

Strengthening Ontario's Centres of Creativity, Innovation, and Knowledge Opportunities for Outcomes Assessment and Credit Course Aggregation in Ontario

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Strengthening Ontario's Centres of Creativity, Innovation, and Knowledge

As part of its response to the Ministry of Training, Colleges and Universities June 2012 discussion paper, *Strengthening Ontario's Centres of Creativity, Innovation and Knowledge*, [Contact North | Contact Nord](#) shared its initial thoughts on trends that are transforming post-secondary education and how the Ministry could support innovation through online learning in July 2012.¹ We promised to suggest ideas and investments related these trends that the ministry might consider in order to promote *Strengthening's* goal of driving productivity and innovation in the post-secondary education sector.²

In the next installment of [Contact North | Contact Nord's](#) contribution to this dialogue within Ontario's post-secondary sector, we address two of those trends – outcomes assessment and course credit aggregation.

After exploring at some of the limitations and challenges of the current system, we look at the future and opportunities for Ontario in three specific areas. Students, colleges and universities, employers, and the province as a whole can benefit from more creative, inclusive, and coherent approaches to the assessment and awarding of credentials for quality learning within and outside of institutions.

Credentials Today

The future of credentials may not be as straightforward as it has been for previous generations. We're accustomed to an academic credential being awarded when an accredited college or university decides that a student has successfully completed a set number of courses and fulfilled any other requirements, such as completing a thesis, a work experience component, or comprehensive examination. Accreditation is traditionally the last step in a chain of institutional services that includes acceptance, enrolment, instruction, support, and assessment throughout a course of study.

But post-secondary education faces a profusion of choice that will cause today's tight couplings between instruction, assessment, and credit aggregation to loosen. We are witnessing the birth of the 'free agent learner.' Students will be freer to assemble their education from many different sources, to find new ways to get learning recognized, and to put a personal touch on the way their accomplishments are documented. Colleges and universities and other accreditation bodies must find new ways of assessing and recognizing learning that incorporate activity outside their campuses.

1 <http://www.tcu.gov.on.ca/pepg/publications/DiscussionStrengtheningOntarioPSE.pdf>

2 <http://www.contactnorth.ca/newsroom/strengthening-ontario-centres-commentary>

The Ministry of Training, Colleges and Universities can become a leader in understanding and influencing how the credentialing process is evolving, so that Ontario displays the best of educational innovation tied to academic quality. These activities build on the ministry's authority to decide who may award degrees, its responsibility for supervising professional licensing, and its commitment to providing access to affordable, high-quality education.

To establish a more responsive and comprehensive approach to credentialing in the future, it is imperative to address some of the problems of today.

One key criticism is that credentialing tends to be managed from an institutional rather than a student or sector-wide viewpoint. A laudable desire to maintain standards and to differentiate themselves competitively can lead colleges and universities to assume a “not invented here” attitude toward academic work done elsewhere. Students who change colleges and universities can find themselves negotiating unpredictable credit transfers or re-fulfilling slightly differing requirements.

Another challenge is gaining recognition for learning that takes place outside formal academic settings. Job experience, workplace or military training, and personal independent study can all be difficult or impossible to translate into academic credit. At a time of widening concern about the rising costs of education, the credibility and reputation of the post-secondary education sector suffer when colleges and universities require students to “learn” skills they have already mastered.

Employers, too, have reason to ask for changes in, and alternatives to, the credentialing system. While public and private sector employers are, in a very real sense, consumers of educational credentials and rely on colleges and universities to screen prospects, educational outputs like degrees, credits, and grades are often too coarse-grained to address particular employment requirements. We can expect employers to be keenly interested in more flexible, agile, and open forms of skills credentialing, certainly as a supplement to traditional academic degrees and certificates, and in some cases as a replacement for them.

Opportunities for Ontario

Activity directed at shaping new ways to transfer, award, and aggregate recognition for learning is intense, and there is a good deal of innovation and experimentation that merits the Ministry of Training, Colleges and Universities' support. In particular, the ministry could foster and encourage:

- Improved articulation of traditional academic credits;
- Competency-based and prior learning assessment; and
- Alternative credentials and aggregation models.

In the sections below, we elaborate on the need for investments in these areas and identify three specific actions the Ministry of Training, Colleges and Universities could consider.

Improved Articulation

Improving the portability of educational credits and credentials is one of the most important steps colleges and universities can take to align themselves with the reality of an increasingly competitive and consumer-oriented marketplace. Since the Ministry of Training, Colleges and Universities released its credit transfer policy vision in 2011, Ontario has begun to create the policy, organizational, and infrastructure framework for improving credit portability within the province. This is an opportunity to leap ahead – not simply to catch up – in credit transferability with the following ministry initiatives:

- Pursue its announced goal of a province-wide credit transfer system by 2015 seeking the widest possible range of multilateral and block transfer agreements, based on the principle that all credits earned at Ontario’s public colleges and universities should be transferable within the province.
- Coordinate articulation efforts between colleges and universities in Ontario and colleges and universities or other appropriate bodies in other provinces and support efforts to create a national articulation policy.

Competency-Based and Prior Learning Assessment

New learning options have revitalized interest in granting credit by assessing competencies gained outside of traditional classrooms. Credit by examination is one well-established option.

In the United States, thousands of post-secondary institutions recognize credits earned through the [College Level Examination Program \(CLEP\)](#) and the [DANTES Subject Standardized Test \(DSST\)](#). CLEP and DSST credits are not widely accepted in Canada, however, and there are no close equivalents, though some Canadian colleges and universities offer students challenge-for-credit options.

Another strand in the movement toward competency-based credit is prior learning assessment and recognition (PLAR). PLAR helps students demonstrate non-traditional learning achievements so that faculty members can assess them for academic content and value. Historically, it has been institution-based, fostered by advocate organizations that help colleges and universities implement academically sound PLAR programs. Typically the intent has been to give adult learners a head start earning a credential in a field where they already have work, voluntary or other learning experience.

But PLAR is changing in two key ways that broaden its impact. First, direct-to-student PLAR services are now becoming available. Through its [Learning Counts](#) initiative, the U.S. PLAR organization, the [Council for Adult and Experiential Learning](#) (CAEL), helps individuals create learning portfolios that are then reviewed by CAEL assessors for a credit recommendation. Over 100 partner institutions have agreed to accept CAEL's recommendations. The Kaplan for-profit learning organization's [KNEXT](#) subsidiary markets a similar service.

PLAR is also becoming more relevant to self-directed academic study online. Major online institutions like the [University of Maryland University College](#) and [UMassOnline](#) are adapting their PLAR processes to attract students who have completed free massive open online courses (MOOCs) from other providers. With learning delivery and assessment separated this way, a student record might be substantially or entirely composed of PLAR or other assessment-based credits.

Perhaps the most radical attempt to re-orient post-secondary education around students' demonstrated capabilities is [Western Governors University](#) (WGU), based in Salt Lake City, Utah. Challenging traditional notions of seat time and calendar-based coursework, WGU awards credit solely on the basis of competency assessments in the form of examinations, essays, and portfolios. Students acquire the competencies required by their course of study; however, they choose and progress toward a degree as fast as they can pass their assessments. Now enrolling over 25,000 students, WGU operates nationally within the USA and has several state-endorsed subsidiaries. Recently the [University of Wisconsin](#) announced that it would offer its own competency-based degree program.

WGU's success makes it clear that the competency approach appeals to a substantial student market, but obstacles to wider adoption remain. Seat time and other artifacts of a calendar-based educational program are deeply imbedded in post-secondary education and in ancillary processes like employer reimbursements for education. Transfer and articulation between competency-based and credit-hour based systems are a challenge. The post-secondary education sector also lacks well-developed competency and learning outcomes definitions and validated assessments – matters which, though equally true of the traditional credit system, are more evident in a competency-based environment.

With all these developments in mind, we believe that the Ministry of Training, Colleges and Universities could:

- Promote province-wide and nationwide systems that allow non-matriculated learners to earn academic credit by examination;
- Ensure that post-secondary education regulations and funding models do not discriminate against academic credits awarded on the basis of demonstrated skills and experience rather than course completion and residence;

- Permit public colleges and universities in Ontario to design academic programs and award degrees based on competency assessments;
- Ensure that competency and prior learning-based credits are incorporated into Ontario's articulation framework so that these methods can produce reliably transferable academic credit;
- Encourage and participate in similar initiatives across Canada with the view of establishing national standards and services for competency and prior learning assessments;
- Establish funding opportunities and coordination efforts to help colleges and universities develop competency frameworks and assessments; and
- Support research into more accurate and cost-effective ways to implement competency-based learning.

Alternative Credentials and Aggregation Models

While competency assessment and PLAR create more paths to traditional academic credit, completely new types of credentials are emerging. The post-secondary sector's effective monopoly over academic credit has been its secret weapon during the Internet era, a barrier more daunting to interlopers than all of its faculties, libraries, and campuses. That monopoly, however, is coming under increasing challenge.

The most far-reaching challenge is the movement to issue, earn, and display digital "badges" — indicators that issuers award to individuals in recognition of some skill or achievement. Badges combine elements of social networking, electronic certification, and learning metadata.

In the vision of the open source organization [Mozilla](#), anyone curious about a badge holder's credentials will be able to authenticate the badge with its issuer and to learn about what it required and how it was earned. Badge metadata might also include instructor comments or third-party assessments. In 2011, the [MacArthur Foundation](#), [HASTAC](#) (Humanities, Arts, Science and Technology Advanced Collaboratory) and Mozilla invested \$2 million for leading organizations, learning and assessment specialists, designers and technologists to create and test badges and badge systems. The badging movement has not attempted to specify an intrinsic value or standard of quality for badges; that is left to the marketplace.

Some implementations of badges are trivial, but others have clear potential for helping post-secondary education address the limitations of traditional credits. The [University of California](#)

[at Davis](#), for example, is incorporating badges into its undergraduate program in sustainable agriculture to help students demonstrate skills in a more fine-grained way than a transcript does. The [University of Southern California](#) uses badges to document student participation in volunteer community service projects. Ultimately, we may see the convergence of badging with competency-

based assessment and prior learning assessment, creating a tier of badges accepted as essentially equivalent to academic credit.

Other sorts of credentials are emerging which, like badges, may compete with academic credits even as they intertwine with the post-secondary sector. Industries like manufacturing, IT, and health care are developing their own “stackable credentials” that address workforce requirements, potentially but not necessarily earned in post-secondary institutions. The new ventures offering MOOCs promote credit substitutes like certificates of achievement. The undeniable academic ambition of MOOCs from the more prestigious universities or conglomerates may well endow these certificates with employment marketplace clout.

Efforts are also being made to aggregate these credentials. Badges can be combined in “meta-badges” to reflect complex competencies, while one of the motivating ideas behind stackable credentials is to permit the flexible combination of different skill sets. [Degreed](#), a new venture founded by Internet entrepreneur William Blake and open education pioneer David Wiley, offers to aggregate learning achievements from multiple sources using a scoring mechanism, going so far as to issue “degree equivalencies” up to the master’s level. Efforts like these aim to create a recognized credentialing service completely decoupled from learning delivery.

Finally, in some contexts, academic credentials have lost significance because learners can show their achievements directly to anyone interested in evaluating them. Personal profiles at online software development sites like [GitHub](#) and [Stack Overflow](#), which show each person’s activity and others’ ratings of their efforts, already carry some weight in the IT employment marketplace. Student e-portfolios could generalize this phenomenon, especially if better mechanisms for authenticating portfolio entries are developed.

While acknowledging that any change in awarding and aggregating learning credentials has its dangers, the Ministry of Training, Colleges and Universities could embrace the potential of new systems even while remaining diligent about the possibility of fraud or failure including:

- Encourage and fund pilot efforts demonstrating the potential of badges and other alternative credentials within post-secondary education;
- Support research that promotes the security, quality, and educational validity of alternative credentials;
- Establish an educational e-portfolio system available to all students in Ontario, with integrations permitting colleges and universities to add and authenticate entries; and

- Study radical alternatives to credentialing and credit aggregation now being explored in the post-secondary sector, and develop scenarios for the possible adoption of these methods as they mature.

Looking to the Future

We are convinced that post-secondary credentialing must – and will – become more student-centric and less institution-centric. Our youngest students have seen a remarkable proliferation of new educational options, but there have been few comparable changes in recognizing and rewarding educational achievement. It's time to fix this problem, or others will fix it for us. The tools are there. However much we might profit from research and experimentation, above all we need action to implement practices whose potential is clear, including:

- Devise a comprehensive system of articulation grounded in the principle of credit transportability among all public colleges and universities in Ontario;
- Expand alternative mechanisms for awarding credit through examinations, competency assessments, and prior learning assessments;
- Develop tools like badges and e-portfolios that allow students to demonstrate their achievements in more personal, accessible, and detailed ways; and
- Give colleges and universities the freedom to devise radically different assessment and degree options based on student achievement alone, regardless of seat time or residency.

Ontario has built a world-class post-secondary education sector. Today the challenge is to respond to frictionless information flows and globally-networked expertise. The way to preserve Ontario's educational preeminence is to make it easier for students to take advantage of the best the world has to offer, to recognize what they achieve when exploiting those opportunities, and to allow them to assemble an education that meets their needs in every phase of life. To do that, we need credentials that keep pace with the educational accomplishments they represent.