



**Higher
Education**
STRATEGY ASSOCIATES

Strengthening Regional Colleges in Canada

**Prepared by Jonathan Williams and
Michael Savage**

FALL 2020





Higher Education Strategy Associates (HESA) is a Toronto-based firm providing strategic insight and guidance to governments, postsecondary institutions, and agencies through excellence and expertise in policy analysis, monitoring and evaluation, and strategic consulting services. Through these activities, HESA strives to improve the quality, efficacy, and fairness of higher education systems in Canada and worldwide.

Authors: Jonathan Williams and Michael Savage

Acknowledgements: This report benefitted from valuable guidance and ideas from Alex Usher and Nadiia Kachynska at HESA, and Nobina Robinson. We would like to thank Atlantic Colleges Atlantique (ACA) for permitting us to publish this report that is inspired in no small part from our work on their behalf, as well as all the many interviewed during our work on behalf of the ACA. We have taken important lessons from work with other clients as well, and thank them for working with us.

Any errors or omissions are the authors' alone.

Contact:

Higher Education Strategy Associates
20 Maud Street, Suite 207, Toronto ON, M5V 2M5, Canada
+1 (416) 848-0215
info@higheredstrategy.com
www.higheredstrategy.com

© Higher Education Strategy Associates, 2021

Table of Contents

Executive Summary	IV
Context	IV
Theme 1: Strengthen teaching and learning	V
Theme 2: Increase the flexibility of education delivery	VI
Theme 3: Promote diversity in programs and careers	VII
Theme 4: Improve Service to Employers	VII
Résumé	IX
Contexte	IX
Premier thème : Renforcer l’enseignement et l’apprentissage	X
Deuxième thème : Assouplir les méthodes d’enseignement	XI
Troisième thème : Promouvoir la diversité dans les programmes et les carrières.....	XII
Quatrième thème : Améliorer le service aux employeurs	XIII
Economic and Social Trends Affecting Canada	2
Changing Skill Demands	2
Drivers of Change Across the Developed World	2
Demographic change	3
Technological change	3
Globalisation	4
Shifting Consumption from Goods to Services	5
Further Challenges for Peripheral Canada	5
Sustaining rural communities	5
Unfavourable firm dynamics	7
Implications for Regional Colleges	8
Theme 1: Strengthen Teaching and Learning	9
Context	9
Vocational and qualifications frameworks	9
Measures to promote improvement in instruction.....	10
Transformational Activities	12
Develop and apply qualifications frameworks	12
Introduce teaching and learning frameworks	13
Create teaching and learning centres	15
Theme 2: Increase the Flexibility of Education Delivery	18
Context	18
A cautionary note on “flexibility”	19
Inflexible academic calendars and program sequences	19
Accommodating students who fail courses	20
Online and blended learning	20
Micro-credentials	21
Recognition of prior learning.....	22
Transformational Activities	23
Adopt a more flexible annual calendar	24
Introduce more flexible offerings for continuing education	26
Strengthen recognition of prior learning	28

Theme 3: Promote Diversity in Programs and Careers	30
Context	30
Study success supports and institutional data systems	30
Supporting equity-deserving groups	32
International recruitment: a high-risk-high-return strategy	33
Transformational Activities	35
Build data-driven systems to support study success	36
Enshrine commitment to diversity in policy	37
Pursue ambitious international recruitment with an emphasis on eventual immigration	37
Recruit for rural Canadian livelihoods	39
 Theme 4: Improve Service to Employers	 40
Context	40
Coordination	40
Labour market foresight	41
Applied research	42
Customised training	44
Transformational Activities	44
Strengthen labour market foresight capacity	45
Improve coordination of employer engagement	47
More ambitious applied research and customised training	48
 Conclusion	 50
Prioritisation	50
Cross-cutting elements of implementation	51
Internal-facing measures	51
External-facing measures	51
 Appendix 1: Heuristic Tables	 53
 Appendix 2: Transforming Apprenticeship	 54
Context	54
Focusing on learning	55
An inflexible form of credential	55
Low completion rates	57
Raising youth participation	58
Transformational Activities	58
Continue to strengthen the competency basis for apprenticeship	58
Develop micro-apprenticeship-certifications	58
Strengthen requirements for certification in critical fields	59
Extend proactive support to apprentices	59

Boxes

Box 1: Providing targeted support for students who fail courses.....	25
Box 2: Findings from survey of middle-aged Atlantic Canadians regarding interest in training	27
Box 3: Unbundling training delivery and assessment of competencies	29
Box 4: Nudging for study success.....	31
Box 5: Tackling the absence of comparative data on institutional performance	36
Box 6: The development of shared study programs	47

Executive Summary

Canadian colleges provide an array of programs predominantly at the diploma level (ISCED 5). They arguably represent the strongest system of short-cycle higher education institutions in the world. For instance, short-cycle higher education attainment among Canadian adults is higher than for any other OECD country, and almost four-times the OECD average. Colleges focus mainly on training skilled workers for their local economies, but also provide applied research and customised training services to support businesses and other organisations.

This report focuses on Canada's *regional colleges*, as in the relatively smaller community-college-type institutions located across Canada outside of the largest urban centres. Notwithstanding their strength, we would argue that regional colleges in Canada can pursue transformational activities to achieve markedly better results on behalf of students and employers. Our proposals imply considerable short-term challenges and often high costs, but, we believe, great returns down the road.

There is considerable diversity among Canadian colleges and the jurisdictions where they operate. Many institutions may be leaders in the kinds of activities that we address in this report – we look to identify these leaders where possible, but surely do not reflect the full breadth of colleges' accomplishments. As well, the research behind this report focused closely on Atlantic Canada, stemming in large part from a project on behalf of the Atlantic Colleges in late 2019 and early 2020. All the same, we humbly suggest that all regional colleges could at least further improve regarding most of our transformational activities, and so would ascribe to this report pan-Canadian relevance.

We identify 13 transformational activities under four themes – Appendix 2 addresses the additional theme of apprenticeship. Before reviewing these recommendations, and possible ways colleges could collaborate in pursuing them, we briefly discuss the evolving context in which colleges are operating.

Context

Technology, globalisation, demography and shifts in consumer demand are transforming the labour market, and Canadian society as a whole. While it is difficult to know what will follow the COVID-19 pandemic, it seems likely that these changes will only accelerate. Regional colleges have to adapt to meet the associated challenges.

Graduates must develop a broader skillset than previously. Technical skills alone are no longer adequate in most fields of work. Workers must be socially skilled, while also being prepared to solve problems using new technologies. These stronger skills will be more important for the strongest firms that aspire to higher levels of innovation and productivity.

While the pace of technological change may not be accelerating in the ways commonly asserted, workplace changes are continual and many industries and workers will remain at risk of displacement for the foreseeable future. Colleges can help enable those threatened or affected to compete and/or reorient into new opportunities. As well, there

may be an important role for colleges in staying informed of practices in leading firms and jurisdictions and transmitting lessons to students and local employers. Many small and medium-sized enterprises have special difficulties to keep up with leading practices, and could benefit from greater relevant information and training.

So-called traditional industries will remain important. The challenge in these sectors will be to ensure adequate labour supply, and to enable workers in these fields to raise productivity through the use of technology and innovative work methods. Many of these sectors are seasonal and concentrated in rural communities – exercising multiple occupations can help to meet labour demand and provide steadier year-round income. In general, college campuses are economic and social anchors of many rural areas, and these communities need them to exercise proactive leadership.

Finally, much of the challenge for peripheral Canada is and will remain attracting and successfully integrating new immigrants. Where regional colleges can help in this area, their communities could experience remarkable benefits in terms of economic and social development.

Theme 1: Strengthen teaching and learning

The essential purpose of colleges is to educate learners, helping them to expand what they know and can do, and subsequently fill occupations that provide good livelihoods. It is most of all through high quality teaching that colleges help students to learn. We identify three measures by which colleges can promote radical improvement in teaching and learning for their students.

Our first recommendation is that colleges work to develop qualifications frameworks and put them into practice. Qualifications frameworks are common to many developed jurisdictions, identifying the competencies associated with education credentials and occupations. They support learning outcomes-based instruction, more informed labour market decision-making by all actors, and easier transitions between occupations – in part by greatly facilitating recognition of prior learning (RPL). Canada lags behind in applying qualifications frameworks in a widespread fashion to structure our education and training system. Colleges cannot implement full qualifications frameworks entirely on their own, but they can make a critical contribution by beginning such work with their own programs.

We secondly recommend that colleges adopt teaching and learning frameworks (TLFs). Strong TLFs establish clear objectives and expectations for the quality of instruction, facilitating performance measurement and improvement. Critical elements of a TLF include expectations for transversal learning outcomes, instructor competencies, approaches to work-integrated learning (WIL), and the responsibilities of relevant actors.

Lastly under this theme, we recommend that colleges operate teaching and learning centres (TLCs), so that there is institutional capacity for fostering communities of practice among instructors. TLCs play a facilitating role, and a resource role in delivering training and developing or collating research and information from elsewhere.

Progress on qualifications frameworks necessitates close collaboration amongst colleges – for each institution to operate its own framework would be counterproductive and costly. Coalitions of colleges could similarly develop unified TLFs, though it could make more sense to develop common guiding principles while allowing each institution to develop many of its own related policies and initiatives. Finally, a single TLC for colleges within a certain region, such as Atlantic Canada, could pool resources and facilitate the development of regional communities of practice, especially given how the multi-campus character of many colleges would require that their TLCs operate largely online anyway. Any TLC initiative would need to have a presence physically on campuses to help generate buy-in however, and if colleges developed their own TLCs these could still share resources and collaborate extensively.

Theme 2: Increase the flexibility of education delivery

To expand their impact, colleges need to cater education delivery to the needs of learners and the wider economy. We recommend three approaches for colleges to enhance their strategic flexibility.

The first measure is to adopt a flexible annual calendar, which aligns program timing with industry and provides greater access to programs throughout the year. This is not only about having multiple intakes, but also less rigid semesters of instruction. Changes can improve the efficiency of the labour market, strengthen the quality of WIL and facilitate the development of mixed-livelihood strategies in rural communities.

The second measure encompasses more flexible offerings for continuing education. Many innovations in flexible delivery are most suitable for more educated and mature learners. We recommend the development of post-graduate and certificate programs, as well as micro-credentials, to cater to this market, with blended learning and modularised learning delivery for these offerings.

Thirdly, greater recognition of prior learning (RPL) is critical. Developing qualifications frameworks represents the single most transformational step colleges can take to advance RPL, but colleges need to also continuously optimize their internal systems and work with their provincial governments to explore new funding structures to strengthen incentives for RPL.

Adopting more flexible annual calendars depends largely on institutions' internal systems, with limited potential for inter-institutional collaboration. There is more potential for collaboration in the development of flexible continuing education offerings, for instance to develop a consistent framework for micro-credentials, to limit destructive competition and possibly to create optimal platforms for online learning through pooling of resources. In RPL, institutional collaboration can allow the sharing of resources for pre-assessment and assessment, and facilitate lesson-learning and accountability for progress.

Theme 3: Promote diversity in programs and careers

Canada is growing increasingly diverse, not only in ethnicity but in other ways of being or earning a living. This is reflected in the student bodies of colleges, which must respond and better support all learners to be successful.

Our first recommendation is that colleges build data-driven systems to support study success. This involves strengthening human resources and administrative capacity for the collection and use of data to design and implement evidence-based interventions. Colleges need to also gear relevant services towards implementing these interventions, shifting focus from supporting students who seek out support to delivering directed support to those identified as being in need. Students from traditionally disadvantaged communities benefit most from this kind of approach.

We recommend that colleges enshrine commitment to diversity in policy. More specifically, Educational Equity Policies can confirm institutional commitment to advancing equity and spur action. Particular efforts need to go towards staff buy-in and training.

Colleges should pursue ambitious international recruitment while responsibly mitigating related risks. Such efforts can be especially transformational if they facilitate eventual immigration, notably in rural regions and where focused on fields with labour shortages. To succeed, colleges must invest in supporting students' adaptation to Canada and integration in their communities.

Finally, we recommend that rural colleges develop and promote programming helping students to pursue multi-occupational careers. Facing serious labour shortages, many rural communities may offer strong livelihoods to those who combine different fields of work. Colleges could play a critical role in spreading awareness and channeling learners into these careers.

The predominant opportunity for institutional collaboration in promoting diversity in programs and careers is through joint learning. Additionally, international student recruitment could benefit from more intensive collaboration, for instance in processing applications, while institutions might benefit from a common strategy and communications for feeding students into multi-occupational careers.

Theme 4: Improve Service to Employers

Regional colleges support Canadian businesses and other organisations through their well-prepared graduates, customized training, and applied research and innovation support. Colleges in turn rely on these partners, for instance to provide their students with WIL experiences and to inform academic program offerings.

We recommend that regional colleges strengthen their labour market foresight capacity. The college role needs to be reimagined from consuming information and feedback from industry and providing solutions, to exchanging information that informs the activities of all parties. Labour market foresight units may conduct research on high-level economic trends affecting colleges' main clients (i.e. learners and employers) and can convene

informed contacts for knowledge exchange. For many parts of Canada, such as Atlantic Canada, a single regional body could fulfill this role most effectively, and also facilitate program cluster advisory committees as a modification of program advisory committees (PACs), with better support and governance.

Coordination of employer engagement is essential. Within institutions, bringing the leading actors in employer engagement under a common reporting structure can promote this objective, as can the use of a shared customer relations management (CRM) system. Colleges can also better coordinate amongst themselves within regions – we suggest finder’s fees for referrals on applied research and customised training projects, and even for WIL placements.

Finally, ambitious applied research and customised training are important to maximizing colleges’ impact. Colleges should develop coordinated areas of expertise, expanding the number of TAC-equivalent organisations and adding customised training to their purview. It makes sense to closely connect applied research and customised training services, given technology and skills are the two drivers of increased productivity in firms.

We provide some reflections on implementation at the end of the report, including the sequencing of our recommendations, and other considerations.

Résumé

Les collèges canadiens offrent une panoplie de programmes principalement au niveau du diplôme (CITE 5). Ensemble, ils représentent possiblement le plus fort système d'enseignement supérieur à court cycle au monde. Du fait, le Canada a le taux d'atteint de l'enseignement supérieur à court cycle le plus élevé de l'OCDE, soit presque quatre fois le niveau moyen du bloc. Les collèges se concentrent avant tout sur la formation des étudiants pour participer au marché de travail des communautés locales, mais ils offrent aussi aux entreprises et autres organisations de l'appui à la recherche appliquée et des services de formation sur mesure.

Nous mettons l'emphase dans ce rapport sur ce que nous qualifions de collèges régionaux, c'est-à-dire les collèges plus petits qui sont éparpillés sur le territoire Canadien à l'extérieur des plus grands centres urbains. Nonobstant leurs forces, nous croyons que les collèges régionaux pourraient transformer leurs approches dans plusieurs domaines pour mieux répondre aux besoins de leurs communautés. Nos propos comporteraient des défis considérables à court terme et des coûts souvent élevés, mais promettraient d'importants avantages à long terme.

Il faut reconnaître la diversité importante des collèges régionaux et de leurs juridictions. Plusieurs collèges poursuivent avec beaucoup de compétence des activités qui se ressemblent beaucoup à ce que nous proposons. Autant que possible, nous cherchons à identifier les chefs de file en relation aux activités pertinentes, mais nous ne reflétons sûrement pas la pleine ampleur des accomplissements des collèges canadiens. Aussi, les recherches qui informent ce rapport ont concentré largement sur le Canada atlantique, effectués dans le cadre d'un projet pour les Collèges de l'atlantique. Cela dit, nous suggérerions avec toute humilité que tous les collèges régionaux du Canada pourraient tirer des leçons ou améliorer leur performance en relation aux mesures transformationnelles que nous identifions. Alors nous affirmons que ce rapport a de la pertinence pancanadienne.

Nous avons regroupé treize mesures transformationnelles sous quatre thèmes, que nous allons discuter après avoir décrit le contexte actuel des collèges.

Contexte

La technologie, la mondialisation, la démographie et l'évolution de la demande du consommateur sont autant de facteurs qui transforment le marché du travail de même que l'ensemble de la société canadienne. Or, les collèges devront s'adapter afin de relever les défis associés.

Les diplômés doivent acquérir un éventail plus complet de compétences qu'auparavant. Les compétences techniques seules ne suffiront plus dans la plupart des domaines de travail. Les travailleurs doivent posséder des compétences sociales, et dans la mesure du possible, pouvoir utiliser les nouvelles technologies pour résoudre des problèmes. Ces qualités plus solides seront encore plus importantes pour les entreprises de pointe et celles qui aspirent à des niveaux plus élevés d'innovation et de productivité.

Même si le rythme de l'évolution technologique ne s'accélère peut-être pas autant qu'on a souvent anticipé, les changements en milieu de travail se poursuivent et les industries et les travailleurs risquent toujours d'être délogés. Les collègues peuvent aider les personnes qui sont menacées ou touchées à se réorienter vers de nouvelles possibilités. Ils pourraient également davantage se tenir au fait des pratiques des grandes entreprises et administrations, pour ensuite les transmettre aux étudiants et aux employeurs, aux fins d'adoption ou d'adaptation. Les petites et moyennes entreprises en particulier ont de la difficulté à se tenir au courant des pratiques de pointe, et pourraient bénéficier d'une formation et d'informations plus pertinentes.

Les industries soi-disant traditionnelles garderont sans doute leur importance. Le défi sera de leur garantir une offre de main-d'œuvre adéquate et de faire en sorte que les travailleurs de ces domaines deviennent plus productifs grâce à l'utilisation de technologies et de méthodes de travail innovantes. Nombre de ces secteurs sont saisonniers et concentrés dans les communautés rurales. Or, exercer plusieurs emplois peut contribuer à répondre aux besoins en main-d'œuvre et à se garantir un salaire stable à longueur d'année. De façon plus générale, les campus des collèges sont des pivots socio-économiques pour bon nombre de communautés rurales, qui ont besoin de leur leadership proactif.

Enfin, un enjeu de taille pour le Canada demeure l'attraction et la bonne intégration des nouveaux arrivants, en particulier dans les communautés rurales. En apportant une certaine contribution dans ce domaine, les collèges favoriseraient grandement le développement économique et social de leurs régions.

Premier thème : Renforcer l'enseignement et l'apprentissage

Le but essentiel des collèges canadiens est de former les apprenants, de les aider à accroître leurs connaissances et leurs capacités, afin qu'au bout du compte, ils puissent occuper des emplois qui leur assurent un bon gagne-pain stable et qui favorisent l'économie et le bien-être social de leurs communautés. Un enseignement de qualité est le meilleur moyen par lequel les collèges peuvent favoriser l'apprentissage des étudiants. Dans le présent rapport, nous proposons des mesures que les collèges régionaux pourraient prendre pour grandement améliorer l'enseignement et l'apprentissage de leurs étudiants.

D'abord, nous recommandons que les collèges élaborent des cadres de qualification au niveau de leurs régions. De nombreuses autorités du monde industrialisé ont mis au point ce genre de cadre où elles présentent les qualités requises pour obtenir certains diplômes et occuper certains emplois. Ces cadres favorisent l'éducation axée sur les résultats, permettent à tous les acteurs de prendre des décisions plus éclairées sur le marché du travail et facilitent la transition des apprenants d'un emploi à l'autre – en grande partie à travers de la reconnaissance des acquis. Le Canada est à la traîne de plusieurs autres pays en ce qui concerne la mise en application des cadres de qualification pour structurer notre système d'enseignement et de formation. À eux seuls, les collèges ne pourraient pas mettre en œuvre un cadre de qualification intégral, mais ils pourraient en l'appliquant à leurs propres programmes ils pourraient faire des avances importantes.

Nous recommandons ensuite que les collèges régionaux se dotent de solides cadres d'enseignement et d'apprentissage. On peut ainsi établir des attentes et des objectifs clairs en matière de qualité de l'enseignement, ce qui facilite la mesure et l'amélioration du rendement. Les éléments essentiels d'un cadre d'enseignement et d'apprentissage comprennent les objectifs de formation transversale pour les étudiants, les attentes au niveau des compétences du personnel enseignant, les attentes en matière d'apprentissage intégré au travail et les responsabilités de tous les acteurs visés.

Dernier élément de ce premier thème, nous recommandons aux collèges de créer des centres d'enseignement et d'apprentissage. Les collèges ont besoin de la capacité institutionnelle de favoriser une communauté de pratique parmi les enseignants. Les centres d'enseignement et d'apprentissage jouent un rôle de facilitateur et de ressource en ce qui concerne la prestation de la formation et le développement ou le rassemblement de recherches et d'informations provenant d'ailleurs.

Les cadres de qualification nécessiteraient une collaboration étroite entre des collèges au niveau des régions – car l'élaboration d'un cadre pour chaque établissement serait coûteuse et irait à l'encontre du but visé. Des collèges pourraient également mettre au point un cadre d'enseignement et d'apprentissage commun. Cela dit, il serait peut-être plus logique d'élaborer des principes directeurs communs tout en laissant à chaque établissement le soin d'élaborer ses propres politiques et initiatives. Enfin, un seul centre d'enseignement et d'apprentissage pour plusieurs collèges, tels que les collèges de l'Atlantique, pourrait permettre la mise en commun des ressources et la création de communautés de pratique régionales. À noter également que de nombreux collèges ont plusieurs campus, ce qui obligerait leurs centres d'enseignement et d'apprentissage à fonctionner largement en ligne. Cependant, nous croyons que tout centre d'enseignement et d'apprentissage devrait afficher une présence physique sur les campus afin d'en favoriser l'acceptation. D'ailleurs, même si chaque collège met sur pied son propre centre, le partage des ressources et la collaboration soutenue seront toujours possibles.

Deuxième thème : Assouplir les méthodes d'enseignement

Pour accroître leur portée, les collèges doivent axer leurs méthodes d'enseignement sur les besoins des apprenants et de l'économie en général. Leurs structures doivent s'adapter à la situation des étudiants et des employeurs, plutôt que l'inverse. Nous recommandons trois mesures pour que les collèges soient plus souples.

La première mesure serait d'assouplir l'année académique, pour aligner davantage les programmes d'études sur les besoins de l'industrie et les rendre plus accessibles tout au long de l'année. Il n'est pas question seulement d'avoir plusieurs moments d'entrée aux programmes, mais aussi des semestres d'enseignement moins rigides. Ces modifications pourraient accroître l'efficacité du marché du travail, renforcer la qualité de l'apprentissage intégré au travail et faciliter l'élaboration de stratégies de promotion de plusieurs moyens de subsistance en milieu rural.

La deuxième mesure consisterait à augmenter et assouplir les offres de formation continue. De nombreuses innovations à ce chapitre sont particulièrement adaptées aux apprenants plus instruits et plus âgés. Nous recommandons la mise au point de

programmes de post-diplôme ou post-bachelier, et de certificats, ainsi que de micro-titres de compétences, pour répondre aux besoins de ce marché. Ces programmes pourraient être largement d'apprentissage mixte et d'apprentissage par modules.

Troisièmement, la meilleure reconnaissance des acquis est essentielle. La mesure la plus efficace pour avancer cet objectif serait d'élaborer un cadre de qualification. Cela dit, les collèges pourraient également consolider leurs systèmes internes et travailler avec les gouvernements de leurs provinces pour explorer de nouvelles structures de financement afin de renforcer les incitations à la reconnaissance des acquis.

L'assouplissement du calendrier d'enseignement dépendrait largement d'une révision des systèmes internes des collèges. L'augmentation et l'assouplissement des offres en éducation permanente présente une plus grande possibilité de collaboration interinstitutionnelle. Par exemple, il serait possible d'adopter une définition uniforme des micro-titres de compétences, de limiter la concurrence néfaste et peut-être même de créer des meilleures plateformes d'enseignement en ligne grâce à une mise en commun des ressources. En matière de reconnaissance des acquis, la collaboration inter-collégiale favoriserait le partage des ressources pour la pré-évaluation et l'évaluation et permettrait de tirer des leçons et d'encourager la reddition de comptes.

Troisième thème : Promouvoir la diversité dans les programmes et les carrières

Le Canada est une société de plus en plus diversifiée, non seulement sur le plan ethnique mais aussi par ses nombreuses façons d'être ou de gagner un revenu. Cette diversité se reflète également dans le corps étudiant des collèges régionaux, lesquels doivent répondre aux besoins de tous les apprenants et mieux les soutenir pour assurer leur réussite.

Nous recommandons d'abord que les collèges créent des systèmes guidés par les données pour soutenir la réussite des études. Pour ce faire, il faut renforcer les ressources humaines et la capacité administrative nécessaire à la collecte et à l'utilisation des données afin de concevoir et de mettre en œuvre des interventions fondées sur des données probantes. Les collèges devraient également orienter les services appropriés vers la mise en œuvre de ces interventions, ce qui permettrait de passer du soutien des étudiants qui demandent de l'aide à la prestation d'une aide ciblée sur ceux qui en ont besoin. Les étudiants qui viennent de communautés traditionnellement désavantagées tirent les plus grands bénéfices de ce genre d'approche.

Nous recommandons aux collèges d'intégrer dans leurs politiques un engagement en faveur de la diversité. Plus précisément, une politique d'équité en matière d'éducation peut confirmer l'engagement à favoriser l'équité et à la mettre en pratique. Des efforts particuliers doivent être déployés pour obtenir l'appui du personnel et lui offrir une formation efficace.

Les collèges devraient prioriser le recrutement international et mettre l'accent sur l'immigration éventuelle des recrutés. Le recrutement international intensifié pourrait avoir une incidence considérable sur l'immigration, mais les collèges doivent aussi atténuer de

façon responsable les risques inhérents. Il serait particulièrement avantageux de recruter des étudiants internationaux dans des domaines touchés par une pénurie de main-d'œuvre. Pour mieux réussir, les collèges devront investir pour soutenir l'adaptation des étudiants au Canada et leur intégration dans la communauté.

Enfin, nous recommandons que les collèges ruraux conçoivent et mettent en œuvre des programmes pour aider les étudiants à occuper plusieurs emplois en même temps. Plusieurs collectivités rurales sont confrontées à de graves pénuries de main-d'œuvre, mais peuvent offrir de solides moyens de subsistance à ceux qui sont prêts à combiner plusieurs domaines de travail. Les collèges peuvent jouer un rôle crucial dans la sensibilisation et l'orientation des apprenants vers ces carrières.

L'apprentissage partagé est la meilleure manière que des collèges pourraient collaborer dans la promotion de la diversité. Le recrutement d'étudiants internationaux pourrait profiter d'une collaboration plus soutenue, par exemple en ce qui concerne le traitement des candidatures. Aussi, des collèges pourraient bénéficier d'une stratégie et d'une communication communes pour orienter les étudiants vers des carrières axées sur plusieurs emplois.

Quatrième thème : Améliorer le service aux employeurs

Les collèges régionaux soutiennent les entreprises et autres organisations en produisant des diplômés bien préparés, en offrant la formation sur mesure et en soutenant la recherche appliquée. Les collèges s'appuient à leur tour sur ces partenaires, par exemple pour offrir à leurs étudiants des expériences d'apprentissage intégrées au travail et pour mieux concevoir les programmes d'études.

Nous recommandons que les collèges renforcent leur capacité d'analyser l'évolution des besoins du marché du travail. Ils doivent réinventer leur rôle : au lieu de proposer des solutions à l'industrie à la lumière de la rétroaction et des renseignements obtenus d'elle, ils devraient échanger des renseignements avec l'industries pour mieux éclairer les activités de toutes les parties. Des services d'analyse prospective du marché du travail peuvent mener des recherches sur les tendances économiques à grande échelle qui touchent les principaux clients des collèges (soit les apprenants et les employeurs), et réunir des personnes-ressources bien informées pour l'échange de connaissances. Dans plusieurs régions canadiennes, des organismes uniques couvrant la région entière pourraient remplir ce rôle de manière plus efficace. On pourrait aussi créer des comités consultatifs chargés de grappes de programmes de toutes les institutions au lieu d'avoir un comité consultatif par programme et par institution, avec un soutien et des cadres de fonctionnement améliorés.

La bonne coordination de l'engagement des employeurs est essentielle. Dans chaque collège, le regroupement des principaux acteurs de l'engagement des employeurs dans une structure de rapport commune pourrait favoriser cet objectif, tout comme la création d'un système commun de gestion des relations avec la clientèle. Les collèges pourraient également mieux coordonner leurs activités entre eux, par exemple prévoir la remise d'une prime à l'aiguillage de candidats aux programmes de recherche appliquée et aux

projets de formation sur mesure, et même pour les placements en apprentissage intégré au travail.

Enfin, l'ambition envers la recherche appliquée et les services de formation sur mesure est importante pour maximiser l'impact des collèges. Les collèges devraient mettre au point des domaines de spécialisation coordonnés, en augmentant le nombre d'organismes qui s'apparentent aux centres d'accès à la technologie et en ajoutant la formation sur mesure à leurs compétences. Étant donné que la technologie et les compétences sont les deux moteurs de l'augmentation de la productivité dans les entreprises, il est logique de créer un lien étroit entre la recherche appliquée et les services de formation sur mesure.

À la fin du rapport, nous offrons quelques réflexions sur l'implémentation de ces initiatives. Cela inclut comment les initiatives s'interagissent, et comment les séquencer.

Introduction

Canadian colleges provide an array of programs predominantly at the diploma level (ISCED 5). They arguably represent the strongest system of short-cycle higher education institutions in the world. For instance, short-cycle higher education attainment among Canadian adults is higher than for any other OECD country, and almost four-times the OECD average. Colleges focus mainly on training skilled workers for their local economies, but also provide applied research and customised training services to support businesses and other organisations. We define regional colleges as being smaller colleges of fewer than ~20,000 students, which are located outside of Canada's major urban centres (i.e. outside of cities of 500,000 or more).

This report discusses transformational activities that Canadian colleges can pursue to better promote the economic and social development of their communities. In November 2019, Atlantic Colleges Atlantique (ACA) commissioned Higher Education Strategy Associates (HESA) to articulate a vision for transformation for its seven member-colleges to maximise their contributions towards the Atlantic region's economic and social development. This report combines what HESA learned in our work for Atlantic colleges in late 2019 and early 2020, with our experiences and observations from work elsewhere in Canada and internationally.¹

We must note that there is considerable diversity among Canadian colleges and the jurisdictions in which they operate. Many institutions may be well underway in pursuing the kinds of activities that we propose. We look to identify leaders with regards to our transformational activities where possible, but surely do not reflect the full breadth of colleges' accomplishments. Moreover, the research behind this report focused most of all on Atlantic Canada. All the same, we humbly suggest that all regional colleges could further improve regarding most of our transformational activities, and so would ascribe to this report pan-Canadian relevance.

We identify thirteen transformational activities, which fall under the following four themes:

1. Strengthen teaching and learning
2. Increase the flexibility of education delivery
3. Promote diversity in programs and careers
4. Improve service to employers

We proceed as follows. We first review economic and social trends affecting Canada, to situate colleges and the societal challenges our recommendations would seek to address. Then we review the transformational activities by theme. The conclusion outlines a matrix for prioritising the transformational activities and provides insights on cross-cutting steps for implementation. In Appendices, we provide heuristic tables supporting our analysis, and address transformational activities in apprenticeship.

¹ Given this combination of learning, unless explicitly indicated our observations should not be taken to reflect any specific Atlantic colleges. Even for our project on behalf of the ACA, HESA spent considerable time looking at challenges and leading practices outside of Atlantic Canada, which helps to inform this report. That being said, we cannot claim to have comprehensively studied regional colleges outside the Atlantic region to inform this project.

Economic and Social Trends Affecting Canada

Much consternation in policy circles concerns the “future of work”. This section will review how demand for skills is evolving in developed economies, the major factors driving these changes, and some specific challenges facing Canadians outside major urban centres.

Changing Skill Demands

Productive tasks, and consequently skill demands, have been evolving in fits and starts since the beginning of the industrial revolution. Colleges have to respond to these changes to fulfil their obligations to students, employers and their wider communities.

A decline in demand for routine tasks has been well documented across developed economies. What has been less well understood is that this has extended increasingly into cognitive tasks, and beyond the routine into certain non-routine tasks. This has helped to hollow out the middle of the income distribution. Social skills, meanwhile, appear to be increasing in importance, especially where these combine with cognitive skills. Workers who can work well with others, and make use of new technologies, are best able to be successful.

There are firm and regional-level implications from these changes. Differences in productivity and skill demands are growing between businesses, causing greater differences in wages. Meanwhile patterns of economic convergence between regions have slowed and possibly reversed, with the emergence notably of breakout innovation hubs such as San Francisco and Austin. In essence, it seems that the differences in economic success between leading firms and regions, and laggards, have grown.

Within regions, these patterns in skill demands may pose special challenges for certain groups. Greater emphasis on social skills may be disadvantaging male workers or clashing with their self-identity. Social skills are also culturally mediated, and assessments of these skills may be subject to prejudice – harming members of traditionally disadvantaged groups. Ultimately, those with the lowest skill levels are most vulnerable, as workers may take jobs below their skill level if given no other option.

Much of the challenge of this new reality is in managing the transition, and finding ways of supporting those who become displaced or are at risk of displacement. The extensive literature on the challenges of re-tooling displaced workers for new fields of work indicates that it is very difficult to do well.²

Drivers of Change Across the Developed World

Four main trends are driving the future of work in the developed world. These are demographic change, technological change, globalisation and shifting consumption from

² https://www.researchgate.net/profile/Indermit_Gill/publication/5217884_Evaluating_Retraining_Programs_in_OECD_Countries_Lessons_Learned/links/554b96380cf29752ee7cc147/Evaluating-Retraining-Programs-in-OECD-Countries-Lessons-Learned.pdf

goods to services. It is difficult to assess how the COVID-19 pandemic may change these patterns, but at this point it appears unlikely to alter the overall trajectory of these combined trends.

Demographic change

Demographic change, mainly population aging, is a primary driver of labour supply outside of Canada's major urban centres.³ Atlantic Canada faces the greatest challenges, but is by no means unique.

In 2019, the median ages in the Atlantic provinces were 47.1 in Newfoundland and Labrador and 46 in New Brunswick, 44.9 in Nova Scotia and 43.2 in Prince Edward Island, all figures well above the national average (40.8). The share of the population aged 65 and over is 21%, far above the Canadian average of 17.5%. Population aging is unevenly distributed, not only between the Atlantic provinces but even more importantly within them – with the most dramatic trends in rural communities.

The rural-urban divide is in fact the key variable for this pattern. Almost half (45.9%) of Atlantic Canada residents lived in rural communities in 2016, including most people in New Brunswick and PEI. The equivalent figure across Canada is only 18.7%. British Columbia, Quebec and Ontario have only slightly better age profiles than Atlantic Canada once you exclude their largest cities.

These demographic changes are driving changes in labour supply, but also in demand. Largely because of population aging, long-term care and healthcare are the most obvious areas for job growth across North America. The Conference Board of Canada projects high demand for new long-term care beds that is closely correlated with population age profiles.⁴

Technological change

Automation has replaced labour with capital in a growing set of tasks since the start of the industrial revolution. This substitution effect inherently reduces demand for labour, but can be offset if the automation:

- raises productivity and this increases labour demand;
- raises the price of capital relative to labour;
- complements labour and therefore raises its value; or
- creates substantial new work by raising productivity and freeing up labour.

There has been considerable anxiety recently that automation will displace labour more in the coming years than it has in the past. It seems that much of this anxiety has been

³ Outside of PEI, labour force participation within the same age groups is lower in Atlantic Canada than across the rest of Canada. The problem is therefore not only aging, even if aging is the biggest factor.

⁴ https://www.cma.ca/sites/default/files/2018-11/9228_Meeting%20the%20Demand%20for%20Long-Term%20Care%20Beds_RPT.pdf

misplaced, as there is little actual evidence of worker displacement in line with many commonly cited doomsday scenarios.⁵

Based off of 2012 PIAAC data, the OECD estimates that 13.5% of jobs in Canada are at high risk of automation, which is slightly below the OECD average of 14%. Fully 28.6% of jobs are at significant risk of change, which is more markedly below the OECD average (31.6%). Still, Canada is more susceptible to automation than the US by both measures.⁶ Moreover, the COVID-19 pandemic seems likely to ultimately spur a surge in labour displacement.

It is likely not that a large share of jobs that will disappear, rather that many jobs will likely experience considerable changes in tasks, or potentially some disappearance and at least partial replacement with other roles. Still, slow productivity growth during a period of extensive automation is concerning. It suggests that the countervailing forces against automation's substitution effect are weakening. New work is again the most important of these countervailing forces. It tends to emerge more at the technological frontier in dynamic innovation clusters such as Silicon Valley, Austin and Boston. Still, promoting innovation and entrepreneurship to support the development of new work might help to create good quality employment. There is also room for better training and business practices to help translate automation into productivity improvement, not merely replacing people.

Globalisation

The tradable side of the economy generally has higher productivity growth and therefore is critical for driving economic growth.⁷ The theoretical case for international trade, grounded in comparative advantage, inherently implies that trade will drive economic specialisation. More open economies therefore concentrate tradable economic activity where local resources offer them an advantage. These local resources may relate to the natural environment or skills of the local population.

The basic implication of globalisation is that industries where Canada has no special advantage are unlikely to be successful. The most vulnerable industries are those with tradable products that emphasise low-skill tasks, because developing country workers can compete with comparable productivity levels and considerably lower wages.

Canada has traditionally specialised in natural resources sectors, including oil and gas, minerals, agriculture and related processed food products, wood products, and fisheries. This relates to our resource endowments and geographic position, though Canadian regions have also developed related ecosystems of skills, networks, culture and infrastructure. Yet, Canada has had great difficulty raising productivity in many of these sectors and commodity prices have often been the critical driver of industry performance.

⁵ <https://www.nationalnewswatch.com/2020/01/01/doomsday-scenario-of-mass-layoffs-due-to-ai-unlikely-federal-documents-say-3/#.XhiSHRd7ln5>; <https://www.cbc.ca/news/business/canadian-workforce-ai-documents-1.5412341>

⁶ <https://www.oecd-ilibrary.org/sites/9ee00155-en/index.html?itemId=/content/publication/9ee00155-en>

⁷ Of course, much of the economy is non-tradable and this side of the economy remains important for employment and maintaining Canadians' standard of living.

These sectors are likely to remain important for Canada, notwithstanding the common discourse regarding supposed “sunset” industries.

Some other relatively large and globally competitive industries in Canada have been less based upon natural resources and geographic location. With the rise of international student numbers, higher education has become an important export industry. ICT is promising for relatively high-wage work and growing product demand, though it has attracted considerable attention from many competitor jurisdictions as well and is more economically concentrated than is often acknowledged (specifically in certain urban centres). The challenge is to provide the most skilled workforce possible, provide a high quality and affordable standard of living to foster wage competitiveness, and help firms to keep up with the technological frontier. This is a very difficult race, but worthwhile for the direct benefits of the sector and the potential to foster related technological advances in other sectors.

Shifting Consumption from Goods to Services

Over time, sectors experiencing higher productivity growth will tend to see the prices of their products decline – competition causes producers to share the benefits of productivity gains with consumers. Sectors that do not experience high productivity growth meanwhile maintain their prices. This pattern leads to higher spending on less productive sectors and lower spending on more productive sectors.

Goods producing sectors tend to have higher productivity growth than services. Meanwhile, as incomes rise the share of spending on goods tends to decline. These patterns have led the share of Americans’ incomes spent on goods to fall consistently for the past number of decades, which is likely true in Canada as well. We are instead spending more and more of our income on services, including especially healthcare services. This pattern is likely to continue for the foreseeable future, thereby driving an increase in services employment.

Further Challenges for Peripheral Canada

We can distinguish two additional challenges that are somewhat specific to Canada outside of the major urban centres. These are sustaining rural communities and unfavourable firm dynamics.

Sustaining rural communities

Many rural parts of Canada are caught in self-reinforcing loops of economic and social decline. The population has fallen due to a mix of aging and out-migration, and as the population falls it becomes more expensive on a per capita basis to deliver public services. This in turn leads to service reductions, including closures of schools and health facilities, which feeds out-migration by making the communities more difficult places to live.

The challenges of rural communities have wider ramifications. As we have noted, many of Canada's leading tradable industries are focused on natural resources development, and by extension they are largely dispersed outside of urban centres. Other leading tradable industries are also concentrated outside of major urban hubs, including manufacturers such as: Michelin in various communities in Nova Scotia; Bombardier in La Pocatière, Quebec; mining equipment manufacturing in North Bay; and Friesens in Altona, Manitoba. Urban centres often develop to provide services for the productive activities undertaken in the surrounding region. Viewing the decline of rural communities and industries as merely a natural process of urban concentration is short-sighted, and misses out on how rural industries form much of the basis for the prosperity of urban Canada (and vice versa).

At the same time, the historic pattern of high rural unemployment, and largely low wages in those jobs that were available, has begun to change. Declining rural populations are leading industries to experience labour shortages, contributing to a rise in incomes. For instance, Atlantic Canadian fish harvester fishing incomes more than doubled in real dollars between 2009 and 2016.⁸

Immigration is a key driver of urban-rural inequality, with immigrants highly concentrated in major urban centres. Changing this pattern and increasing immigration to peripheral regions has been a top policy priority. For instance, governments appear to consider international immigration as the most promising avenue for Atlantic Canada to overcome its near- and long-term economic and demographic challenges. Many would agree that there has been a positive shift in attitudes towards immigration across the region, including in smaller communities that are desperate to sustain their populations and consequently local services.

Recent policy efforts have recognised the need to better distribute immigration. The Atlantic Immigration Pilot (AIP), introduced in 2017, aimed to attract 2,000 extra immigrants per year to Atlantic Canada. By the end of October 2018, employers made over 3,037 job offers and 1,202 workers, spouses, and children achieved permanent residency through the program. The Government of Canada followed on this success by introducing the Rural and Northern Immigration Pilot.

However, it is difficult to identify rural regions that have successfully attracted immigrants in recent years, aside from areas in close proximity to major cities, those experiencing resource or industry booms, or cases of religious-based immigration such as in Manitoba. In the US, there has been an influx of Hispanic immigrants to many rural communities, but these patterns have not been sufficient to fully offset outmigration. In New Brunswick, McCain Foods has enticed considerable numbers of newcomers to the town of Florenceville-Bristol and created comprehensive settlement and integration supports to aid their retention in both the company and community.

One important feature of many rural industries is seasonality – which in fact explains a substantial part of their higher unemployment rates. An important way to strengthen the viability of rural life is by assisting rural workers in pursuing mixed livelihood strategies, where they can move between different sectors between seasons. This could help to

⁸ Williams, R. 2019. *A Future for the Fishery: Crisis and Renewal in Canada's Neglected Fishing Industry*. Halifax, NS: Nimbus Publishing Limited. Of course this is also a function of shifts in fish prices.

tackle labour shortages in different fields and offer workers higher incomes and more engaging careers.

It is unlikely in the foreseeable future that decline in rural Canada will reverse towards durable growth. The challenge is to stabilise rural communities as viable places to work and live and break the self-reinforcing loop of decline.

Unfavourable firm dynamics

Canada needs more high-productivity high-growth firms, but there are important firm dynamics that limit the dynamism of the Canadian economy. We will focus here on the challenge in Atlantic Canada, much of which we would associate with the region's rurality and distance from Canada's core.

Arguably the most important measure of an economy's fundamental strength is labour productivity, i.e. the amount of value (GDP) generated per hour worked. Across Canada, raising productivity outside of the context of major natural resource booms has been a longstanding challenge. From 1997 to 2018, the Maritime provinces had the lowest labour productivity in business sector industries among all Canadian provinces. The Maritime provinces also experienced slower-than-average productivity growth over that time, meaning that they fell further behind.⁹

Atlantic Canada has consistently lower firm birth rates than the other predominantly Anglophone provinces, while its entrant firms also have the lowest survival rates.¹⁰ This necessarily makes firms older on average and older firms tend to have lower productivity growth. Once again, these patterns appear to be common to rural and peripheral areas in other parts of Canada as well – there are well-documented barriers to launching start-ups in rural places.¹¹

Atlantic Canadian firms spend comparatively little on innovation-related activities. In 2016, business enterprises accounted for just 28% of total R&D spending in the Atlantic provinces, which is half the rates of Quebec and British Columbia (both 57%) and still well below Ontario (54%) and the Prairie provinces (44%).¹² In 2015, Atlantic Canadian investments in information and communications technologies (ICT) relative to GDP were below the Canadian average as well.¹³

More productive firms tend to be better positioned to participate in export markets.¹⁴ SMEs in Atlantic Canada have lower export propensity than in the other Canadian provinces, except for Saskatchewan and Alberta. On the more positive side, however, the export intensity of those SMEs that do export is comparable to Ontario and British Columbia, and slightly higher than in Quebec.

⁹ Newfoundland and Labrador is a slightly different story, with above-average productivity driven largely by the oil and gas sector. It is also the only province to have experienced a fall in productivity since the end of the Great Recession.

¹⁰ Quebec has equally poor firm birth rates, but its firms survive considerably better than in Atlantic Canada.

¹¹ <https://www.oecd-ilibrary.org/sites/16f0fc77-en/index.html?itemId=/content/component/16f0fc77-en>

¹² <https://www150.statcan.gc.ca/n1/daily-quotidien/181212/cq-c002-eng.htm>

¹³ New Brunswick was the exception and showed positive signs of increasing its ICT investment relative to international peers. <https://www.conferenceboard.ca/hcp/provincial/innovation/ict.aspx>

¹⁴ https://www.ic.gc.ca/eic/site/061.nsf/eng/h_02925.html

Given the relative weakness of private industry, Atlantic Canadian living standards have largely been sustained by the public sector. Government spending accounted for 37.5% of Atlantic Canadian GDP in 2018, compared to only 24.1% across Canada. The importance of public spending is especially high in the Maritime provinces, but remains above average in Newfoundland and Labrador. Once again similar patterns are visible in other peripheral regions, including most obviously the Territories but also former industrial towns such as Thunder Bay.¹⁵

Implications for Regional Colleges

Together, these patterns have important implications for regional colleges.

Graduates must develop a broader skillset than previously. Technical skills alone are no longer adequate in most fields of work. Workers must be socially skilled, while also being prepared to solve problems using new technologies. These stronger skills will be more important for the strongest firms that aspire to higher levels of innovation and productivity.

While the pace of technological change may not be accelerating in the ways commonly asserted, workplace changes are continual and many industries and workers will remain at risk of displacement for the foreseeable future. Colleges could help enable those threatened or affected to compete and/or reorient into new opportunities. As well, there may be an important role for colleges in staying informed of practices in leading firms and jurisdictions and transmitting lessons to students and local employers. Many small and medium-sized enterprises have special difficulties to keep up with leading practices, and could benefit from greater relevant information and training.

So-called traditional industries will remain important. The challenge in these sectors will be to ensure adequate labour supply, and to enable workers in these fields to raise productivity through the use of technology and innovative work methods. Many of these sectors are seasonal and concentrated in rural communities – exercising multiple occupations can help to meet labour demand and provide steadier year-round income. In general, college campuses are economic and social anchors of many rural areas, and these communities need them to exercise proactive leadership.

Work in service industries, and especially in healthcare and elderly support, will likely continue growing. Of course, much of the difficulty filling labour demands in these fields is not about training, but about wages and the quality of work. Colleges cannot make continuing care work better paid, for instance, but there may still be considerable scope for colleges to support these occupations.

Finally, much of the challenge for peripheral Canada is and will remain attracting and successfully integrating new immigrants. Where regional colleges can help in this area, their regions could experience remarkable benefits in terms of economic and social development.

¹⁵ <https://www.theglobeandmail.com/opinion/article-thunder-bays-economic-hardships-are-a-sign-of-things-to-come-for-the/>

Theme 1: Strengthen Teaching and Learning

The recommendations in this section are as follows:

- a. Develop stronger qualifications frameworks – Qualifications frameworks are common to many developed jurisdictions, identifying the competencies associated with education credentials and occupations. They support learning outcomes-based instruction, more informed labour market decision-making by all actors, and easier transitions between occupations – in part by greatly facilitating recognition of prior learning (RPL). Colleges cannot implement full qualifications frameworks entirely on their own, but they can begin such work with their own programs.
- b. Adopt teaching and learning frameworks (TLFs) – Strong TLFs establish clear objectives and expectations for the quality of instruction, facilitating performance measurement and improvement. Critical elements of a TLF include expectations for transversal learning outcomes, instructor competencies, approaches to work-integrated learning (WIL), and the responsibilities of relevant actors.
- c. Operate teaching and learning centres (TLCs) – Colleges need institutional capacity for fostering communities of practice among instructors. TLCs play a facilitating role, and a resource role in delivering training and developing or collating research and information from elsewhere.

Context

To provide context for our recommendations, we firstly review evidence regarding vocational and qualifications frameworks. Then we review approaches for improving teaching and learning.

Vocational and qualifications frameworks

A vocational framework outlines the competencies required to exercise occupations across an economy, including with a measure of intellectual complexity. A qualifications framework similarly identifies the competencies associated with formal qualifications, accounting for intellectual complexity. Both aim to facilitate translation of shared competencies between different occupations/credentials. The strongest frameworks, moreover, combine both the vocational and qualifications functions, recognising the need for alignment between the two. Given this we will use the term “qualifications framework” as a catch-all moving forward.

A full qualifications framework for a region or nationally would cover formal secondary education credentials, vocational and higher education credentials, regulated roles and occupations (for example mechanics and plumbers), recognition of prior learning routes for all these credentials, competency profiles, appropriate assessment practices, and quality assurance.

Qualifications frameworks, when used well, can have various benefits:

- They can reinforce the learning outcomes basis for education programs.
- They can establish a clearer basis for translating learning outcomes between qualifications and occupations. This helps to facilitate transfer between jobs and education and training programs, including through RPL.
- They help to better communicate graduate competencies to employers and permit employers to better understand what an occupation entails, which can be especially important for filling roles outside of a company's core area of business.

Canada (along with the United States) is unusual among developed economies in not having a strong national qualifications framework. The Canadian Degree Qualifications Framework, adopted in 2007, is limited to just university-level credentials, as is the Maritime Degree Level Qualifications Framework. Ontario and Alberta have adopted broader qualifications frameworks down to the certificate level.

Most importantly, however, there has been very little mapping of qualifications to Canadian frameworks across different fields, in part because the frameworks are likely inadequate to the task – notably with their limitation to only university-level degrees. This is more difficult work in many ways than initial framework development, as it relates not just to the level of credentials (vertical mapping) but the learning outcomes associated with credentials (horizontal mapping). This effort is however essential to derive the full value of a framework.

European countries are much more advanced in this area. The European Qualifications Framework (EQF) provides a basic structure within which European countries have been able to develop or situate their own qualifications frameworks. European countries map their full set of qualifications to the frameworks across fields of study, including by undertaking detailed work to identify common competencies. The frameworks therefore provide a touchstone for the development of training programs, and are especially useful because of their regionally cross-cutting relevance.

Qualifications frameworks are essentially a platform. They provide a structure upon which many elements of a strong education and training system, and broader labour market, can be built. The absence of such structure hinders the Canadian education system and our labour markets.

Measures to promote improvement in instruction

There is clear evidence that the quality of teaching is the key determinant of student learning in academic programs. Higher education institutions, including regional colleges, pursue various measures to support improvement in instruction.

HESA research indicates that almost all college (and university) strategic plans in Canada prioritise improved teaching and learning. However, plans rarely articulate measures of success relative to this priority, leaving little identification of how performance will be

evaluated. Strong teaching and learning frameworks (TLFs) can address this short-coming and are one important tool for driving improvement.¹⁶

TLFs establish clear objectives for the teaching and learning process at the institution in line with the mandate and strategic plan, principles to guide teaching and learning activities towards these objectives and related responsibilities of different actors within the institution. These frameworks can also identify the expected competencies of instructors. Academic units within the institution are required to align to this framework.¹⁷

A key focus of TLFs, and driver of teaching quality, are instructor competencies. Instructor professional knowledge can be broken down into three categories:¹⁸

1. Subject-matter knowledge particular to their specific field
2. General pedagogical knowledge that is generally applicable across all fields of study
3. Pedagogical content-knowledge which is relevant to facilitating student learning in the specific field of study

Subject-matter knowledge is typically the most important driver of hiring decisions in colleges – it is the *sine qua non*. Meanwhile general pedagogical knowledge is often a focus of faculty development activities. Pedagogical content-knowledge specific to the field of study can be neglected as it requires a combination of pedagogical and subject-matter expertise to foster.

Regional colleges adopt various approaches to promote improvement in instruction. Most colleges have staff responsible for instructor development, though they may be housed in broader academic units. Formal Teaching and Learning Centres (TLCs) are common particularly in larger colleges, such as Centennial College, Humber College and Sheridan College in the Greater Toronto Area.

Regional colleges often have strong initial professional development programmes for faculty, implemented in collaboration with university teacher training programs. Concerns relate to balancing workload for training and teaching, and the timing of training relative to when professors are in the classroom (i.e. being sure to deliver training in the summer before new professors first teach, not waiting until the summer after). Professional development after the first couple years as an instructor may be more limited, though some colleges may be stronger than others.

At times, however, these mechanisms fall short of fostering the culture of continuous improvement in instruction that would be expected to pervade world leading institutions. Canadian regional colleges may have longstanding faculty members who do not continuously develop their teaching methods. Problems for faculty delivering new learning modalities, such as blended/online instruction, or accompaniment in work-integrated learning (WIL), appear especially significant. It is not clear that many faculty members are well positioned to deliver more competency-based learning, or assist efficiently in related

¹⁶ <https://www.oecd.org/education/imhe/QT%20policies%20and%20practices.pdf>

¹⁷ What we are calling a teaching and learning framework can have other names. Their objectives can be met through instructional improvement plans or quality assurance documents – though an advantage of plans or frameworks over the latter is the clearer potential for reconsideration and renewal. Institutions that have TLFs in Canada include Athabasca University, BCIT and Memorial University.

¹⁸ https://www.amacad.org/sites/default/files/publication/downloads/CFUE_Undergraduate-Teaching.pdf

activities such as recognition of prior learning (RPL). Many faculty members may have only limited conversations with each other about improvement in their professional practice.

A strong orientation towards learning outcomes is crucial to achieve quality and efficiency in college education and training. This provides a foundation for many of the improvements discussed in this report. The learning outcomes orientation of programs could improve at many Canadian regional colleges. For instance, faculty may not be sufficiently trained to focus their instruction and assessment on learning outcomes and programs may still be based largely on classroom hours and outputs.

Improving the teaching quality in colleges is hard work. Faculty members are hired to be practitioners first, instructors second. Many may move back and forth between college and industry. Educating adults well into their careers is in many ways more difficult than young people early on. Still, the strong ethic of service among college instructors can help to drive performance and a thirst for improvement.

Transformational Activities

We have identified three transformational activities to strengthen teaching and learning at regional colleges. Firstly, colleges should work to develop qualifications frameworks based off of the EQF to help strengthen the learning outcomes basis for programs and their translatability. Secondly, we recommend developing teaching and learning frameworks setting clear goals and expectations for how these goals will be achieved. Finally, regional colleges should establish teaching and learning centres to drive improvement in instruction by fostering communities of practice.

Develop and apply qualifications frameworks

We recommend that regional colleges begin the development and/or application of qualifications frameworks for their programs. Framework development would require close collaboration with provincial authorities where possible, or otherwise careful reflection on pathways for progress without provincial collaboration.

Creating a basic qualifications framework document is relatively straightforward. It generally falls outside the purview of single higher education institutions however. Governments typically take the lead. In Atlantic Canada, we believe that colleges could still spearhead regional framework development because one-to-two institutions represent the full system in their given jurisdiction – although a united framework for the entire Atlantic region would have much greater value than a patchwork of provincial frameworks. Elsewhere, our thoughts suggest how institutions might nevertheless make some progress in ways that can enhance their operations and help to facilitate framework development once government authorities come on board.

Applying frameworks to programs and occupations is more critical than basic framework development. Often, learning outcomes are mapped and parallels between occupations identified bit-by-bit. Education institutions tend to lead much of this work – not

government authorities. Therefore, in the absence of a clear structure and support from government, such work is more difficult but it may be possible for colleges nevertheless to get started. Colleges can review what qualifications already have well-defined learning outcomes and identify and establish common definitions for skills that cut across different occupations. This work will be most useful if undertaken by institutional coalitions.

The European Qualifications Framework (EQF) offers a starting place that Canadian colleges could build upon for structuring their framework efforts. There is a precedent for translating this structure, as Canada is a signatory to the related Lisbon Convention, which is otherwise a European treaty. Colleges would need to explore how the EQF might adapt to Canada, but there is little reason in principle to believe the EQF could not translate over – it covers a huge diversity of jurisdictions already. Not only would using the EQF as a basic structure help to align credentials amongst institutions spearheading this work in Canada, but also of course with Europe.

Canadian colleges could commission scoping studies of how existing regulations, processes and occupational and education/training program profiles would align with the EQF. They could then assess what would be necessary to achieve full alignment, and the scope to develop competency profiles or learning outcomes for fields of work and study that do not currently have them. This would enable colleges to prepare implementation plans to align with the EQF, with responsibilities, timelines and budgets.

We would speculate that with sufficient resources and attention, development and application of frameworks addressing college programs and related occupations could be completed within three-to-four years at the level of a region such as Atlantic Canada. It could proceed first in priority fields, perhaps in support of other initiatives such as micro-credentials or apprenticeship harmonisation.

Our basic view is that qualifications framework development is essential to strengthen Canadian higher education, including by strengthening the learning outcomes basis for instruction and recognition of prior learning, including for immigrants. This kind of work will be key for the development of micro-credentials, with their positioning clear relative to more established credentials in Canada. Given therefore how important this work is, colleges need to take it on as best they can, with or without provincial leadership. The structures that colleges develop could help them to operate better, and eventually form the basis for regional frameworks or even a pan-Canadian qualifications framework (in line with commitments under the Lisbon Recognition Convention and the proposed UNESCO Global Convention) that would deliver more systematic benefits,

Introduce teaching and learning frameworks

We recommend that regional colleges implement teaching and learning frameworks (TLFs). These should reflect the mission, values and specialties of an institution and define high-level objectives for student learning outcomes and teaching. All programs within institutions would need to align to the overall TLF, though they would each have their individual characteristics and requirements as well. This section will provide a series of suggestions as to the content of TLFs.

A high-level learning outcome statement that we would propose for colleges, for purposes of discussion would be as follows: *X College will strive to instill in its graduates the following attributes:*

- *Strong essential skills necessary to be successful in the workplace (i.e. reading, writing, document use, oral communication, numeracy, working with others, thinking, and digital technology and continuous learning)*
- *Capacity to exercise leading practices in their field of work (i.e. to operate near the technological frontier upon graduation)*
- *An ethos of continuous learning and improvement (for instance, to strive to keep up with technological developments)*

Institutions should also explore means of measuring student performance in at least some essential skills across different programs to identify strengths and weaknesses and to inform improvements. Assessments could be based off of PIAAC, as for instance with HEQCO's essential skills initiative that is evaluating the core skills of first-year and graduating college and university students.¹⁹

The TLF should identify the pedagogical competencies and practices required for effective instruction across the institution to support its mission and the high-level learning outcomes. These should form the basis for professional development, and secondarily for performance assessment. The TLF can only touch upon discipline-specific instructor professional knowledge, but could outline in more detail the general pedagogical knowledge expected of faculty members. Important elements would include capacity to:

- Foster learning environments that are inclusive of a diversity of learners
- Facilitate active learning
- Identify learning outcomes and measure their attainment
- Conduct assessment for learning
- Be adept in the use of relevant instructional technologies
- Exercise effective classroom management techniques

The TLF could establish new requirements for faculty members to participate in continuing training, or participate in different forms of mentoring or guided reflection. This could be connected to incentives in faculty compensation and job security. All of these approaches should be carefully adapted not to stifle but to encourage innovation, and to foster a culture of continuous improvement rather than bitterness.

Common expectations for work-integrated learning (WIL) and experiential learning across all of an institution's programs would be another important element of a TLF. WIL is an important area where many regional colleges can improve, shifting from offering their students *work* experiences more towards *work-integrated learning* experiences. We would suggest that TLFs require that all study programs include a WIL experience, or at least some significant form of experiential learning where WIL placements are infeasible, so that students can learn in an applied setting. Secondly, TLFs could require that programs map out the learning outcomes students are expected to have achieved at the beginning and end points of any WIL placement, as well as at the end of their programs. There

¹⁹ <http://www.heqco.ca/en-ca/OurPriorities/LearningOutcomes/Pages/the-essential-adult-skills-initiative.aspx>

should also be structures to ensure students and employers understand the learning goals of work placements at the outset, can review if learning goals are being met during their placements, and then permit reflection and assessment of learning outcomes at the end of the placement. Thirdly, clarifying the role of the four major players (students, employers, faculty and support staff) is essential, in particular the role of faculty as the stewards of students' learning.

TLFs should also articulate the role of students for teaching and learning more generally. This could include providing a sense for how students can provide feedback to improve quality of instruction, or participate in different forms of decision-making surrounding programs. Professional development activities for instructors could also relate to strengthening dialogue with students and their role in driving their own learning.

Clear leadership roles are important for continuous improvement in teaching and learning. A high-level institutional leader should have primary responsibility for oversight of the TLF – with this person at a higher level of authority than the manager or director of a teaching and learning centre or similar office. Other staff should have more explicit responsibility for fostering high quality teaching and learning, including deans/principals, department heads and so on. There should be consistent reporting on how programs are performing relative to the TLF. Colleges should also ensure their other policies are consistent with the TLF, such as policies on quality assurance and program review, human resources, student support services and so on. Finally, colleges need to make sure sufficient resources are available to support their TLFs.

It is conceivable that regional colleges could partner to develop much of their TLFs in common. In particular, many of the student learning outcomes could very well be shared, and colleges might benefit from measuring essential skills together to facilitate comparison of programs and achieve economies of scale. General expectations of faculty competencies also need not be distinctive. Colleges could differ more in their particular structures and initiatives to foster stronger teaching and learning, including in particular approaches to faculty professional development.

Colleges should develop their TLFs in consultation with their wider community, including students, faculty, employers, governments and other partners. This is critical for ensuring the TLFs are suitable and to generate buy-in.

Create teaching and learning centres

We recommend that regional colleges operate teaching and learning centres (TLCs) to foster continuous improvement in faculty pedagogical skills and practices in support of the TLF. TLCs should operate apart from but still in alignment with other administrative units (e.g. curriculum design and development, human resources and performance assessment).

Of the three forms of professional knowledge for instructors that we identified earlier, TLCs are most responsible for directly helping faculty members to build general pedagogical knowledge. In terms of pedagogical content knowledge, their role is more as a facilitator of dialogue among faculty members.

An important function of effective TLCs is to foster communities of practice, i.e. relationships among faculty members of mutual support towards improvement in teaching practices. This is why it is important to separate centres from management-type functions such as performance assessment. Colleges should aim for their TLC to be perceived by faculty as an instrument of support for their growth and not of management or accountability for performance, though the TLC should seek to ensure that faculty members are familiar with the institution's overall TLF.

Promoting innovation in instruction should be an important objective of TLCs, which would entail staying abreast of research taking place elsewhere, and potentially assisting faculty in piloting new approaches to instruction and learning. This research is critical to help generate valuable materials and training sessions for faculty members, though providing support for applied research into pedagogical methods may be less straightforward in a college setting relative to a university. Whether a TLC generates research and tools used by other institutions is likely a valuable measure of whether that TLC is at the cutting edge of college pedagogy.

TLCs need to pay special attention to supporting faculty in the use of new technologies. In particular, online learning requires adaptation from faculty – though we would not recommend in general that the learning technologists who directly set up courses with faculty members be positioned within TLCs (TLCs should see these learning technologists as clients like other faculty members, and also as resources upon which they can draw for delivering training). TLCs should also help faculty to learn how to use different tools to effectively communicate with their students outside of an online learning course (as well as how to manage students' use of devices in the classroom).

Awards to recognise individual excellence in instruction are a common TLC activity. Winners of these awards may be compensated, which can provide an incentive for excellence. Such awards may offer value, perhaps especially where they act as an instrument for identifying and then empowering leading instructors to influence their peers for the better. Recognition can set an example for others, that is amplified by assigning these faculty members additional roles in training or otherwise supporting their peers – up to and including with time allocated away from the classroom towards work with the TLC or funds to pursue experimentation in instruction. It may be still more beneficial for colleges to implement awards programs recognising faculty members for their excellence as a group. In particular, this method can better help to foster communities of practice within programs, with faculty members having an interest not only in improving their own teaching, but also that of their peers. Whichever awards approach is adopted, colleges should make sure that the awards have high profile and recognition across the institution to maximise their potential impact – these awards may be administered by TLCs, perhaps through a committee of faculty members from within and outside the institution, but should engage the highest college leadership in communications.

Many colleges deliver instruction across multiple campuses, in which cases TLCs cannot be primarily physical spaces but must operate online. Even in these cases, however, we would recommend that each campus have at least one faculty member, or perhaps a committee of faculty members, with some responsibility and time to support the operations of the TLC. Our view is that if TLCs operate exclusively online for a large

number of campuses, they are unlikely to secure much buy-in. Each campus's TLC representative could be identified through an awards program as identified earlier.

Colleges within a region might develop TLCs in close connection, potentially even developing them under a common umbrella with sub-units at each institution. TLCs operating online and through other means of bridging across locations could be equally effective between institutions. There could be efficiencies in developing TLC resources in common, rather than in isolation from each other.

Connections between institutions could also help to foster stronger communities of practice, given especially that many colleges' small size intrinsically contracts internal networks. Collaboration could be especially important to foster pedagogical content knowledge; which colleges might seek to improve in specific fields of concern through common pilot efforts.

For institutions without TLCs, work could begin on their development at any time. The first step is to determine what resources already in place to shift into the TLC. With this complete, it could become clear what further resources are necessary. If a unified TLC model is adopted for a group of colleges (either with a single entity or with a somewhat looser network structure that has shared systems), the colleges would have to negotiate how best to organise this work. Setting up joint systems for sharing resources and information could require time and investment.

Theme 2: Increase the Flexibility of Education Delivery

The transformational activities in this section are as follows:

- a. Adopt a more flexible annual calendar – Institutions should align program timing with industry and provide greater access to programs throughout the year. This is not only about having multiple intakes, but also less rigid semesters of instruction. Changes can improve the efficiency of the labour market, strengthen the quality of WIL and facilitate the development of mixed-livelihood strategies in rural communities.
- b. Introduce more flexible offerings for continuing education – Many innovations in flexible delivery are most suitable for more educated and mature learners. We recommend the development of post-graduate and certificate programs, as well as micro-credentials, to cater to this market, with blended learning and modularised learning delivery for these offerings.
- c. Strengthen recognition of prior learning (RPL) – Developing qualifications frameworks represents the single most transformational step colleges can take to advance RPL, but colleges need to also continuously optimize their internal systems and work with their provincial governments to explore new funding structures to strengthen incentives for RPL.

Context

While Canadian colleges have a reputation for being more responsive than universities, in practice many of their administrative structures are more constraining and program delivery actually is often less flexible. Many college professionals are committed to increasing the flexibility of education program delivery. Proposed elements of more flexible delivery include:

- Changing the annual calendar to allow for more strategic intakes (up to the point of continuous intakes) and timing for WIL.
- Shifting away from traditional full-time delivery offered four-to-five days per week.
- Shifting from program-based to course-based enrolment.
- Shifting more delivery online, rather than relying solely on in-person classes.
- Shifting away from current course structures towards more modular learning.
- Allowing more diverse structures of programs rather than a heavy or almost exclusive reliance on one-year and two-year programs. This could include the development of micro-credentials.
- Recognizing prior learning

In providing context for our transformative activities regarding flexibility in education delivery, we first provide a cautionary note on “flexibility”. Then the section proceeds by considering the inflexibility of academic calendars, challenges in accommodating students who fail courses, online and blended learning, micro-credentials and finally RPL.

A cautionary note on “flexibility”

Flexibility is inherently a positive word, and given this it is hard to argue against a higher education institution seeking to be flexible. However, a reframing of “flexible” is as “unstructured”, just as “rigid” can be reframed as “structured”. Flexibility in education is not always what it is cut out to be.

The US has arguably the most flexible higher education system in the world. It is a world leader in online delivery and its colleges have large shares of students in part-time studies. Its regional colleges provide a wide range of programs, including many that purposefully bridge into further education at four-year colleges (universities in Canadian parlance). Yet, American community colleges also have very poor outcomes in terms of student persistence, completion and post-graduate employment – much worse than in Canada by many measures. It is increasingly believed that the flexibility of American community colleges is a contributing factor in their poor outcomes, most especially for traditionally disadvantaged students.

Much of the case for flexibility rests on an assumption that older learners and learners from traditionally disadvantaged groups will be better able to attend more flexible college programs. For the latter group, the evidence on lower success rates in more flexible programs ought to put pause to this idea. Reducing flexibility by placing students in peer cohorts that proceed through programs is a leading, frequently successful US intervention to promote greater completion, especially among more disadvantaged students.²⁰ Fortunately for smaller Canadian colleges, learning communities reflect practice in most programs by default, given the small sizes of student cohorts. Still, more flexible designs could sacrifice this attribute. With regards to older learners, low participation in training is a long-established pattern in Canadian society. Greater flexibility could help to tackle this problem from the supply side, but it is far from certain that greater flexibility can cause a dramatic change in entrenched patterns of demand for training.

Many modalities of flexible delivery also have high costs and depend on economies of scale. For instance, there is much evidence of the need for high enrolments to finance the delivery of good quality online learning. Continuous intakes often are only viable online, while multiple intakes are more common where enrolments are high. Course-based enrolment is considerably more expensive than program-based enrolment due to inefficiencies in assigning students to courses. Our read of the evidence suggests that not all such interventions are worth their cost, especially for smaller colleges.²¹

Inflexible academic calendars and program sequences

Regional colleges often have rather inflexible calendars, with intakes overwhelmingly bunched in September. Rare exceptions include intakes in January or April, or less often at other times of year.

²⁰ <https://journals.sagepub.com/doi/full/10.3102/0162373714563307>

²¹ In some cases, where colleges provide more flexible programmes governments have provided additional funds to begin programs as quickly as possible, to meet urgent labour market demands for instance relating to public services or greater credential requirements.

Rigid start dates cause some learners to have to wait many months to be able to begin their studies. This may be most detrimental for displaced workers or new immigrants. The current timing of start dates also may not align with many regional industry cycles. Work in seasonal industries is often abundant at points in the year that can conflict with college academic calendars, for instance agriculture activity frequently extends well into the fall, while fishing seasons occur often outside of the summer. Work-integrated learning (WIL) placements in the current structure may also line up very poorly with industry labour demand.

Across Canada, many who are involved with colleges express considerable interest in increasing the flexibility of academic calendars, up to the possibility of continuous intakes. Beyond the cost concerns we have noted, impediments to change include challenges altering employment terms for faculty and other staff, rigid student information management systems and student financial aid policies that are geared toward September start times.

Accommodating students who fail courses

One common argument for greater flexibility, in particular multiple intakes and course-based enrolment, relates to supporting students who fail courses. These students can be held back by as much as a year until their course is offered again. In such cases, it can be impossible to keep students who fail courses on track, and it seems certain that those whose programs become extended in this way would be much likelier to drop out.

Some colleges have made headway in accommodating students who fail courses, for instance by recognising that certain competencies are the same in multiple programs and therefore coding the relevant courses in common. Multiplying offerings can provide opportunities for students to retake courses, though this is not a panacea because students can still be held back through cascading effects on other courses they need to take – i.e. where the make-up course is a pre-requisite for other courses or conflicts with another course that is only taught in one semester per year.

Another idea has been to provide distance and evening delivery for make-up course-work to help students stay on track. This may be more effective than having students take the course again. However, as we have noted distance delivery seems to be least effective with the kinds of students who might be expected to have failed a course. Similarly, evening courses that are simply added on to the regular full-time course-load may be especially difficult for students who have already struggled.

One last approach has been to allow students to pay for tutoring and reattempt an exam. We are unsure to what extent such an approach has been implemented in Canada.

Online and blended learning

Geographic flexibility of delivery has been a traditional area of emphasis for many regional colleges, achieved by operating dispersed campuses. However, even prior to COVID this kind of flexibility has increasingly shifted towards online or blended delivery.

There is very strong evidence regarding the effectiveness and ineffectiveness of online learning. In summary:

- Students are equally successful in in-person and blended learning courses, but significantly less successful in fully online courses.
- Variation in success among students is more significant in fully online courses. In particular, students with lower GPAs entering online courses perform markedly worse. Higher skilled, and often higher income, students are more successful in online coursework.
- Graduate studies appear to be the most promising area for fully online learning, allowing highly skilled and motivated students to continue their studies with convenience.
- The most effective online learning relies on advanced technology that must be regularly updated. It is only economical at a very large scale.

Ultimately, these patterns make us less than bullish regarding online learning. However, the COVID-19 pandemic may alter many dimensions of online learning in ways that will merit monitoring.

Micro-credentials

Micro-credentials can have a number of different meanings. They are typically made up of a single or very small group of courses, aimed at providing evidence of mastery over a narrow set of topics and skills. “Badges” outside of degrees may be the best-known form of micro-credential. Modularisation of study programs could help create micro-credentials, while allowing these to be stackable into diplomas or certificates. The market is primarily made up of mid-career learners with a track record of achievement who are seeking specific competencies.

Few Canadian colleges have offered micro-credentials to date, but interest appears to be growing markedly.²² Globally, Singapore has been a leader in the development of micro-credentials, built around the work of the SkillsFuture agency. SkillsFuture has created “industry skills frameworks” (ISFs) in consultation with industry. Micro-credentials are focused on delivering skills outlined in the ISFs to allow workers to advance up their career ladder. Meanwhile, the State University of New York (SUNY) has created micro-credentials that do not focus on a single course for a narrow skill, but offer bundles of courses smaller than typical certificates. Finally, Northeastern has positioned its micro-credentials as stackable towards Master’s degrees and focused in two specific areas of skills. These US programs more closely resemble traditional programs, likely from a feeling that these credentials will be more easily recognised absent Singapore-style ISFs.

A critical challenge for introducing micro-credentials is to establish a common understanding of what they mean among employers. If employers do not understand the credentials and value them, learners will have little interest in pursuing them. However,

²² Previously, institutions seem to have gone the furthest in developing micro-credentials for faculty members who they wish to attain certain competencies.

someone needs to take micro-credentials for them to develop meaning, creating a catch-22 that could be challenging to break through.

The new Canada Training Benefit (CTB) may provide a new opportunity for colleges to offer micro-credentials effectively. The CTB creates a legal “right-to-training” in the form of guaranteed leave. It also provides a refundable tax credit that can accumulate over time, up to a lifetime limit of \$5,000 with modest income targeting.

Recognition of prior learning

The core purpose of recognition of prior learning (RPL) is to grant formal credentials for what people already know and can do, without them having to spend time (and money) in the classroom. Canada has long been a leader in thinking about RPL, but in terms of implementation we have fallen well behind – relative to Europe in particular. Still, attention to RPL in Canada has increased of late, especially to facilitate the integration of newcomers to Canada with credentials and experience abroad.

There is strong evidence of benefits from RPL. In an empirical case study of the College Level Examination Program (CLEP) in Wisconsin, Boatman et al. found that students who had their learning recognised were 5.5 percentage points more likely to complete their programs and earned 1.6% higher incomes, comparing those who barely met requirements for RPL with those who did not. These benefits easily passed a cost-benefit analysis and were greatest for community college students, students above the age of 24 and members of under-represented minority groups.²³ Another study in Colorado found that students who received RPL credits were 27 percentage points more likely to graduate, and completed their degrees between one and 7.5 months faster.²⁴

More advanced systems of RPL in Europe rely on their detailed qualifications frameworks. These frameworks, in their ideal form, have three key advantages for implementing RPL:

1. They outline the learning outcomes required for specific credentials, which become the reference points for measuring whether learners have the required competencies;
2. They outline the skills, knowledge and attributes required for occupations, which can provide an initial sense of what a person who has worked in an occupation will know and be able to do when seeking RPL for a credential (these also provide the basis for what students need to learn when seeking a credential); and,
3. They identify common competencies between occupations and/or credentials, to facilitate translation through RPL (for instance they establish a common understanding of what it means to work in teams that can translate between different occupations).

As we have noted, Canada operates in the absence of such detailed frameworks. Regulated professions and the skilled trades at least do have established competencies and it is therefore no surprise that RPL is generally most advanced in these areas. This is especially the case for fields with labour shortages. Conestoga College’s Enhanced

²³ https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2933695

²⁴ <https://smlr.rutgers.edu/sites/default/files/documents/PLA%20Baseline%20Report%20FINAL%202-4-16.pdf>

Professional Practice Program in Gerontology and Chronic Illnesses provides a graduate certificate to complement students' foreign credentials.²⁵ Similarly, there are bridging programs for nurses at Centennial College²⁶ and Fanshawe College,²⁷ while the Ontario Health Workforce Planning Branch along with the College of Nurses Ontario provide further information to help internationally educated nurses find pathways to practice in Canada.²⁸

However, RPL is difficult to implement successfully even in regulated fields. Assessment of competencies must occur on a case-by-case basis and is complex, requiring well trained evaluators and in some cases fit-for-purpose facilities or equipment. Administrative and academic structures may not easily accommodate RPL, for instance by permitting learners to fill in identified gaps in learning, or simply allowing RPL to be done efficiently. There can be little financial incentive for institutions to provide RPL, as it reduces take up of their core program offerings. Meanwhile students in Canada are ineligible for financial aid to defray RPL costs.

Many Canadian regional colleges face a host of further difficulties in delivering RPL, many of which are of their own making. Communications are unclear, making it difficult for learners to know that recognition is possible. Fees for students to have their learning assessed may be high. Administrative structures for RPL are generally unfavourable, for instance setting unrealistic timelines, or requiring that students register for a program or even a course prior to being able to have their learning assessed. Not enough faculty members may be prepared to conduct RPL effectively. Some colleges track students passing through RPL processes, but in some cases this is only recent, or only information on successful application is retained. Many colleges limit how much credit can be recognised towards a program. A key strength of the Quebec system is that learners can obtain their full college diploma through RPL, with no distinction between credentials obtained through RPL or other avenues.

Provincial funding is key to ensure institutions have support (and basically an incentive) to pursue RPL effectively. The Quebec government provides funding to implement RPL on a cost-free basis for users, which helps explain why Quebec is leading the way in Canada.

Transformational Activities

Canadian regional colleges could become considerably more flexible and thereby better serve their communities. We firstly recommend adopting more flexible annual calendars. Secondly, colleges should offer more flexible continuing education and particularly post-diploma-level programs, taking advantage of innovations such as micro-credentials, modular learning and blended delivery. Thirdly, colleges should greatly improve RPL by strengthening their capacities in assessment and better organising related processes.

²⁵ <https://www.conestogac.on.ca/fulltime/enhanced-professional-practice-gerontology-and-chronic-illness>

²⁶ <https://www.centennialcollege.ca/programs-courses/full-time/bridging-to-university-nursing-ien/>

²⁷ <https://www.fanshawec.ca/pt/bie2-bridging-internationally-educated-nurses>

²⁸ http://www.health.gov.on.ca/en/pro/programs/hhrsd/nursing/internationally_educated.aspx

Adopt a more flexible annual calendar

The most unequivocally positive way that Canadian colleges can be more flexible is through the academic calendar. Measures include starting programs at various points in the year, allowing differences in timing of elements within programs such as work placements, and optimising end dates. The most important goal would be to align to the needs of learners and employers, rather than allowing limitations of administrative systems to take precedence.

Program start dates should strategically align with graduation from high school, with moments of rising seasonal unemployment that may be location or sector specific, or simply to distribute opportunities throughout the year. For larger programs, especially those little affected by seasonal industry patterns, multiple start dates can help spread out opportunities. These changes might especially benefit laid-off workers and newcomers eager to obtain a recognised credential, allowing them to more efficiently transition into training.

Colleges can also adapt the timing of activities within programs. Instruction might be more or less intensive between programs or at different points in the year. WIL placements should align with seasonal cycles of industry activity to provide the best opportunities for students and placement length should correspond to learning requirements that can vary greatly between study fields, while allowing for adequate reflection during or post-placement. Colleges should also keep in mind what would be required to facilitate mixed-livelihood strategies in rural communities. This could include designing programs to closely match the off-season(s) of industries, so that for instance it is feasible to combine work as a fish harvester with studies in carpentry or operating heavy equipment.

Finally, colleges should determine program end-dates not only as a by-product of start-dates and requirements for work-integrated learning, but to release graduates into the labour force strategically. Well-designed end-dates can match up with seasonal increases in labour demand. Spacing out end-dates can prevent uneven graduate flows that may create cycles of unemployment and labour shortages. A strategy for when the college wants to release graduates can feed back into the design of internal program elements, such as the intensity of coursework.

From the perspective of learners and employers, there is little downside to undertaking these changes. Breaking up common start and program end dates might hinder community on campus, but this should be of limited consequence assuming class cohorts are the most important vehicle for social support of students. The current model may serve learners transitioning directly from high school well, but a more flexible approach would not neglect their interests.

Shifting to a more flexible annual calendar would be highly complex for colleges to implement effectively however. Institutions would have to pursue a series of steps.

One challenging element is to negotiate changes in working conditions for staff. Many people choose to work in education in part because of the holiday profile – with time off in the summer. The expiry of collective agreements therefore constrains the timing of

changes. Joint commitment amongst multiple colleges to a new model may assist in the negotiations, especially when the timing of contract negotiations coincides.

Another difficulty is in adapting administrative systems for a more flexible calendar. Adapting computer systems in particular can be time-consuming, expensive and risky. Where relevant, institutions should conduct an audit of their current information management systems to determine whether they are: adequate for a more flexible calendar, would require modification and if so to what extent, or are wholly inadequate and would need to be replaced. Cost of procuring an entirely new system could be very considerable (amortisable over a number of years) for colleges of any size, though joint procurement for new systems or possibly even system modification amongst colleges may generate savings and greater potential for later efficiencies through collaboration.²⁹ Institutions should negotiate agreements with providers carefully to avoid becoming unduly captive for maintenance and updates moving forward, and require that development proceeds using an agile (rather than waterfall) approach. Nevertheless, stronger information management systems could have important side-benefits, for instance enabling institutions to better pursue other priorities such as improved customised training and micro-credentials.

Box 1: Providing targeted support for students who fail courses

On the whole, accommodating students who fail courses by emphasising flexibility in course delivery is very inefficient. Concern about failed courses should not be a driver for offering courses at multiple points in the year or for building common courses between programs – though other arguments for implementing such policies may be strong.

Student failure is an area where prevention is far more efficient than treatment, which is why we propose ambitious measures to better support study success. However, some students likely will always fail courses. The optimal strategy to assist these students is to identify which learning outcomes were missed and to help the students resume a path to completion by providing timely tutoring or other support regarding the specific elements of concern. This is basically about applying the gap filling principles of a strong RPL system. The practice of offering retakes of exams provides some basis for this model. Recognizing that they share responsibility for their students' success, colleges should consider subsidising the relevant tutoring services – or providing these services directly.

Institutions should be able to gradually improve their support for students who fail courses. Capacity in assessment is critical to understand exactly where students have fallen short, which relates to both program design and faculty competencies. Faculty and staff will also need to be available on a flexible basis to deliver necessary support. Given these requirements, we would see this as mainly a downstream priority relative to some of our other proposals.

²⁹ It may be worth keeping an eye on potential alignment of systems between colleges while conducting this work, in the event that this facilitates valuable collaboration in the future.

Institutions capable of shifting their calendars must determine how best to time programs on an on-going basis, notably in consultation with industry. Then they must undertake ambitious efforts to inform key stakeholders such as prospective students, employers, teachers and guidance counsellors in schools, counsellors in employment and training service provider organisations, and the broader public. Such awareness efforts require significant investment, so as to reduce the risk that prospective students unaware of the change miss out on applying, or employers mistime their hiring efforts.

Shifting to a more flexible calendar is very practically challenging. For instance, if a program currently starts in September but would be better to launch in March, could the institution simply delay the start of courses for six months? Would faculty be paid during this time when no students are in the program? There could be considerable complexity and costs in making these kinds of adjustments. It may also take time to build awareness of the new model. It is likely appropriate for institutions to adopt more flexible calendars gradually.

Introduce more flexible offerings for continuing education

Without question, it would be beneficial if regional colleges were capable of effectively delivering flexible learning in terms of timing during the week, modular learning³⁰ and blended learning, as well as micro-credentials. However, we would not recommend that they apply these changes widely to their core business of educating approximately traditional-age students without having greater evidence that the benefits of doing so would exceed the downsides. For most of colleges' core learners, including especially learners from traditionally disadvantaged backgrounds, the risks of de-structuring programs likely outweigh the benefits. More flexible delivery offers the greatest potential for learners who are older, face greater time constraints, and are the most autonomous and motivated.³¹

Many more flexible program modalities could be most relevant for post-graduate diploma and certificate programs. Learners in these programs typically benefit from stronger academic records and greater capacity for self-directed learning. There is important evidence, for instance, of greater success in online learning in graduate studies. These programs could also be very relevant for immigrants to Canada, who typically have post-secondary credentials but find it difficult to have these recognised for professional practice, or may need or want to change their industry or occupation regardless.

It seems clear that micro-credentials are of greatest interest for learners with previous post-secondary credentials. We would therefore recommend developing micro-credentials specifically focused at the post-graduate level, potentially stackable into certificates or diplomas. These programs should be developed in close consultation with industry, and could build upon qualifications frameworks somewhat along the Singaporean model.

³⁰ The First Nations Technical Institute, l'Université de Hearst, and Quest University offer extensive modular learning.

³¹ This recommendation may appear to leave many learners from disadvantaged backgrounds underserved. In our view, however, the primary flexibility-related way to better support mature disadvantaged learners is stronger RPL, while for younger learners in a later section we emphasise measures to promote study success and encourage enrolment.

Box 2: Findings from survey of middle-aged Atlantic Canadians regarding interest in training

To help inform its report on behalf of Atlantic colleges and gauge interest in training programs, HESA in partnership with Strategic Counsel conducted a survey of Atlantic Canadians aged 25-54 in March-April, 2020. We summarise some of the results of this survey here:

- 1) Delivering training to or through employers must be a key element of community college strategy given that respondents identify employers as the most likely vehicle for receiving training. Colleges should strengthen their customized training services and market their other programs to employers.
- 2) The greatest demand is for management skills, many of which are commonly associated with university programs. Still, community colleges might be able to build a niche focused on narrower skills-focused training, such as staff supervision/human resources, introducing digital technologies in business, and focused on specific industries traditionally associated with colleges/the trades.
- 3) Various dimensions of flexibility are important, and especially so for learners most interested in community colleges. The findings in this area reinforce the importance of RPL and a more flexible academic calendar, as well as greater flexibility in terms of delivery online and outside traditional hours.
- 4) Community colleges appear to be seen as more supportive for learners than universities, especially for learners who face greater academic or other challenges. They may occupy a niche for those without a clear idea of what they would most benefit from learning and those with more limited resources for training. This suggests that community colleges should emphasise close learner support, learner-centered pathways and affordability. Enhanced capacity to advise students on skill demands in the labour market would complement these activities – though this may rely most on strong employment and training services to provide independent advice and help inform worker up-skilling.

In truth, given among the greatest barriers to offering micro-credentials is the absence of common understanding as to what they would mean, it would make sense to tie their development closely to the implementation of qualifications frameworks. In more clearly identifying discrete learning outcomes, qualifications framework development can facilitate micro-credential development. This alignment would also ensure the new credentials are positioned relative to other credentials that are commonly understood. Both exercises necessitate collaboration among institutions within a region to be effective.

Many institutions need to build stronger capacity to deliver blended learning effectively. We have previously discussed the importance of training faculty members to function in this modality. Providing technical support and a high-quality online learning platform is also imperative. There seems to be considerable scope for colleges with regions to engage in joint purchasing of a teaching platform, not merely to save costs but also to make a higher quality platform affordable. Considerable progress may be made in this area during the COVID-19 pandemic.

Building capacity to deliver modular learning, blended learning, and micro-credentials would have little downside for institutions beyond the upfront costs. It would greatly complement a stronger focus on customised training for instance, which often depends on flexibility in college structures. Customised training and modules may also easily convert into one another. Institutions can introduce more flexible offerings for continuing education relatively quickly once supportive institutional systems are in place.

Strengthen recognition of prior learning

RPL offers great potential to facilitate workforce integration of immigrants and worker transitions between occupations and sectors. We recommend that regional colleges strive to make RPL a priority and a core part of the services offered to students, rather than a cost-recovery activity or something that detracts from the institution's success. They should guarantee that learners may obtain up to the entirety of a credential through RPL, eliminate any distinction between credentials obtained through RPL or otherwise, and find a way to provide RPL at low cost.

Developing a qualifications framework is the single most transformational step colleges could take to promote RPL. In fact, it is difficult to imagine transformational approaches to RPL without a baseline qualification framework and program-level learning outcomes to work from.

In terms of institutional procedures, learners should be able to access RPL before enrolling in an academic program. This can allow them to know how many credits they will still need to attain a credential. Learners who secure RPL should have priority for admission to academic programs, recognising that they are the most efficient students to train (with limited credits to fill out). Colleges must also strive to ensure as best as possible that their programs can help those who receive RPL to fill the outstanding gaps in their learning. This depends again on strengthening the learning outcomes basis for programs, and flexibility for students to enroll in only the courses needed to attain their expected competencies

Other steps would represent more incremental improvements in how RPL is delivered, but could have considerable benefits given how unsuitable many administrative and other policies are for RPL.

- Communicate RPL opportunities and processes clearly and streamline administrative processes for RPL to improve their navigability and efficiency, all based on principles of user-based design.
- Develop and promote tools for pre-assessment starting with key learning outcomes or study programs, so that learners can gauge for themselves if they may be candidates for RPL before starting a full process. As a possible model, Otago Polytechnic in New Zealand has a very clean and intuitive online portal for students to complete 15-minute self-assessments that form the basis for a presentation they deliver to college accreditors when looking to explain their past learning and its relevance to credits they wish to receive.³²

³² <https://capable.nz/>

- Expand training of faculty members or other evaluators to better conduct assessment for the purposes of RPL. This could be an important priority for TLCs.
- Systematically track RPL assessments, be they successful or not, to provide a reference point for subsequent decisions.

These policies are not all straightforward and may imply important costs. Meanwhile there is risk in communication of making promises that institutions cannot keep. It seems likely that only once a qualifications framework is in place could colleges implement RPL really extensively. In the meantime, colleges will almost certainly need to continue proceeding incrementally on a program-by-program basis focusing on fields with rising formal qualification requirements, where significant numbers of workers completing similar tasks are subject to displacement, and/or where there are labour shortages. Efforts could also concentrate on learning outcomes that are common across a broad range of study programs (perhaps embodied in core courses).

Although colleges should not wait on financing reforms to do what they can on their own, working with provinces to ensure appropriate RPL financing is critical. We would not endorse offering RPL for free, barring a strong pre-assessment process to ensure applicants have a serious chance of recognition, but it is surely important that RPL costs be restricted to a modest level. This requires appropriate provincial funding so that RPL does not detract from institutional resources. Providing learners with loans to cover the costs of RPL could also help, though including this in mainstream student financial aid programs may require new legislation in some provinces.

In terms of regional collaboration, colleges could develop common policy and performance standards for relevant processes, and report on these to a common table, to help ensure shared learning and reinforce commitment to improved performance. If colleges work towards common programs, they could set up shared databases with regards to RPL requests and decisions to try to generate efficiencies. Colleges could also develop shared pre-assessment and assessment tools, including through a common online platform, as well as infrastructure for hands-on competency demonstration.

Box 3: Unbundling training delivery and assessment of competencies

One additional proposal that is further outside the box would be for colleges to unbundle training delivery from (final) assessment of competencies gained. Colleges might develop capacity to conduct this kind of unbundling internally or collectively, in particular through specialised assessors. This approach would more firmly position learning outcomes as the clear basis for final assessments of courses rather than simply confirming what has been taught or related procedural elements – strengthening the credibility of programs. It would also position colleges much better to implement RPL, while one interviewee suggested it could turn assessment into a new line of business, on behalf of employers for instance. There is however limited evidence of unbundling like this occurring outside of online programs, and there could be considerable administrative and other obstacles. Therefore, at this stage we suggest only that this model could merit piloting in a narrow set of larger programs.

Theme 3: Promote Diversity in Programs and Careers

The transformational activities in this section are as follows:

- a. Build data-driven systems to support study success – This involves strengthening human resources and administrative capacity for the collection and use of data to design and implement evidence-based interventions. Colleges need to also gear relevant services towards implementing these interventions, shifting focus from supporting students who seek out support to delivering directed support to those identified as being in need. Students from traditionally disadvantaged communities benefit most from this kind of approach.
- b. Enshrine commitment to diversity in policy – Educational Equity Policies can confirm institutional commitment to advancing equity and spur action. Particular efforts need to go towards staff buy-in and training.
- c. Pursue ambitious international recruitment with an emphasis on eventual immigration – Colleges should pursue ambitious international recruitment while responsibly mitigating related risks. Such efforts can be especially transformational if they facilitate eventual immigration, notably in rural regions and where focused on fields with labour shortages. To succeed, colleges must invest to support students' adaptation to Canada and integration in their communities.
- d. Recruit for rural Canadian livelihoods – Facing serious labour shortages, many rural communities may offer strong livelihoods to those who combine different fields of work. Colleges could play a major role in spreading awareness and channeling learners into these careers.

Context

To provide context for these transformative activities, we first review study success supports at the different colleges as well as their institutional data systems. Then we address supports specifically for equity-seeking groups, before finishing with a discussion of international recruitment.

Study success supports and institutional data systems

Regional colleges offer an array of services to support students' success and well-being. To our knowledge, all provide advising and counselling services, with the former tending to focus on students' academic and career pathways and the latter on personal wellness. Tutoring services are also common, or other services focused on study strategy. In many cases, institutions are expanding these services, yet there are pervasive concerns as to the adequacy of these services given rising demands.

An important movement in supporting study success has been towards proactive interventions, i.e. measures that do not require students to seek help, but reach out to students identified as being at risk of withdrawal. For instance, academic alert systems

can be set up for faculty to notify support staff to reach out to students at risk of failure. Certain Canadian colleges have adopted proactive approaches. However, where these programs are reliant purely on faculty discretion they are likely less effective than more systematically evidence-based approaches (which do not preclude faculty-driven intervention as well).

Many of the most effective interventions to support student (and likely apprentice) success depend on strong data systems to address specific causes of poor outcomes.³³ This reflects how the collection and use of data is one of the strongest drivers of innovation and productivity growth in the contemporary economy in general. Georgia State University (GSU), which includes the previously independent Perimeter College, is a world leader in raising completion. GSU has eliminated achievement gaps for students from many disadvantaged groups, and doubled its overall completion rate in the process. One intervention tracks 800 different indicators and alerts an advisor to contact students when identified risk-factors signal that they have heightened likelihood of withdrawal. GSU also waives outstanding tuition bills of less than USD 2,000 for students who are in the last year of their program and in good academic standing, but are having difficulty paying fees, which the university believes has raised completion at no net cost.³⁴

Box 4: Nudging for study success

Nudging programs have also shown some signs of effectiveness in promoting study success. Various colleges in the US have implemented the Nudges to the Finish Line program, providing students with personalised text messages regarding information on completing their degrees, and they found that the programs raised completion modestly at a very low cost.³⁵ “Future Authoring” was tested at Mohawk College in Ontario, encouraging students to envision their lives in three-to-five years if they take care of themselves, and may have helped to reduce student withdrawals.³⁶

In general, our impression is that lead institutions in the United States are well ahead of Canada in marshalling data to help improve institutional outcomes. Beyond GSU, other leaders would appear to include Montgomery County Community College (Pennsylvania),³⁷ Amarillo College (Texas), Odessa College (Texas),³⁸ and Bunker Hill Community College (Massachusetts)³⁹ and the Community College of Beaver County (Pennsylvania).⁴⁰ The Community College of Allegheny County (Pennsylvania) provides an example of a strong data-driven and promoting president who adopted various measures to engage faculty into the analysis of student data to support student success efforts – to try to overcome cultural resistance. In Canada, colleges with the strongest data systems tend to be large and urban, such as George Brown College and Sheridan College in Toronto.

³³ Such interventions may not be necessary in very small institutions, where it is more possible to engage with each individual student, but in larger institutions they are intensely promising.

³⁴ <https://success.gsu.edu/approach/>

³⁵ <https://collegecompletionnetwork.org/studies/nudges-finish-line-experimental-interventions-prevent-late-college-departure>

³⁶ <http://www.heqco.ca/en-ca/Research/ResPub/Pages/Using-Future-Authoring-to-Improve-Student-Outcomes.aspx>

³⁷ https://www.achievingthedream.org/sites/default/files/resources/ATD_CuttingEdge_No3.pdf

³⁸ http://www.iebcnow.org/wp-content/uploads/2018/08/Phillips-Horowitz_flyer_July-2018.pdf

³⁹ <https://www.zogotech.com/bhcc/>

⁴⁰ https://www.achievingthedream.org/sites/default/files/resources/ATD_CuttingEdge_No3.pdf

A key measuring stick for data systems is the extent of automation. Automated data collection and processing will generally be more efficient and consistent. Beyond this, we would distinguish three basic levels of institutional data use and capacity:

1. The institution collects basic data to inform strategic planning and to meet accountability requirements. Use of data to inform changes in program and service delivery is limited.
2. The institution collects relatively diverse and detailed data that is used to inform program and policy decisions. For instance, the college tracks where programs or specific sub-populations of students have especially low persistence rates and pursues interventions to help address these challenges, and then uses its data to track these interventions' success.
3. The institution collects detailed data that can track individual students and has developed capacity to use these data to make predictive interventions to avert poor outcomes. Interventions involving advising (academic and personal), tutoring, scholarships, and so forth are most effective when they specifically address the challenges facing individual students.

From our experience, we would situate most Canadian regional colleges at level two, or level one. Larger institutions tend to be stronger, while some smaller colleges are struggling to generate basic statistics in an accurate and timely fashion, let alone interpret the data and translate what is learned into effective interventions. Staff dedicated to institutional data collection and analysis can be very limited, while training on data usage across the college can be inadequate. Automated data collection and processing is usually limited. Data management systems are often inefficient, which greatly hinders the potential for automation of collection and analysis and may generate inaccuracies. There are difficulties with coordination in some cases, whereby Institutional Research may have limited involvement in the analysis of data they generate, with some risk of misinterpretation.

Supporting equity-deserving groups

The learner population served by Canadian regional colleges is increasingly diverse. Colleges recognise the need to provide targeted outreach and supports to different communities.

Leading higher education institutions have committed strongly to supporting diverse learners. This can be enshrined in robust diversity policies to drive institutional change. The Nova Scotia Community College (NSCC) is a leader in this area. Its Educational Equity Policy delineates specific responsibilities for all community members, and is designed to ensure equity mindedness, representational equity, and resource equity in its offerings and on the part of its institutional staff. Staff report that the Educational Equity Policy is driving reconsideration of practices ranging from classroom pedagogy to RPL. Work remains to be done in addressing colonial teaching attitudes and curriculum, but there is anecdotal evidence that this model is helping better ensure that every student feels welcome and is able to achieve their full academic and occupational potential.

Supporting students with disabilities has been a major priority at many colleges. To our knowledge, practically all colleges offer accessible learning services in some fashion. These services are responsible for facilitating academic accommodations, delivering technology support and providing other services. At large multi-campus institutions, there is often an accessible learning specialist on each campus. At smaller institutions this is not always a stand-alone unit.

A 2010 HEQCO report identified various best practices in supporting indigenous students. These included soliciting community input in designing programs, allowing students to minimise time spent outside of indigenous communities, recruiting students through networks established with Band Councils, Elders and local high schools, and developing culturally relevant and sensitive course materials. Many colleges have specific supports for indigenous students, including specialised advisors, dedicated physical spaces, regular availability of elders on campus, and some efforts to integrate Indigenous knowledge or approaches into pedagogy, including but not exclusively through academic programs specifically targeted towards indigenous learners. Evidence suggests that Indigenous students tend to appreciate having indigenous student services and spaces on campus.⁴¹ Colleges' efforts to support indigenous students depend on strong relationships with Indigenous communities.

Colleges have provided various forms of support for women in non-traditional fields and professions, basically STEM and the trades. These efforts tend to focus overwhelmingly on the trades, and depend on partnerships with local women's organisations and provincial governments. Activities may include multi-week programs for women to explore trades careers through hands-on learning, mentorship and introduction to workplaces, and modest targeted financial aid.

Lastly, certain colleges offer programs to support immigrants to Canada in attaining English language proficiency, sometimes free of charge. Other colleges may direct learners to other organisations that offer similar programs. Often colleges encourage those pursuing these language instruction to continue into other programs, including their full diplomas.

International recruitment: a high-risk-high-return strategy

Over the last five years, declining youth populations have led to stable or declining domestic post-secondary enrolments in many regions of Canada. As a result, a number of institutions have turned to the international market for students.

Rising international enrolments have been evident in particular in the university sector. To take the most extreme example, Cape Breton University is now over 60% international. In colleges, statistics are more difficult to come by in many provinces, but international enrolments are considerable. International students accounted for 13% of Canadian college enrolments in 2017-18 (these figures include the large urban colleges as well as regional colleges).

⁴¹ <http://www.heqco.ca/SiteCollectionDocuments/Promising%20Practices.pdf>

Since international students pay relatively high tuition fees, the shift to international students has a beneficial effect on institutions' finances. In Ontario, total college revenues rose by 18% from 2017-18 to 2018-19 alone based primarily on international student tuition.⁴²

International recruitment is of interest not only for the benefits students bring while in their programs, but also for their potential post-graduation to increase immigration.

Looking at Atlantic Canada, likely reflect trends in much of peripheral Canada, retention of international students has been relatively low. Between 2009 and 2015, only 15% to 18% of international graduates of Atlantic Canadian institutions were still living in the region one year later. However, this number is up from 11% between 2004 and 2013. Nova Scotia retained 12.6% of international students in 2018, surpassing its goal of retaining 10% and up from 3.6% in 2005.

There is limited evidence on recruitment of international students to colleges as prospective immigrants for an economically peripheral region, or for rural communities in particular. Yet, there is clear evidence that international students at community colleges have stronger intentions to settle permanently in Canada than those attending universities, by as much as 44 percentage points according to one study. Presumably this interest translates into higher likelihood to settle permanently. This suggests that raising the proportion of international students in colleges could by itself raise the share of students who settle permanently. Additionally, a much larger share of employment goes to college graduates than university graduates, so an immigration strategy emphasising university students may neglect important economic sectors.⁴³

Internationalizing institutions must provide international students with dedicated services, encompassing support for both the academic transition, and the transition to life in Canada in terms of general cultural adaptation, accommodations, etc. However, international student services at many regional colleges are limited.

There are important risks to international recruitment that must be managed, otherwise internationalisation may imperil colleges' mission to serve local communities. Notably, provincial governments may be concerned about these risks and have the ability to block prevent colleges from recruiting abroad.

The most important risk is that international students obtain seats at the expense of domestic students. In institutions or programs where *numerus clausus* (i.e. allocated seat limits) are minimal, this is not a major issue. However, in many regional colleges many programs do have seat limits.

Another concern is that colleges might shift from a service orientation to a market driven ethos. This is not simply a question of ethics. The institutional identity and types of programs implied in catering to an international audience may differ considerably from what might best serve local communities, such that international responsiveness comes at the expense of local responsiveness. Yet, an approach that is unresponsive to

⁴² <https://higheredstrategy.com/where-the-living-is-easy/>

⁴³ Retention can also differ significantly according to students' nationality of origin In Atlantic Canada for instance, students from India are the most likely to stay permanently. <https://ppforum.ca/articles/keeping-international-students-in-atlantic-canada-edunovas-big-experiment/>

international students but recruits them anyway to fund an institution's other priorities is equally anathema to a service commitment. Many worry about recruiting international students and not offering them a high-quality experience, in terms of both their academics and life in Canadian communities. Enrolling international students requires cultural adaptation not only for these students, but on the part of local students, instructors, support staff and other local community members. If all these groups are not supported to adapt successfully, outcomes will be suboptimal. Fortunately, this adaptation appears to be beneficial, as for instance research shows that cross-cultural groups typically have superior performance.⁴⁴ The College of the North Atlantic's Qatar campus provides a model for effective approaches to educating students across cultural divides.⁴⁵

It is not enough to be actually protecting seats for local students, or to be maintaining a service orientation in practice, institutions need to be widely perceived as doing so as well. Even if problems we have identified do not truly materialise, the perception that they are occurring may affect an institution's image among its stakeholders.

Finally, international student recruitment can be relatively unstable and incur other risks, including geopolitical ones. Most obviously, the COVID-19 pandemic has been affecting Canadian institutions most dependent on revenues from international students, given that it poses an obstacle to international travel and has interrupted academic pathways in many sending countries. Diversifying source countries or source regions within countries is a worthy risk-mitigation strategy, though more difficult to do than is often assumed given the relatively enormous size of China and India.⁴⁶ Stronger approaches to international recruitment, such as working with trusted agents and incrementally expanding markets, are also less risky – especially with regards to fraud.

And yet, certain internationalisation strategies mitigate these concerns. For instance, responsible institutions allocate seats to international students very carefully based on ongoing tracking of applications and projections of local demand. In line with this, many of the regional colleges that have been more aggressive in recruiting international students would appear to be those that have experienced stagnation or decline in local demand, and therefore face less risk of depriving local residents of a place. Under these circumstances enrolling international students may in fact help to sustain options for local residents by ensuring there are sufficient students to offer classes.

Transformational Activities

We recommend four transformative activities for regional colleges to promote diversity in their programs and careers. The first is building stronger data-driven systems to support study success. The second is enshrining commitment to diversity in policy, while undertaking efforts to foster staff and community buy-in. The third is pursuing ambitious international recruitment with an emphasis on eventual immigration, in a responsible manner to mitigate potential risks. Finally, we recommend that colleges develop and

⁴⁴https://pdfs.semanticscholar.org/e015/a52ff29f4261aa0efb2d30a8a84595332393.pdf?_ga=2.86318107.2038883800.1579030508-293702207.1579030508

⁴⁵ <http://higheredstrategy.com/international-students-as-a-labour-issue/>

⁴⁶ More diverse classrooms have added benefits as learning environments.

recruit students for programs that foster multi-occupational livelihoods in rural communities.

Build data-driven systems to support study success

We recommend that colleges build their human resources and administrative capacity to move towards our level three of data collection and use, with extensive automation. Once in place, institutional research units should continuously study trends among students to identify challenges for student success that policies or programs could be better designed or adapted to address. Special focus should go to indicators of student success such as course failure, persistence and completion/withdrawal.

Audits of current information management systems (which we recommended earlier to determine colleges' adaptability to a more flexible academic calendar) can also explore how systems might be adapted to support data-driven study success initiatives. In this area, deficiencies may be more significant than for adjusted calendars. The pace of data system development will necessarily determine the broader timeline for implementing proactive study success initiatives.

Institutions should prepare their relevant services to respond to intervention opportunities that emerge from data, including advising, tutoring, curriculum design, academic staff, TLCs, student financial assistance, etc. Concerns relate to both capacity for proactive intervention, and respect for data as key to designing interventions. Given that staff resistance is among the most important potential causes for failure in adoption of data-driven models of support for study success, college leadership must commit to fostering a culture of using data throughout their organisations, and seek to nurture ambassadors for this approach among staff and faculty.

Regional colleges together might best pursue this work to achieve efficiencies and joint learning. A data-driven approach to promoting student success is all about learning from data and then applying what you learn, which communication among colleges might accelerate. More intensive collaboration could involve joint purchasing of software for data collection and analysis, or even institutions sharing part of the actual collection and analysis functions – as in creating a shared unit housed within one institution or a standalone body that would be responsible for efforts across multiple colleges.

Box 5: Tackling the absence of comparative data on institutional performance

Regional colleges should work towards common definitions and explore means of sharing data to provide comparisons that can help in understanding performance. An inability to dependably measure their performance in the absence of such data is of serious concern.

Enshrine commitment to diversity in policy

We recommend that colleges adopt Educational Equity Policies identifying clear responsibilities and measures of success. Such policies should formalise deep institutional commitment to equity-driven systems change, and require significant staff and faculty buy-in to be successful. The NSCC appears to be demonstrating that the adoption of an official educational equity policy alongside an engaged staff can begin the work of structural transformation. To achieve this would require the involvement of top leadership in the policy's development and to foster a commitment to advancing equity throughout every level of the institution, as well as extensive community engagement.

In line with a proposed equity policy, Teaching and Learning Centres (TLCs) should play a leading role in working with instructional staff at interculturalizing and decolonizing program curricula. This can be accomplished through institution-wide programs of professional development incorporating intercultural models, inclusive pedagogy, and regular curriculum reviews. Ideally, TLCs will engage in regular conversations with the college services focused on equity seeking groups, including indigenous centres and international student offices. If institutions make a strong commitment to greater inclusion and enact an equity policy, they must make sure that they follow through and that the wider community buys-in.

Pursue ambitious international recruitment with an emphasis on eventual immigration

Educating international students is a critical way for colleges to deliver value. It represents a valuable export industry that can benefit both colleges' students and regions, but is especially transformational when it channels students into permanent immigration. In sum, this area of activity should not be left to universities or major urban colleges, although regional colleges should be careful to mitigate risks in pursuing these efforts.

For those colleges that are currently internationalising little, the potential for increased internationalisation is great but there are clearly concerns to account for. Given this, the first step is to determine how more ambitious internationalisation could be pursued most efficiently – i.e. maximising the benefit for an institution's major stakeholders (i.e. government, students and employers) while minimising downside risks. This would require an open dialogue with stakeholders, including with those working to help broader regions to achieve their goals for international immigration. Ultimately, reflection and dialogue should lead to the development of a strategy for international recruitment growth that suits these colleges' mandates and circumstances.

Moving on from this, the simplest thing colleges can do to maximise the potential of international students as permanent immigrants is to recruit as many students as is reasonable while delivering a high-quality experience. A responsible approach to internationalisation recognises that there are considerable costs to educating international students that institutions must be willing to pay.

Ongoing analysis of what challenges international students encounter and what kinds of supports or activities amplify the likelihood of permanent settlement is essential. Powerful institutional data systems supporting proactive study success interventions are especially relevant to this goal, as are institutional diversity policies, strong teaching and

learning frameworks, and teaching and learning centres providing relevant training to instructors. To date, a clear emphasis has been on WIL placements and more traditional mechanisms of advisor support which is also appropriate. Colleges should take special care that there is sufficient housing, transportation and other services – particularly in more rural communities. Across these areas, shared learning among colleges could be especially valuable to help each improve.

Institutions should develop some study programs that cater especially to international students. These may have more flexible seat counts and no local competition for places. Post-diploma programs are often very attractive to international students notably as a step towards immigration. If colleges would like to develop these programs more for local mature learners per our earlier recommendation, recruitment of international students may help to boost enrolments while local recognition and demand for these credentials is forming. In doing this, colleges should be careful to preserve “Canadian” experiences by not concentrating international students so much in certain programs or campuses that they do not interact with local peers.

Another clear area of potential is to recruit international students to train for fields with clear labour shortages. In these fields, colleges might even educate students who subsequently complete articulated undergraduate degrees with local universities – potentially with some instruction occurring abroad. This approach could even have appeal for colleges/provinces predisposed against international recruitment in community colleges and represent an acceptable incremental step towards broader international recruitment efforts – even motivating government investments. Having a clear sense of labour shortages and designing recruitment and programs to channel students into these fields is critical initial work.

Importantly, colleges may not on their own be able to mitigate labour shortages that result mostly from poor wages and working conditions, such as those found in long-term care facilities. International students are likely not the solution because they probably will not remain for long in such jobs, while colleges may not wish to recruit students for such unattractive work. Yet there are labour shortages in attractive fields of work where international recruitment could be very effective.

In Atlantic Canada, EduNova’s success highlights the potential for collaboration in recruitment efforts. EduNova is a cooperative association of Nova Scotia education and training providers that has helped its members to raise the profile of their collective expertise and opportunities.

Beyond marketing, there could also be opportunities for colleges to build shared capacity to process applications from overseas students. This can take the form of common application portals, which can help to channel students into programs across a region where there are openings, or focus at the back end in processing applications from international students – which is often tricky and can require specific expertise.

As a last note, colleges must once again be careful regarding how internationalisation is perceived, and adapt their internationalisation strategy to protect their brand in their communities. Perception can be as impactful as reality in some cases, and colleges need to accurately counter narratives that they are neglecting local students or exploiting

international students without offering a commensurate return in a proactive and responsible way.

Recruit for rural Canadian livelihoods

Increasingly vibrant seasonal industries and growing labour shortages have created new opportunities to earn a very good living in rural Canada, provided workers can work in multiple occupations. However, workers need to be aware of these opportunities in the first place and have adequate training for the professions they would occupy.

Rural colleges should explore ways that their academic programs can support the development of multi-occupational careers, such as “dual diplomas” with common learning outcomes, and efficient program timing, or slimmed down credentials more fitting for a part-time occupation (though this may depend on trades qualification requirements for instance). Making the annual calendar more flexible and strategic, as discussed earlier in detail, would be critical. A qualifications framework that articulates common competencies between programs and ultimately occupations that a rural worker may successfully combine would also be very helpful. For initial and ongoing work, institutions will need to be able to identify occupations experiencing shortages in different parts of rural Canada and by extension how programs should be designed to facilitate learners filling multiple such occupations.

It would be essential also that colleges help to market rural multi-occupational livelihoods. Recruitment efforts should not only focus on rural areas but also urban and international audiences. Rural Canadian life can offer much to those who earn good incomes, including modest living costs.

Theme 4: Improve Service to Employers

The transformational activities in this section are as follows:

- a. Strengthen labour market foresight capacity – The college role needs to be reimagined from consuming information and feedback from industry and providing solutions, to exchanging information that informs the activities of all parties. Labour market foresight units may conduct research on high-level economic trends affecting colleges' main clients (i.e. learners and employers) and can convene informed contacts for knowledge exchange. For many regions, such as Atlantic Canada, a single regional body could fulfill this role most effectively, and also facilitate program cluster advisory committees as a modification of program advisory committees (PACs), with better support and governance.
- b. Improve coordination of employer engagement – Institutions should look internally to bring the leading actors in employer engagement under a common reporting structure and also to enact customer relations management (CRM) systems. Colleges can also better coordinate amongst themselves within regions – we suggest finder's fees for referrals on applied research and customised training projects, and even for WIL placements.
- c. Develop more ambitious applied research and customised training – Colleges should develop coordinated areas of expertise, expanding the number of organisations equivalent to Technology Access Centres (TACs) or equivalent and adding customised training to their purview. Given that technology and skills are the two drivers of increased productivity in firms, colleges should closely connect their applied research and customised training services.

Context

To provide context for our recommendations, we first consider how colleges currently coordinate their employer engagement activities. Then we describe how they generate labour market foresight, pursue applied research and deliver customised training.

Coordination

Colleges work with employers in many areas, including curriculum development, applied research and customised training, work-integrated learning, as well as outreach through career fairs, fund-raising and alumni activities. However, Canadian post-secondary institutions often have limited internal structures to ensure employer engagement is strategic.⁴⁷ A lack of coordination is problematic employers when contact a college in search of support, but is even more critical when colleges are actively reaching out.

⁴⁷ This was less of an issue in the smallest institutions, which only engage employers in a narrow area and often on a program (cluster) by program (cluster) basis.

At many institutions, information sharing across areas of activity is often informal and inadequate. There may even be weak coordination within a single unit, such as customised training. It is more common that different units may not realise for quite some time that they are engaging with the same external partner on different or even similar possible initiatives. Among the greatest concerns relate to linkages between applied research and customised training. In some institutions the customised training office is responsible for most outreach, while the other service is assigned a more passive role.

Customer relations management (CRM) software can help improve coordination. Yet, instituting CRM software across units within a college often appears to be very challenging.

The lack of coordination of employer engagement appears to often be deliberate. Different units and even individuals within a post-secondary institution can jealously guard external contacts in fear that others in the college could jeopardise them. This is truer still between institutions. Nevertheless, coordination can facilitate efficiencies and service improvement.

Labour market foresight

Colleges need to understand their local labour markets as well as possible, for instance to determine what programs they should offer. Many colleges currently rely on consultation with people that they assume are well informed of what is happening in their industry/sector or occupation. But, in many cases colleges might themselves be better informed than those they consult, or the colleges should be better informed.

Canadian colleges use program advisory committees (PACs) as the key instrument for engaging employers with curriculum development and renewal. Some institutions have PACs for all their programs, in other institutions, the use of PACs is more uneven. PACs may be more common in certain faculties or even for certain campuses within an institution – PACs do not always match neatly with programs.

PACs vary in size considerably, extending into the thirties in some cases. Many colleges appear to have an open-door policy basically to include as many members as possible as a means of broader engagement.

Typically, PACs meet once per year, and some colleges may at least aspire for them to meet more often. In other cases, PACs may only meet on the program renewal cycle, which varies between programs. Committees that meet less often may be seen less as PACs than as focus groups to inform program development or renewal.

A number of factors can limit PACs' effectiveness:

- The program-basis for PACs may not align with how industry thinks about its needs, which is often much more oriented towards tasks and skills.
- PACs may not consult their members regularly enough for effective engagement. It is difficult to know how PACs can be effective when consulted only once per year or every few years.

- The quality of PAC members' contributions can be highly variable. PAC members ideally should be highly engaged in the PAC's work, well connected with their industry within their local region if not more broadly, and well informed as to where the technological frontier is even if they are not operating at the technological frontier. Typically, only a limited number of people can be expected to fit this profile.
- PAC meetings may not be facilitated effectively so as to draw out high quality contributions from their members. For instance, college staff may dominate conversations and foster an environment where industry representatives do not feel able or encouraged to engage effectively. PAC members may especially be discouraged from providing critical feedback.
- Colleges may not be asking the right questions to their PACs. They may seek narrow feedback on program elements or elicit anecdotal experiences regarding a limited number of students on placement, rather than facilitating a conversation about where industries and their skills needs are going. It may be a mistake to view PACs as a source of information when in fact they may be better used as assisting in verifying and interpreting what colleges are learning elsewhere, or providing insight on directions for further research and analysis.
- Colleges must exercise discretion in responding to the recommendations of PAC members to ensure they are not designing programs to serve the narrow interests of specific employers but instead the broad interests of industry and consequently students.

Colleges also conduct labour market research of various forms, using internal capacity or hiring external consultants. Their research may involve statistical analysis of industry data, focus groups (other than PACs), participation in various tables, surveys of graduates and industry, and secondary research. Colleges also rely on their instructors who learn from providing employers with applied research and customised training support, and from other professional work.

In many cases, colleges have limited internal capacity to pull together information from these activities and to conduct market research in general. Many efforts may be quite informal (which is likely inevitable and not entirely undesirable) and represent only a fraction of the responsibilities of relevant staff. There is little capacity to extend research beyond consultation to data analysis and the study of potentially predictive trends in other jurisdictions.

When considering these elements together, our conclusion is that many Canadian regional colleges' capacities for economic foresight may fall short of what is required to respond to the economic challenges their communities face.

Applied research

Applied research in regional colleges refers to an array of supports responding to industry or community demand for commercialisation and innovation solutions. Assets for applied research can include expertise, state-of-the art facilities and equipment.

Applied research partners are typically small and medium-sized enterprises (SMEs), which account for the majority of the private sector workforce in Canada and often have limited in-house capacity for innovation. Colleges have also recently grown their ability to provide applied research and innovation support for social sector agencies, promoting “community or social innovation”.

At its most basic, applied research support directly assists partners in solving operational and/or technological problems. It can permit experimentation to make more informed choices about investments in cutting-edge tools, equipment or skills, assisting employers in moving closer to the technological frontier. Often, partners reach out to colleges for pre-commercialisation solutions such as market validation, prototype development, technology adaptations and even in search of assistance in grant applications for business innovation funding. Colleges have an important advantage over universities in that the partner retains the intellectual property, which confirms that partners secure full benefits from collaboration. Often firms are frustrated by slow processes of commercialising research relationships with universities, often as a result of conflicting IP ownership.

We observe basically two prevailing models of applied research (which can be combined) amongst colleges. Under the first model, faculty and students pursue projects with employers, largely as an extra activity off the side of the faculty-member’s desk, and as a part-time job or experiential learning project for the student. The second model involves centres of applied research expertise that have full-time staff and draw upon other resources in their college to support their work including engaging students.

Quebec CÉGEPs are the world leader in applied research at the college level. The Government of Quebec has provided stable funding for technology centres (Centres collégiaux de transfert de technologie - CCTT) attached to CÉGEPs throughout the province since 1983. Inspired by CCTTs, the Government of Canada supports Technology Access Centres (TACs), of which there are 47 across Canada. A key feature of the CCTT and TAC networks is a commitment to “triage” requests to provide better and more timely solutions, directing companies and organisations to the centre that has the most relevant expertise (equipment, facilities, know-how) for the problem that needs solving. For example, there is an understanding in Ontario that companies needing specific business innovation services will be navigated to the nearest TAC capable of servicing their need in the timeframe required. A recent OECD case study regarding TACs found that they enhance the applied research capacity of Canadian colleges, complement other publicly funded knowledge-transfer and innovation entities in their local areas, and enable instructors and students to participate in applied research projects which enhance their educational experiences.⁴⁸ To secure TACs, colleges must make their own investments in applied research in advance.

The Collège Communautaire du Nouveau Brunswick (CCNB) has one of the most impressive applied research models in Canada. Despite its small size, it has been in the top 20 Canadian colleges for total R&D funding. It undertook nearly 50 applied research projects in 2018-19, mostly focused in three areas of expertise: advanced manufacturing (i.e. the TAC); advanced materials (Caraquet); and agriculture-beverages-bioprocesses-

⁴⁸http://www.innovationpolicyplatform.org/www.innovationpolicyplatform.org/system/files/imce/TACGrants_Canada_TIPKnowledgeTransferCaseStudy2019_0/index.pdf

environment (Grand-Sault). Projects range in value from as little as \$5,000 to well into the six-figures. CCNB delivers applied research support both within and outside of New Brunswick, and with both Francophone and (in fact mostly) Anglophone clients.

There are significant constraints that could prevent many colleges from providing research and innovation services effectively. They include inadequate relationships with employers to understand their innovation needs; difficulties in engaging faculty due to resistance or limited time release; lack of institutional funds; a lack of grant-writing capacity; and finally, difficulties in meeting clients' commercialisation needs in a timely way.

Customised training

Many colleges engage in customised training, ideally helping employers raise their productivity while charging fees that turn a profit. Programs may: range in length from single days to multiple weeks; include employer-specific certificates or no certificates; deliver training directly or via train-the-trainer models; and be delivered in-person on college premises, in-person at the employer's or other premises, or online. Clients can come from the public, private and non-profit sectors.

Colleges can inventory their customised training offerings over time to speed up responsiveness. They often also use customised training as a part of their program development pipeline, whereby a customised training program evolves into a regular diploma or certificate.

Some colleges have specific units responsible for customised training. At other colleges, responsibility for customised training falls under broader administrative structures, such as continuing education units. The human resources supporting customised training vary greatly between institutions even of similar size. Some colleges have staff responsible for outreach to employers regarding customised training who are distributed throughout their provinces or across their campuses.

Canadian colleges encounter various challenges in delivering customised training. These include:

- Challenges in developing customised curriculum fast enough to meet employer expectations while meeting standards for program quality
- Insufficient flexibility in college administrative structures to be able to allocate staff time, space, etc. for the development and delivery of customised training
- Weaknesses in communication or reporting structures addressing customised training, leaving this area of work without sufficient strategic direction
- Basic problems in ensuring customised training offerings are financially worthwhile

Transformational Activities

We identify three transformational activities for regional colleges to better serve employers. These are to strengthen labour market foresight capacity, to improve

coordination of employer engagement, and to pursue more ambitious applied research and customised training.

Strengthen labour market foresight capacity

Colleges need to continuously build-up and harness their expertise and capacity to track where the economy is likely going. They should reimagine their role from (A) consuming information and feedback from industry and providing graduates and other solutions, to (B) exchanging information with industry that helps both to better advance economic and social development.

We recommend that colleges create labour market foresight units that can conduct independent studies and build a network of contacts to inform the colleges' work. These units could resemble an outward, labour market-facing equivalent to the institutional research capacity that we described earlier as the key mechanism for driving improvements in student success. They should not only gather data, but help with interpretation to inform college decision-making.

Better understanding regional trends in demand for college services would be an important function of such units, based at least in part on ongoing analysis of high-level trends in the economy and the labour market, as well as specific industries/sectors and occupations. The goal would not be to project labour market demand, but to try to understand how the needs of tasks, skills and capital are likely to evolve, driven by the four dynamics of technological change, globalisation, demographics and shifting demand from goods to services. This information-generating and facilitating role might generate revenues for colleges – i.e. selling market foresight services to businesses or sectoral associations.

Useful labour market research activities include ongoing surveys of employers, data collection relating to graduate labour market outcomes, and independent studies on particular sectors of relevance. It is particularly important to strive to stay abreast of the technological frontier relevant to a host of industries/sectors and occupations, looking at what is going on locally but also well beyond.

Colleges also need to conduct network-building, and could do so through such units. No single entity could accumulate expertise in the vast array of industries/sectors and occupations of interest to most regional colleges. These foresight units could provide a platform for greater knowledge-sharing within and reaching beyond their institution or even their local area.

In regions such as Atlantic Canada, a single market foresight unity could work best because none but the largest colleges might be able support the work we are proposing on their own. Unified research bodies might be able to attract stronger staff, and facilitate stronger learning and research dynamics among its staff. The work that separate units

might pursue would also overlap considerably.⁴⁹ Studying trends across regions and sub-regions is surely more efficient than at the level of individual sub-regions or small provinces – the core patterns of technological change and globalisation are the same despite local variations for instance in demographics. Regional consultations could hear more views.

Complementary changes would shift the orientation of PACs from the institutional perspective (programs) to the employer perspective (tasks and skills), and reframe them as less of a source of information than an instrument for validating and better interpreting data gathered through various means. We recommend consolidating PACs into program cluster advisory committees (PCACs) covering a group of closely related programs with similar employer industries/sectors and similar or complementary tasks/skills demanded from graduates.⁵⁰ These PCACs could bring together a more select group of members, and engage more regularly – say four times – over the course of the year.

Colleges should establish clear and transparent governance for PCACs, including guidelines for committee size (say between five to nine), appointing members (i.e. requirements for qualifications and diversity) and terms of appointment (e.g. durations of as many as three years).⁵¹ At least one PCAC member should be recruited from outside of the local region, even if this requires higher honoraria amounts. Further efforts could highlight that PCAC members are industry and community leaders to raise esteem for members.

Guidelines for convening and facilitating the work of PCACs can be very useful. They can outline:

- the types of questions that should be asked of PCACs, focusing in particular on the evolution of relevant industries and occupations and how this evolution is likely to alter task and skill profiles within programs as well as aggregate labour demand; and,
- the role of any college staff who attend or otherwise engage with PCACs to ensure that members' voices are engaged as effectively as possible.

Further, we would recommend that regional colleges implement research, communications and engagement strategies to further build PCAC members' understanding of trends in their sectors, including practices at the technological frontier. Still, PCACs can only be a complement to effective data infrastructure with regards to graduate outcomes, the performance of WIL, etc. Again, market intelligence units might be the best locum of responsibility for these activities, working in collaboration with academic units. We would therefore recommend that market foresight units oversee the

⁴⁹ What we are proposing would also be largely distinct from the NLWIC. The NLWIC's objective is to research and promote innovations in training and employment services, which would be only part of the role for the proposed labour market intelligence unit. However, there would be some overlap and possible complementarities between the roles of these two groups that could be beneficial – including with regards to informing college programming, and engaging with employers and other organisations.

⁵⁰ The College of the North Atlantic employs this kind of a model, among other institutions.

⁵¹ This limited size may be of concern to some given that PACs have been quite large in many cases as a means of building relationships with more employers. However, the committees need to be seen as working groups and such large spaces are typically unsuitable for detailed work. Colleges should explore other strategies for engaging with employers in larger groups, with more suitable objectives.

PCACs – recruiting members in consultation with academic units, providing research support for their deliberations, and giving other administrative and logistical assistance.

Given that we believe that market intelligence units could host PCACs, if these market intelligence units operate at the regional level across a group of institutions, so would the PCACs. This would be advantageous for attracting more qualified members, given a larger unified catchment area to choose from. In most cases there is limited diversity within industries and occupations within regions, while colleges often aim to prepare students not only for specific local employers, though in exceptional cases where local distinctiveness is greater colleges of course may reasonably choose not to adopt a regional approach.

The first step to building market intelligence units, where no equivalent is in place, would be to determine what activities currently undertaken within colleges could be delegated to this new entity, and the associated resources. Relevant activities would include the implementation of labour market analyses, and facilitation of PACs and some other industry consultation mechanisms. Centralising these activities should offer efficiencies to help defray the costs of the new entity. With this work complete, colleges could determine what additional resources may be required.

Box 6: The development of shared study programs

Shared capacity in terms of PACs/PCACs, along with shared qualifications frameworks promoting aligned learning outcomes, could eventually lead to the development of shared programs. For instance, one college might develop the program in a certain area and the other colleges deliver the primary college's curriculum, perhaps with some room for local modification. We would suspect that in parts of Canada there would be some appetite for this kind of collaboration to achieve efficiencies in program development and renewal costs.

Improve coordination of employer engagement

Regional colleges should give greater coherence and coordination to their employer engagement efforts. We recommend that regional colleges explore bringing applied research, customised training and labour market foresight together into common reporting structures.

Colleges should consider appointing a lead staff member responsible for employer engagement, potentially reporting to the college president. They might chair a regular committee of staff members involved in employer engagement, or have direct responsibility for relevant units, such as applied research, customised training, entrepreneurship development, WIL, alumni engagement, a labour market foresight body (as a member of whatever governance committee the colleges would create in the event of a regional entity), etc. Colleges might also require regular reporting to the Board of Governors on the institution's overall employer engagement (not limited to specific units).

Staff conducting outreach should be well versed in the three core areas of applied research, customised training and WIL, and accountable for their performance with

regards to each. Strong training and better integration of these areas of activity are needed to mitigate the possibility of staff emphasising one area at the exclusion of the others.

As well, a customer relations management (CRM) software system should be in place in every college and accessible to all services responsible for employer and stakeholder engagement. Colleges within a region could even consider sharing full or at least partial access to such a package amongst themselves to facilitate collaboration.

These steps are not necessarily difficult, and could begin immediately – although they may require time to fully implement. A CRM would improve gradually as contacts are integrated. Most of the challenge, however, will likely relate to fostering buy-in among staff and stakeholders, requiring time and care from senior institutional leaders.

We would further recommend that regional colleges negotiate regional outreach collaboration agreements for applied research, customised training and WIL. Referring prospective clients for applied research and customised training to partner institutions with specialised knowledge can provide improved service and create efficiencies. The same is true with regard to WIL opportunities. A finder's fee could distribute some of the margin of these efficiencies from the delivering institution to the finding institution, and compensate for the profit that the finding institution might have expected to collect from providing the service itself, or for the costs they might incur trying to find a WIL placement. This would still position local colleges as the provider of solutions for local employers, even if the solution comes via a partner.

More ambitious applied research and customised training

Research and training are closely related, loosely representing the two drivers of increased productivity: technology (including management techniques) and human capital. Technology and training are also intimately connected because technology offers little value to a workforce that lacks the skills to use it effectively. Given this, in line with the previous recommendation, we believe that regional colleges should especially bring their applied research and customised training into much closer alignment. These should be connected, complementary services, with college projects regularly involving both.

Speaking to centres of expertise, while the side-of-the-desk model of applied research can deliver some value, only the CCTT/TAC model has transformational potential. We recommend that regional colleges prioritise building an even stronger network of specialised centres focused on strategic economic and possibly social sectors, delivering both applied research support and customised training. Focusing on areas of strength has been a norm in applied research, but should become more the case in customised research as well – recognising the need to maintain some flexibility to respond to employer needs. Colleges should coordinate the development of centres of expertise amongst themselves to ensure complementarity, they should actively refer prospective clients towards each other where appropriate, and they should look to serve partners across the region and not only in their province.

To create more centres of excellence will almost certainly require additional government support, but in a country with consistent difficulties in raising productivity – and in many

peripheral regions where this is especially the case – such support should be justifiable. In advance of receiving the funds, colleges should use their own resource to build applied research capacity and foster areas of strength that could justify the creation of a TAC or provincial equivalent.

Beyond the creation of these expert centres, we suspect that at many colleges applied research and customised training require better administrative support. This would include formulae for assessing the financial case for proposed projects, and performance standards for development and delivery. Implementing our transformational activities relating to flexibility in the academic calendar and in continuing education would likely help to facilitate improvements in customised training, but broader institutional commitment to this line of business will need to strengthen.

Conclusion

We have identified 13 transformative activities to transform Canadian regional colleges for the better. We have provided insights on first steps to implement these activities largely in isolation from each other. This section provides insights on how to strategically coordinate implementation.

Prioritisation

We can categorise our thirteen transformational activities as urgent priorities, high priorities and secondary priorities.

Theme	Urgent Priority	High Priority	Secondary Priority
Strengthen teaching and learning	Qualifications framework	Teaching and learning centre(s)	Teaching and learning framework
Increase the flexibility of education delivery	More flexible academic calendar	More flexible continuing education programs	Strong recognition of prior learning
Promote diversity in programs and careers	Data-driven support for study success	Diversity policy	Recruit for rural livelihoods
		Expand international recruitment	
Improve service to employers	Better coordinate employer engagement	Strengthen labour market foresight	Strengthen applied research and customized training

The urgent priorities are structural, and can facilitate the implementation of other recommendations. More flexible academic calendars can facilitate more flexible continuing education and customized training, and are essential to recruitment for multi-occupational rural livelihoods. Similarly, progress on qualifications frameworks (again, on an incremental basis) is critical for RPL, and can help for strengthening labour market foresight and recruiting for rural livelihoods. Stronger coordination of employer engagement is a pre-condition for strengthening applied research and customized training, and amplifies the benefits of strengthened labour market foresight. Finally, establishing data-driven supports for study success is critical for helping institutions greatly improve their decision-making across their education and training activities.

The high priorities are less urgent because they may be more complex to establish and are generally not pre-conditions for implementing other recommendations. Finally, the secondary priorities are areas where more ambitious efforts will require that other recommendations be enacted first. As one example, recruitment for rural (multi-occupational) livelihoods requires that institutions already have adopted a more flexible academic calendar, and would greatly benefit from qualifications frameworks.

Cross-cutting elements of implementation

Implementing these activities requires that colleges pursue various cross-cutting activities. Some of these are inward facing, i.e. focused on colleges themselves, while others are outward-facing – oriented towards other stakeholders and partners.

Internal-facing measures

Colleges that are in the same region must continue to develop stronger structures for coordination, collaboration and shared learning amongst themselves. As colleges create more common activities, they will need to further formalize their commitments to each other and the governance of joint initiatives. In Atlantic Canada, there is sufficient grounds to build capacity in a shared secretariat.

Colleges need to continuously improve their internal administrative structures, with more strategic reporting lines and more efficient processes. Changes in reporting structures are relevant to the development of teaching and learning frameworks and centres, and better coordination of employer engagement. Process improvement is key to a host of recommendations, but most especially improvement of RPL, data-driven support for study success and strengthened labour market foresight.

Colleges must continuously review their information management systems and address shortcomings aggressively. This is essential for more flexible delivery of academic programs, for using data to support study success, and for better coordinating employer engagement. Today, well-designed and secure data infrastructure is just as important as adequate and safe physical infrastructure.

A last critical task is to build buy-in for transformation amongst internal college stakeholders – i.e. faculty, staff and students. If these stakeholders are not supportive, or worse if they are resistant, then transformation is much more difficult – especially in areas such as inclusiveness of diversity, teaching and learning, data-driven support for study success and greater coordination of employer engagement. Building buy-in starts with demonstrating commitment at the highest levels of institutional leadership. Moreover, leadership must listen to the ideas and concerns of stakeholders, and adjust plans where helpful to improve the transformation agenda and reinforce stakeholder support.

External-facing measures

Turning outwards, colleges must conduct ambitious awareness raising efforts with external stakeholders when they enact changes. If prospective students and employers do not understand a new academic calendar or more flexible continuing education, these initiatives may be doomed to failure. Recruitment for rural livelihoods is largely about spreading awareness of the opportunities available and how colleges can bring them within reach, while employers must use the qualifications framework for it to deliver full value. Finally, all areas of improved service to employers require employer understanding and buy-in.

Lastly, governments must play a role. In particular, transformation may be impossible to implement optimally or even at all if provincial authorities are opposed. Aside from exercising regulatory influence, governments may need to provide funding for some initiatives – such as the development of stronger centres of expertise in applied research and customized training, or improvement in RPL. As a result, college leaders need to closely engage with government colleagues to build the case for transformational changes. In our view, given colleges’ great potential as well as the challenges facing regional economies, the case for support is very strong.

Appendix 1: Heuristic Tables

Notes on implementation of Transformational Activities

Transformational Action	Speed	Ease	Culture change	Affordability	Uncertainty
1a) Qualifications framework	1	1	2	2	2
1b) Teaching and learning framework(s)	2	2	3	3	2
1c) Teaching and learning centre(s)	3	2	3	2	1
2a) More flexible annual calendar	1	1	3	1	2
2b) More flexible offerings for continuing education	2	1	3	1	2
2c) Greater RPL	1	1	3	1	1
3a) Data-driven systems to support study success	1	1	3	1	2
3b) Diversity policy	2	2	3	2	2
3c) International recruitment for immigration	2	2	3	3	3
3d) Recruit for rural livelihoods	1	1	1	2	3
4a) Labour market foresight capacity	1	2	2	2	2
4b) Coordinated employer engagement	3	2	3	3	2
4c) More ambitious applied research and customised training	1	1	2	1	2

The number 3 is the highest possible score, 1 is the lowest.

Appendix 2: Transforming Apprenticeship

Provinces have a predominant role in apprenticeship, with their agencies responsible for setting standards and ensuring delivery. The positions of employers and occupational bodies in the system are also crucial. Employers provide apprentices with their workplace, supervision and income, and along with occupational bodies help to set the broader structure of the trade and apprenticeship program. Colleges support provinces and employers in the delivery of apprenticeship training, while also delivering pre-apprenticeship programs.⁵² Given this situation, regional colleges cannot implement the transformational activities in this section of their own accord – provinces and employers would need to be on board and take the lead. This is why we do not include apprenticeship in the core themes of our report, but as an addendum.

The transformational activities in this theme are:

- a. Continue to strengthen the competency basis for apprenticeship – Apprenticeship needs to focus more on what apprentices need to know and be able to do. Articulating clearer and more transferrable competencies could be part of developing qualifications frameworks. It could help improve RPL for moving in or out of a trade, allow learners to gain qualifications in multiple trades, and facilitate complementary education such as in business management.
- b. Develop micro-apprenticeship-certifications – Developing stackable sub-qualifications could help to make qualified work in the skilled trades more accessible, creating new opportunities for some at the margin of the workforce and helping to increase labour supply. This could be especially important with regards to the construction trades, given the urgent need for increased housing supply.
- c. Strengthen requirements for certification in priority fields – There need to be stronger incentives for attaining journeyman status in priority fields, both for individuals and employers. Priority fields would include those with the greatest health, safety and environmental concerns. Stronger regulatory requirements are the most suitable avenue to achieve this goal, in particular as a condition for publicly subsidised insurance (e.g. workers compensation board and Atlantic Home Warranty coverage).
- d. Extend proactive support to apprentices – Apprenticeship agencies or colleges should collect individual-level data on signals of probable non-completion and create targeted supports for apprentices identified as being at risk. These supports would include advising/counselling, and support in essential skills development. Interventions of this kind would depend on strong coordination between apprenticeship agencies, colleges and trade certifying bodies.

Context

Apprenticeship falls under provincial jurisdiction, as part of the provinces' predominance in education. Provincial authorities set certification standards for apprentices. However,

⁵² Other organisations that deliver apprenticeship training include unions and first nations training centres.

all jurisdictions except Quebec have jointly created Red Seal standards and examinations that allow licensing to practice across the country. There are 56 Red Seal trades in Canada.⁵³

Focusing on learning

There are important challenges around ensuring apprentices learn what they need to. Apprenticeship is structured mainly around documented time practicing a trade, confirmed through log-books that must be signed off on the job, but certified through competency exams. This emphasis could shift towards certified competencies, allowing apprentices to gain full certification more quickly if they learn what is expected. This would require more clearly defined competencies for certified trades and strengthened assessment, including moving beyond pen-and-paper exams to more practice-based assessment. Some work along these lines has been underway particularly with regards to the Red Seal trades, though with limited relaxation so far of time requirements.

The OECD has observed that once apprentices graduate to journeyman status there are limited routes for further upskilling, in contrast with European jurisdictions that have further qualifications.⁵⁴ This can turn apprenticeship into a dead end. Options for further qualifications can include “master craftsman” type qualifications that include management competencies, or admission into academic college and university programs. The absence of business skills can be a particularly important problem given many journeymen are in fact small business owners. Atlantic colleges offer the Atlantic Trades Business Seal program for certified journeymen to address exactly this issue, which is equivalent to the more widely known Blue Seal. There may also be relevant opportunities to strengthen continuing education offerings for certified journeymen to upgrade their skills with the most recent technologies, perhaps in the form of micro-credentials, though many manufacturers, utilities and many resource extraction firms provide this kind of training already.

An inflexible form of credential

As apprenticeship is training for a specific occupation, it is among the least flexible post-secondary credentials in the face of technological and other economic changes.⁵⁵ If demand for the tasks undertaken in an occupation falls, the employment prospects of apprentices and journeymen are more affected than say for business managers in a given industry, who have more transferable skills and credentials. At the same time, if demand for an occupation’s services is rising rapidly, the length of apprenticeship programs can significantly delay labour supply.

Effective forecasting of labour supply and demand can help to inform recruitment, and to prepare agencies who could assist apprentices and journeymen to transition into other fields of work. Labour market forecasting in the trades is already relatively advanced in Canada, and more viable than forecasting in other fields. Still, there may be room to

⁵³ <http://www.red-seal.ca/trades/tr.1d.2s.1.3st-eng.html>

⁵⁴ <https://www.oecd.org/education/a-skills-beyond-school-commentary-on-canada.pdf>

⁵⁵ <http://thebusinesscouncil.ca/wp-content/uploads/2014/04/Robert-Lerman-paper-April-20141.pdf>

further improve how forecasting informs decision-making, for instance in terms of spaces offered in pre-apprenticeship programs.

A second approach is to make trades more flexible. In line with enhancing apprenticeship's learning outcomes basis, establishing common competencies between trades and pathways to journeyman status in multiple fields grants more flexibility.

A third approach is to allow the development of micro-certifications in the trades, i.e. breaking down the competencies within a trade, or distinct sub-fields of a trade, to have credentials below full journeyman status. The idea is very similar to that of micro-credentials in higher education, which are ideally stackable into a degree. Such a credential might certify someone to do drywall work, or to be a roofer, without being a full journeyman, and in fact many who practice skilled trades pursue these kinds of specialties rather than the full scope of practice. Learners would require less time required to obtain a credential and do qualified work, which would help to raise labour supply. This is not a new idea, however, and has been much debated mostly due to its potential ramifications for the bargaining power of workers. Occupational licensing of course restricts labour supply which benefits those who already have certifications. Also, being able to exercise the full scope of practice raises worker bargaining power by increasing the range of potential work. However, the creation of micro-certifications could increase flexibility somewhat by facilitating shifts between sub-fields of trades, say allowing a worker to combine a micro-certification in carpentry with a micro-certification in plumbing.

It is always worth deep reflection whether an apprenticeship should be necessary for a designated occupation. Journeyman status is compulsory in some designated occupations, but this is not the case for most. More broadly, occupational licensing, of which Red Seal and other apprenticeship certificates are a form, has been a growing topic of debate. On the one hand, it can prevent negative externalities (i.e. health, safety and environmental damage) resulting from workers performing badly, and tackle the market failure of inadequate information on workers' competencies to fulfill the expectations of employers/clients. On the other hand, it can be a tool to create market distorting barriers to entry to an occupation, creating artificial scarcity that drives up earnings for insiders.

Occupational licensing also poses a barrier to labour mobility where there are different standards across jurisdictions – a problem in Canada that Red Seal qualifications and the Canada Free Trade Agreement have made considerable progress in addressing. Whereas apprenticeship programs may have different structures (e.g. sequencing of training elements), there have been problems for apprentices who move between provinces to be able to complete. Nationally, the Canadian Council of Directors of Apprenticeship is leading the charge, seeking to harmonise specific Red Seal trades each year.⁵⁶ There are also regional efforts, such as the Atlantic Apprenticeship Harmonisation Project which has sought to standardise requirements across the region for apprentices in 16 trades.⁵⁷

Licensing is more important in some fields than for others, particularly where the negative externalities of poor worker performance are most severe. Some of these fields may not

⁵⁶ https://caf-fca.org/wp-content/uploads/2018/06/A2_Path-to-Harmonization-FINAL.pdf

⁵⁷ https://www.canada.ca/en/employment-social-development/news/2017/10/backgrounder_atlanticapprenticeshipharmonizationproject.html

currently have any occupational licensing at all, such as for instance fish harvesting which is of serious concern given it is both dangerous and environmentally sensitive.⁵⁸

Low completion rates

Completion is a longstanding challenge for apprenticeship in Canada. A number of factors are at play.

Perhaps of greatest importance, it can be difficult to hold an apprenticeship position for the full length of a program. Would-be apprentices often struggle to find initial employment and may lose their jobs later. When business is down, apprentices can be the first laid off. If business is going well, employers may also be reluctant to release apprentices for training blocks. In some cases, difficulties in completing the training segment keeps apprentices wages low. In other cases, once an apprentice is hired and has accumulated some experience, the income difference associated with completion may be limited. A downstream effect of low completion is that many workplaces have no journeypersons and therefore cannot hire apprentices – reinforcing the initial difficulty of securing positions.

Some other challenges may be common to other college students. Many apprentices may lack the basic literacy, numeracy and science knowledge required to complete their apprenticeships successfully.⁵⁹ Pre-apprenticeship diploma programs, which allow apprentices to gain a year's time served towards their tradesperson certificate through coursework, has sought to ensure prospective apprentices have essential skills and a basic orientation towards their trade, which can help the students get hired for an apprenticeship by de-risking them for potential employers. There have also been efforts to provide essential skills support to apprentices who have been identified as having difficulties – it seems that take up of these supports among the identified apprentices can be a challenge. Apprentices may also encounter hostile environments, including women in particular trades that are traditionally male-dominated.⁶⁰ A host of initiatives have sought to address this issue, including Conestoga's Women in Skilled Trades General Carpenter Pre-Apprenticeship and Red River College's Introduction to the Trades programs.

One last obstacle to completion relates to deferred income during classroom training periods. For apprentices to access EI, employers must lay them off, and then the apprentices need to wait for EI cheques to be processed before they receive money. This process causes apprentices financial losses, as well as stress and uncertainty. Almost two-thirds of apprentices are over the age of 24, which often means they have important financial commitments. Where returns to the full certification are modest, it makes sense that workers would choose not to pass through this process and just work without full certification. The Canada Apprenticeship Loan has likely mitigated this difficulty.

⁵⁸ Fishing licenses are not occupational licenses of the kind we have described so much as licenses to fish a quota.

⁵⁹ This has been observed in the past and seems unlikely to have changed. <http://www.caf-fca.org/wp-content/uploads/2017/07/The-Link-Between-Essential-Skills-and-Success-in-Apprenticeship-Training.pdf>

⁶⁰ <https://caf-fca.org/wp-content/uploads/2017/07/Investigating-Apprenticeship-Completion-in-Canada.pdf>

Raising youth participation

Early engagement in apprenticeship may help to reduce the rate of young people not in education, employment or training (NEET), while raising the apprentices labour supply. Canadian governments have for some time been seeking to increase the rate of participation in apprenticeship among those just past the traditional age of high school graduation. Efforts have centered on training for guidance counsellors and integration of apprenticeship into high schools. These kinds of initiatives have transformational potential, but fall outside our scope given the limited role of colleges.

Transformational Activities

This section will recommend policies to transform the apprenticeship system in Canada which actors other than colleges (e.g. provincial authorities) would have to take the lead on adopting. Regional colleges could also promote the changes, and often play a part in their implementation.

Continue to strengthen the competency basis for apprenticeship

Colleges should work with provincial authorities to strengthen the competency basis for apprenticeship. Ideally, the broader apprenticeship system would weaken its emphasis on time employed to focus more on competency attainment. Colleges could concentrate assessment capacity and facilities under such a system.

Articulating clearer and more transferrable competencies could feed off of and contribute to wider efforts to create qualifications frameworks. It would support efforts to help learners gain qualifications in multiple trades, to improve RPL and to provide complementary programs for journeypersons, such as business diplomas. This could in turn improve the resiliency of employment for tradespersons.

Develop micro-apprenticeship-certifications

The rising idea of micro-credentials should not be limited to higher education programs, but applied also to the skilled trades. Apprenticeship agencies should adapt training models and regulations to develop sub-fields or credentials. This work would closely complement efforts to strengthen the competency basis for apprenticeship.

In construction trades, concerns about the bargaining power and therefore the livelihoods of workers have posed a major obstacle to the development of micro-certifications. There are legitimate concerns that micro-certification could contribute to shifting income from workers towards employers or customers. However, rising housing prices in Canada, including in many peripheral regions and their rural communities, speak to a shortage of housing supply that is a major driver of wealth inequality and insecure living conditions. Further to this, high levels of immigration are a foundational element of Canada's current approach to economic growth, both in major urban centres and increasingly in peripheral regions, but if housing supply is static this immigration can only amplify the housing

crunch. Regions that can keep housing prices under control will be better positioned to integrate immigrants and attract workers and employers with lower property costs. Under such circumstances, apprenticeship policies cannot be permitted to restrict the supply of appropriately qualified labour to the construction industry. High demand for construction services should nevertheless go a long way to ensure workers in the sector are appropriately compensated, and other policy options could also be explored.

Micro-apprenticeship-certifications could also create new opportunities for workers otherwise at the margins of the labour force. Notably, these certifications might do much to facilitate multi-occupational livelihoods in rural communities, in addition to adaptations in higher education programs as discussed in our main report. They might also help to mitigate the completion challenge, given an alternative to learners unable or uninterested in completing their full apprenticeship.

Strengthen requirements for certification in critical fields

Fundamentally, if there is a licensing regime in place then there should be strong incentives to complete a full certification. In many fields, incentives are not sufficiently strong. In priority fields, where the health, safety and environmental implications of poor practice are greatest, regulatory agencies should be encouraged to set new requirements for full journeyman status (or micro-certification) for a certain number of workers on a worksite or in an operation. A clear avenue for setting these kinds of expectations, closely tied to safety which is perhaps the most important basis for requiring certification, would be through requirements for insurance coverage under provincial workers' compensation boards (WCBs), the Atlantic Home Warranty or any other equivalent instruments. If a renovation company were ineligible for WCB insurance on sites operating without a licensed journeyman, and the employer was legally liable for any injuries that would have been covered by the WCB, this would send a very strong message of the need for journeyman status.

If a broad consensus indicates that low rates of completion are acceptable in an apprenticeship field, then that apprenticeship program as a whole could merit reconsideration. It may be that the field does not require any form of licensing at all, including in the form of an apprenticeship program, and no related government spending.

Extend proactive support to apprentices

In our main report, we recommend that colleges establish data systems to be able to conduct various forms of interventions to promote completion in their own programs.⁶¹ The same basic recommendation is relevant to apprenticeships – a strong data system should be able to identify signals of likely non-completion at the level of the individual apprentice, while proactive interventions should then provide the apprentices with assistance to overcome the challenges that they are facing. Relevant data for

⁶¹ The Holmesglen Institute in Australia implemented proactive advising with apprentices, involving advisors with subject-matter expertise, and observed a marked increase in completion rates. As a caveat, apprenticeship in Australia is distinct from Canada so this should not be taken as a perfectly equivalent intervention to what we are proposing.

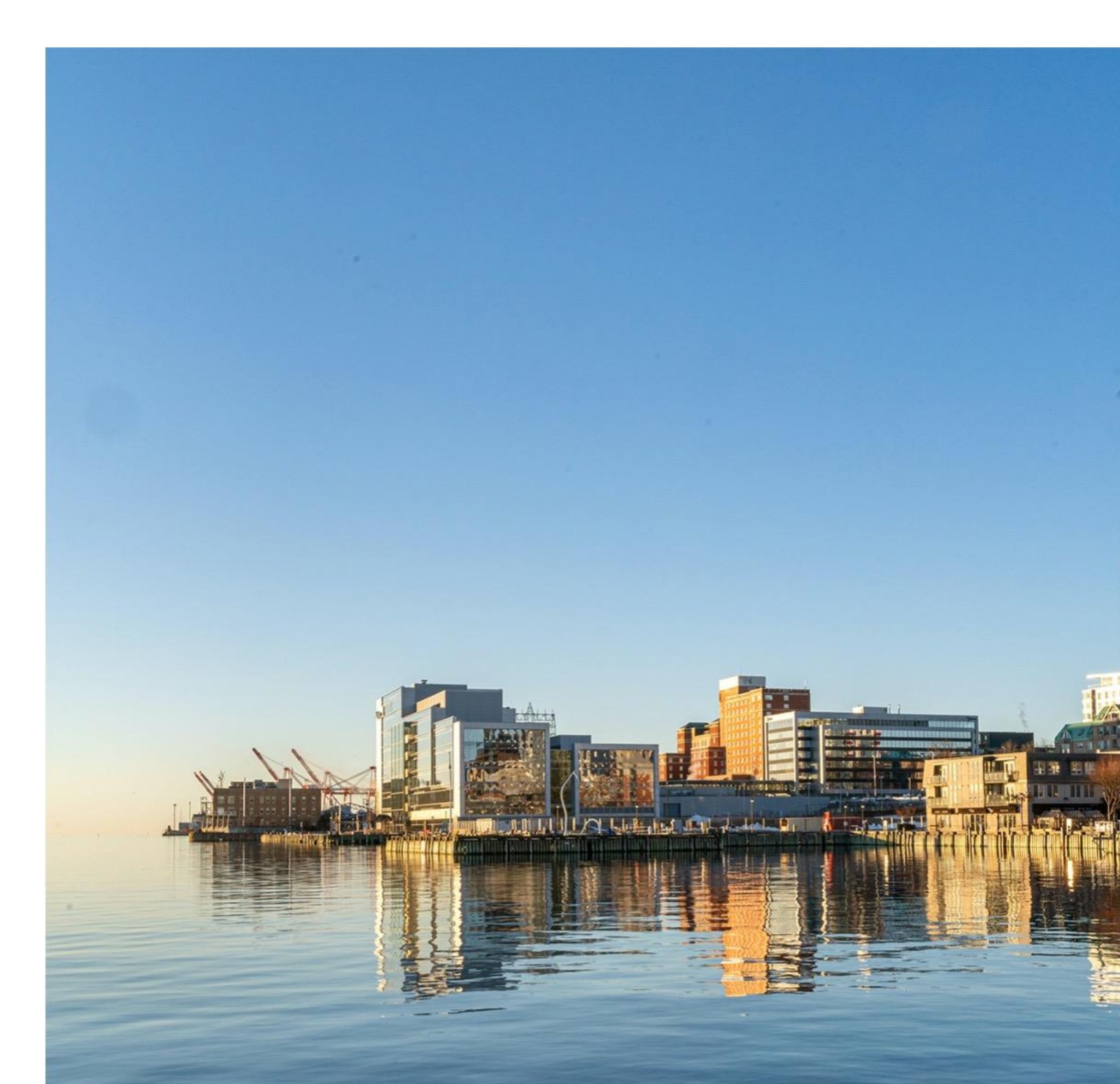
apprenticeship could include participation and performance in training segments, hours worked and other indications of success in the workplace.

One form intervention is individualized advising or counselling. This should be considerably more effective than a model assigning an advisor to a certain number of apprentices without targeting, which we understand has been implemented in certain provinces and in some cases abandoned. Advising may be especially supportive to women and other groups that are traditionally disadvantaged in the trades. Advisors would need special preparation to support these kinds of students. The relevance of the approach will also increase as the share of block training provided online increases.

Another possible intervention is to support essential skills development. Colleges often deliver these kinds of training programs, except other community organisations often handle the most basic skills. Some provinces have in the past made modest efforts to targeted skills development initiatives, which have often been hindered by difficulties in coordination.

Whatever data system and proactive interventions developed would require close coordination between colleges and apprenticeship agencies, as well as other training providers. Those delivering training blocks would be very well positioned to both collect data on apprentices and intervene with them. There may be efficiencies also in integrating apprentices into colleges' broader institutional data systems for proactive intervention.

There may be resistance among employers to proactive approaches, for instance from fear of interference in relations with employees. However, we believe that the public funding invested in apprenticeship provides grounds for these kinds of measures.



**Higher
Education**
STRATEGY ASSOCIATES

20 Maud Street, Suite 207
Toronto ON, M5V 2M5, Canada
+1 (416) 848-0215
info@higheredstrategy.com

higheredstrategy.com