech is available here: [http://startouch.thestar.com/screens/d2a495dd-6df5-4f9b-9168-54b7d7a90890%7C\\_0.html](http://startouch.thestar.com/screens/d2a495dd-6df5-4f9b-9168-54b7d7a90890%7C_0.html)

2 Source: The Digital Revolution in Higher Education Has Already Happened – No One Noticed. Available at <https://medium.com/@cshirky/the-digital-revolution-in-higher-education-has-already-happened-no-one-noticed-78ec0fec16c7> (Retrieved November 5, 2015)

## 1. Demography<sup>3</sup>

Canada's demography is changing significantly. While the population will grow through to 2063, it will do so largely through immigration – Canada's birth rate is low (except amongst Aboriginal communities and recent immigrants). By 2030, three in ten Canadians will be from a visible minority.

The most significant trend is the aging of Canada's population. By 2030, one in four Canadians will be 65 or older and the seniors population will represent 22% of all Canadians (this group currently represents 15%). What is more, seniors will live longer as the life expectancy of Canadians continues to improve.

This in turn has major implications for the Canadian workforce. By 2030, there will be fewer people in the workforce. Not so long ago, there were almost five people of working age for every retiree; by 2030 there will be closer to two retirees for every five workers. The workforce is expected to fund and support increased costs of health care, social services and education.

Canada's First Nations, Inuit and Metis population will continue to grow. Aboriginals currently account for 4.3% of the Canadian population, and the figure is expected to grow to 5.3% of all Canadians by 2030. The Aboriginal population increased by 20.1% between 2006 and 2011, compared with 5.2% for the rest of Canada.

The underlying demographic dynamic is Canada's birth rate is below replacement<sup>4</sup> – we are not producing enough children to replace the population. This makes immigration the key to economic stability and growth.

**Implications: A more diverse and complex student body, with huge pressure for work-relevant skills with continued pressure on educational finance systems. The first language of many Canadians will not be English or French.**

## 2. Structural Complexity

With the pursuit of massification of higher education since the mid-1960s, there has been a growing expectation that more and more individuals attend college and universities and educational attainment will continuously rise. Indeed, some provinces have committed to this as a strategic intention. In 2015, there are significantly more universities and colleges than there were in 1985 and 1995. Canada now has 98 public universities and over 130 public colleges.

This has led to a complex system, which has some barriers to learner mobility:

- Weak transfer credit systems within individual provinces and at the inter-provincial level.
- Weak systems for prior learning assessment across Canada.
- Lack of portability for certain credentials (especially trades and certain professions), reflecting trade barriers and provincial certification differences.
- Weak, but improving systems, for the fast and efficient recognition of foreign credentials.

By 2030, changes can be anticipated, in part due to the clauses within international trade agreements enabling faster and more efficient recognition of foreign credentials<sup>5</sup>.

The key issue for governments is whether, given expectation of a lower revenue base from taxation linked to demographic change, they can afford such a complex and comprehensive system. Put another way, just what portion of funding for the complex system, which has evolved since the 1960s, will be

<sup>3</sup> All information in this section is based on reports from Statistics Canada.

<sup>4</sup> Total Fertility Rate is currently 1.59 and needs to be closer to 2 for replacement.

<sup>5</sup> For example, the Canada-EU Trade Agreement (Draft) contains such agreements as does the Trans Pacific Partnership Agreement (Draft).

paid for by government, and what portion by students and potential employers?

The current complexity becomes even more complex when barriers to entry to higher education by foreign institutions are lowered or non-existent as students can choose to study online from institutions with a global presence.

**Implications: The sustainability of the complex system of higher education in Canada is problematic and will likely lead to fewer institutions, more collaborative programming and more integration of functions and services.**

### 3. Changing Student Expectations

As students pay more of the cost of their own education, they demand more in terms of quality, relevance and engagement. More specifically, students are seeking high-quality programs and courses, which are work-relevant (but not solely focused on employment competencies) and engaging. They are much more critical of the quality of their education than many of their predecessors. As governments reduce their per-capita expenditure on higher education (following the trend they have pursued for the last twenty years), these expectations will increase.

Students are looking for access to quality programs, delivered with flexible options supported by coaches, guides and mentors who can personalize learning and leverage the knowledge and skills the learner brings to their studies. Many more are now looking at university + college courses, suggesting the boundaries between such institutions will shift. By 2030, more joint or seamless programs will be in place.

Students are also looking at shorter programs with much more acceptance of credit transfer, work-based learning credit and prior learning assessment, which is efficient and not cumbersome. The emergence of so-called “micro-credit” (e.g. badges), short courses, accelerated degrees and joint college:university integrated programs are all responses to this need.

**Implication: Students will demonstrate by the decision-making and behaviour what they expect colleges and universities to provide and their influence on decision-making will grow in line with their financial contributions.**

### 4. Costs and Competitiveness

In general, colleges and universities are facing financial challenges due to declining revenues from government, changed market conditions and shifts in student demand. Others are looking at mergers and there are likely, between now and 2030, to be significant structural changes in our systems of higher education in Canada.

More significantly, a combination of global competitive forces in higher education and cost issues is forcing many institutions to re-think their focus and strategic intentions. They are looking initially at increasing the international student population in their institutions (who pay higher fees), at employer or government-sponsored programs, shorter programs (e.g. micro-credentials, badges), collaborative programs and other initiatives, all of which are intended to either sustain or grow registrations and retention while increasing revenue. Governments are actively encouraging these developments.

At the same time, institutions are looking at cost reduction through re-imagining their labour costs and reducing the range and breadth of activity – using differentiated programming to create competitive advantage.

The challenge here is these developments increase the competitive nature of the market for students and staff and represent significant shifts in the way in which colleges and universities undertake their work. Some institutions across Canada are “stuck” between an old paradigm and a new one and do not seem to be able

to build the bridges needed to make this shift.

A related challenge is the quality assurance regimes operating in some parts of Canada make innovation and radical change difficult, as their focus is on equivalence and peer supported change. Breakthrough program design and models of instruction are sometimes “caught” in a quality trap.

**Implications: Institutional change is inevitable and always difficult and requires courageous and innovative leadership. Making such changes will likely be disruptive and likely to lead to some failures.**

## 5. Internationalization

There are programs in some institutions with 30% or more of the registrations from international students. More programs include international study components and more students are completing part of their Canadian programs abroad. More students are coming to Canada with part of a program completed in another country and more courses have international components and links to international research, applied research or organizations. Higher education is increasingly an international business.

The growth of international student body in Canada will continue, though it will become an increasingly competitive market as more institutions seek to capture these students. Canada competes with the USA, UK, Australia and New Zealand for international students. A variety of estimates suggest that, by 2030, some 3 million individuals will be seeking to study in one of these countries – an increase of 1 million from 2015. At this time, the USA, UK and Australia are preferred destinations, especially for post-graduate study.

Indeed, the UK has become increasingly dependent on international students to fund its complex system and requires some 100,000 or more new international students each year to sustain the system. Recruitment depends very much on immigration rules, costs, relevance, security and quality of student life.

Internationalization is not just about who the students are; it is also about what it is they are learning. As access to knowledge is much more universal (aided significantly by advances in automatic translation engines and open education and research resources), then the curriculum itself also needs to reflect who the students are, where they come from and are likely to return to. As knowledge develops at a faster rate than ever before and is much more globalized, a failure to ensure international content and focus is likely to lower the interest of international students in a specific program or area of study (with some exceptions).

Linked to these developments is the observation from a student organization that there may be a need to offer programs, especially online programs, in several languages. The assumption the language of instruction will be either English or French may need to shift by 2030 as the nature of the student body changes. While there are likely to be highly effective translation engines available by 2030 (they have steadily improved since 2000), translation is not a substitute for a program or course being offered and supported in multiple languages.

**Implications: Internationalization is a key feature of the future of higher education, but comes with challenges, especially if colleges and universities become revenue dependent on international students. Internationalization impacts not just who is studying, but also what they are studying and how and where they are studying.**

## 6. Technological Developments

Since 2000, there have been many changes in the technological landscape. Hand-held devices now surpass desktop computers in terms of ownership and use. Growing access to broadband across Canada (but still not universal) has changed access to knowledge, information, services and support. The emergence of online learning transformed access to learning for a great many students and has changed the dynamics of higher education. It is now the case that (approximately) 1.5 million online courses for credit are being taken by Canadian higher education students each year<sup>6</sup>.

By 2030, there will be further changes. These five seem the most likely:

- Artificial intelligence and machine intelligence will generate new ways of assessing and supporting students, using adaptive learning systems and automated assessment. Such developments may also lead to a growing use of robotic technologies to support learning and student services.
- Enhanced simulations and games using augmented reality so as to permit life-like laboratories in science, engineering, music, art and other disciplines, but also make remediation for struggling learners more manageable when combined with adaptive learning technologies.
- More visual and aural learning than text and graphics – with the growth of voice and gesture recognition and an increase in computing power, students may make more use of audio, video, graphics, gesture and 3D imaging in their study and in their assignment activities.
- More personalized and differentiated using adaptive learning and analytics – as the technology becomes more ubiquitous (the so-called “Internet of things”), then learning can shift from batch-processing (classes with an instructor) to a more individualized and self-paced experience.
- Far more extensive use of open educational resources by both students and their instructors, both because of the ease of access and cost, but also because of quality assurance being attached to such resources.

While in the past, the barrier to accelerated adoption of such technologies was the willingness of faculty members and instructors to utilize them, student behaviour and the other trends and patterns listed here lead to more and more colleges and universities adopting these technologies not simply for competitive advantage, but also for survival.

**Implications: Technology will continue to evolve in such a way to make learning more personal, affordable, effective and accessible. Institutions will respond by more rapid adoption in line with student behaviour.**

## 7. Global competitiveness

All of these trends and patterns lead to one conclusion: it will get more difficult over time to recruit, retain students as the market for these students becomes increasingly competitive and value sensitive. What is more, governments will assess institutional performance by their ability to sustain themselves while offering less financial support per capita: expectations will grow while resources available to meet these expectations shift from government to more varied sources of revenue.

<sup>6</sup> This is a “best guess” based on available information. Unfortunately, there are no systematic approaches to data collection across Canada which permits an accurate statement.

What is more, the competition which Canadian institutions face is not just local, provincial or national: it is international. The University of Toronto is competing with all of those institutions listed amongst the top 100 in the world; not just for students, but also for staff. There is a global war for talent.

At the heart of this global competitiveness is a significant increase in student mobility – a cornerstone of the twenty-first century. More students are travelling further and more often for their education, whether or not they leave their home.

This new level of student choice requires a re-imagining of what programs, courses, credit and learning looks like. Offering the same program in 2030 in the same way as it is being offered in 2015 is likely not to be a successful strategy. New business models, program designs, pedagogy, uses for technology and new forms of assessment and credit granting will be found so as to enable colleges and universities to be sustainable.

**Implication: Change is constant, but learning from change is the challenge which institutions face. The key for a college or university is to engage in strategic foresight and constantly look at ways in which it can become secure sustainability through innovation.**

### **Trajectory will not be straight line from the past**

Those in positions of institutional leadership need to understand the trajectory for their organization is unlikely to be a straight line from the past. They will encounter significant new demands for change and need to develop much more nimble, responsive and flexible organizations. To do this, governments need to think differently about the regulation of the system, finances and quality assurance regimes.

Change is inevitable – managing it will be difficult if the regulatory and fiscal frameworks do not change.

Yogi Berra once said “the future isn’t what it used to be!”.