POLICIES, LAWS, AND REGULATIONS

Governing Post-Secondary Education and Skills in Canada.

Policies, Laws, and Regulations: Governing Post-Secondary Education and Skills in Canada
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Preface

This report analyzes the policies, laws, and regulations governing post-secondary education (PSE) and skills in Canada. It is one of three foundational studies by The Conference Board of Canada's Centre for Skills and Post-Secondary Education. The report strives to understand and make sense of past efforts, including successes and failures, and to identify priority areas for action on policies, laws, and regulations reform that will lead to future, ongoing success in the skills and PSE environment.

Acknowledgements

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EXECUTIVE SUMMARY

Policies, Laws, and Regulations: Governing Post-Secondary Education and Skills in Canada

At a Glance

- This report provides a conceptual framework and analysis of Canada's policy, legal, and regulatory environment for skills and post-secondary education.

- We use an aspirational approach to reforming policies, laws, and regulations to envision an optimal PLR system, or set of systems, for post-secondary education (PSE) and the core characteristics of that system.

- Areas for action for improving PLRs to support skills and PSE system objectives and to address current and emerging challenges to the systems are offered.

Canada has one of the most highly educated populations in the world. Over half of the Canadian population has completed tertiary-level education—a higher proportion than any other OECD country.[1] This has been accomplished with fewer public funds than in many other countries.

To remain competitive, however, Canada's post-secondary education (PSE) system and skills production mechanisms must be designed and reviewed on an ongoing basis to ensure they are achieving optimal outcomes. The governance structures of the PSE system—the policies, laws, and regulations (PLRs)—were established to enable the system to achieve its objectives. This report explores the PLRs that affect, define, and govern Canada's skills and post-secondary educational system and guide its operations. The performance of PLRs in supporting desirable skills and PSE system outcomes is a key factor in determining potential system-wide improvements and reforms.

Structure of PSE in Canada

In Canada, post-secondary education is the constitutional responsibility of the provinces and territories. The Canadian PSE system is best conceptualized as a patchwork of regional or provincial/territorial systems. The delivery of PSE in each province/territory has been shaped by historical circumstances, regional demographics, and the political priorities of their respective governments. Post-secondary education in Canada can be classified into four broad regional models—Eastern, Quebec, Western, and Northern.

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1   OECD, *Education at a Glance 2014: Canada*, 1.

The federal government has jurisdiction over a number of policy areas that intersect with PSE, such as economic development, Aboriginal affairs, and foreign affairs.[2] It has influence and involvement in PSE activities primarily through providing funding to PSE systems. These financial arrangements include federal-provincial/territorial transfers and funding programs for student assistance and research and development.

The public post-secondary system in Canada includes universities, university-colleges, institutes, polytechnics, and colleges. They offer various types of credentials to students who successfully complete prescribed programs.

Optimal Characteristics of Policies, Laws, and Regulations

An aspirational approach to reforming policies, laws, and regulations is to envision an optimal PLR system, or set of systems, for PSE and the core characteristics of that system. These characteristics would facilitate the successful achievement of PSE objectives as they relate to learning, skills development, innovation, and other valued outcomes. They would also assist PSE institutions to overcome key challenges. An optimal PLR system is one that simultaneously:

1. supports skills development;
2. responds to labour market needs;
3. encourages research;
4. reduces barriers to student access;
5. facilitates student mobility;
6. assures high-quality programming, management, and outcomes.

2   Shanahan and Jones, "Shifting Roles and Approaches," 32.

PLR Support of Skills Development, Labour Market Needs, and Research

PSE institutions and the PSE system must satisfy a variety of stakeholders with different needs. Students expect to gain knowledge and skills that will help them advance to further education opportunities, find and keep good jobs, and fulfill their own personal need to learn. PSE PLRs that facilitate the development of hard/technical, as well as soft/employability, skills result in well-rounded, adaptable learners. Governments anticipate graduates who can successfully attach to the labour market and contribute to the economy and to their communities. Designing PLRs that encourage experiential learning opportunities is one way of developing graduates who are ready to fill skills and labour gaps and shortages. Governments also depend on PSE institutions to advance research and innovation in Canada in many areas. PLRs that determine research funding formulas and performance management processes should recognize both tangible and intangible results, outcomes, and impacts.

PLRs and the PSE Experience

Student experiences with the PSE system are affected by their ability to access and enter the system, and by their ability to move within it to create their own post-secondary education pathway. Key challenges to student access include lack of awareness of funding availability, limited program space, geographic accessibility issues, and inadequate recognition of prior learning. Although student loans, scholarships, and grants help to lower the financial barriers to PSE participation, such programs are often not sufficiently marketed to prospective users, especially high school students and adult learners. There is also a need to provide better information about higher education options and benefits to raise awareness of these among under-represented groups, parents, and secondary school teachers and counsellors. Student access to PSE would also be strengthened by a more comprehensive and integrated approach to recognizing prior learning. A key challenge to student

mobility is the transferability of PSE credits. An effective PSE credit transfer system should not only enable students to transfer between institutions within a single province, it should also include interprovincial transfer pathways.

PLRs and PSE Quality Assurance

Related to the importance of positive PSE experiences is the importance of ensuring that PSE systems and institutions provide high-quality post-secondary education. While legislation has been a major driver behind the adoption of quality assurance in the post-secondary sector, many PSE institutions are also actively embracing quality assurance as a way to demonstrate their quality and continuously improve. A lack of national quality assurance standards presents challenges for student mobility and transferability. As PSE becomes increasingly globalized, quality assurance practices are an important means of confirming the value of credentials awarded through Canadian PSE institutions.

Areas for Action

This report identifies the following strategy areas for action to improve PLRs as they support skills and PSE system objectives. These strategy areas will also be leveraged in the creation of a Skills and Post-Secondary Education Strategy for Canada, now being developed through the Centre for Skills and Post-Secondary Education:

- Promoting the Benefits of PSE
- Maximizing the Development of Skills and Knowledge
- Supporting Ongoing Research to Determine Skills Outputs
- Providing Advice for Post-Secondary Education-Business Partnerships
- Valuing Research
- Reducing Financial Barriers to PSE Access
- Leveraging Infrastructure to Maximize PSE Access
- Recognizing Prior Learning in PSE Systems
- Building a Comprehensive Pan-Canadian Credit Transfer System
- Developing PSE Quality Assurance Benchmarks and Guidelines

The Centre for Skills and Post-Secondary Education

The Conference Board of Canada's Centre for Skills and Post-Secondary Education (SPSE) is a multi-year initiative that addresses Canada's advanced skills needs by examining the roles, structure, activities, and impact of post-secondary education. The Centre brings together key stakeholders to discuss a shared purpose and take collaborative action toward a common understanding of the nature and importance of skills and the PSE sector in Canada.

Skills and education are very closely linked. The Conference Board's Centre for Skills and Post-Secondary Education defines *skill* as "*an ability acquired or developed through education, training, and/or experience that provides a person with the potential to make a useful contribution to the economy and society.*"[3] A *skilled person*, then, is *"a person who, through education, training, and experience, makes a useful contribution to the economy and society."*[4] This definition incorporates not only expert knowledge and professional or technical skills for specific occupations and activities, but also the broad range of generic employability skills (such as communication, team work, and personal responsibility); literacy and numeracy; critical and analytical skills; creativity; and life skills.

SPSE's goals are to:

- create a Skills and PSE Strategy for Canada that embodies a shared vision for the future of PSE in Canada, specific goals, and actions to achieve the required changes in the medium to long term;
- track and report on the system's performance in achieving the Strategy's vision and goals;
- build a strong empirical base and foster dialogue among skills and PSE stakeholders to generate common understanding, shared purpose, and collaborative action;
- raise public awareness of the nature and importance of skills and the PSE sector to Canada's economy, society, and culture;
- clarify the mix of structures, investments, and pathways for learners.

3   The Conference Board of Canada.
4   The Conference Board of Canada, *Centre for Skills and Post-Secondary Education*, 2.

CHAPTER 1
Introduction

Chapter Summary

- The performance of Canada's post-secondary education (PSE) system in producing enough and the right kinds of skilled graduates is critically important to our ability to be innovative and competitive.

- Provincial and territorial governments are the major actors in establishing, regulating, and funding PSE institutions.

- The performance of policies, laws, and regulations in supporting desirable skills and PSE system outcomes is a key factor in identifying potential system-wide improvements and reforms.

Canada has one of the most highly educated populations in the world. Over half of the Canadian population has completed tertiary-level education—a higher proportion than any other OECD country.[1] This has been accomplished with fewer public funds than in many other countries. In Canada, 57 per cent of tertiary-level funding is from public sources, compared with a 68 per cent average for OECD countries.[2] These achievements are laudable, and should point to Canada's competitiveness in the global economy. However, while Canada earns an "A" grade for education and skills in the Conference Board's *How Canada Performs* report card, we earn only a "D" on innovation, ranking 13th out of 16 peer countries.[3] To remain competitive, Canada's post-secondary education (PSE) system and skills production mechanisms need to be designed and reviewed on an ongoing basis to ensure they are achieving optimal outcomes.

The performance of Canada's PSE system in producing enough graduates with the right kinds of skills is critically important to our ability to be innovative and competitive. At the same time, the various PSE stakeholders have diverse and sometimes conflicting perspectives on what the PSE system should produce and how it should accomplish its objectives. The governance structures of the PSE system—the

1 Organisation for Economic Co-operation and Development, *Education at a Glance 2014: Canada*, 3.

2   Ibid.

3 The Conference Board of Canada, *How Canada Performs*.

policies, laws, and regulations (PLRs)—were established to enable the system to achieve its objectives. In light of ongoing changes in Canada's PSE system, and ongoing and emerging challenges that need to be addressed, there is a need for an account and assessment of the system of PLRs that should govern those changes and the objectives to which they can most effectively be directed.

Purpose and Objectives

This report explores the PLRs, including governance, that affect and define Canada's skills and post-secondary educational system and guide its operations. The performance of PLRs in supporting desirable skills and PSE system outcomes is a key factor in determining potential system-wide improvements and reforms. This report examines the effectiveness of the PLRs governing skills and the PSE system in Canada in achieving desirable system outcomes.

In support of this, the report:

- identifies and assesses the chief PLRs that establish key objectives of Canada's PSE system, as well as those that define its governance and operations;
- examines the role of governing bodies/institutions (e.g., boards of governors; senates; inter-institutional councils; accreditation bodies) in interpreting, applying, and being accountable for PLRs;
- analyzes current challenges and solutions arising from the changing needs of Canada's skills and PSE system;
- identifies likely areas for action for improving PLRs to support skills and PSE system objectives and to address current and emerging challenges to the system.

This report is one of three foundational studies for the Centre for Skills and Post-Secondary Education that, together, offer a diagnosis of the system and its performance. (See box "Centre for Skills and Post-Secondary Education.") They will be followed by future studies that articulate a "desired future state" of PSE and examine options and

strategies for improvement. The reports' results will be used to inform the development of the Skills and Post-Secondary Education Strategy for Canada.

Approach and Scope

Is There "A" System of PLRs Governing PSE?

When examining the PLRs that define and shape the objectives, governance, and operations of the PSE system in Canada, it becomes immediately apparent that there are multiple PLRs issuing from different levels of government that sometimes overlap and/or differ from one another. Thus, our study takes into account activities across different levels of government and investigates the relationships between them.

Provincial and territorial governments are the major actors in establishing, regulating, and funding PSE institutions. They are primarily responsible for the "founding" frameworks that establish the kinds, numbers, and objectives of various PSE institutions within their borders. Additionally, provinces and territories set operating subsidies; regulate tuition; fund capital; increasingly negotiate performance arrangements through mandates, contracts, and letters of expectation; and, in many cases, assess and approve new programs and approve the discontinuation of existing programs. In most respects, Canada's PSE system is simply an aggregation of loosely connected *provincial and territorial* PSE systems.

Federal-level PLRs related to PSE also significantly affect how the system functions. With the exception of the time allocated to faculty for research activities, the federal government is the key source of funding for research in PSE institutions (especially universities) through agencies such as the TriCouncil (the Natural Sciences and Engineering Research Council of Canada, the Social Sciences and Humanities Research Council of Canada, and the Canadian Institutes of Health Research); the Canadian Foundation for Innovation; and the Canadian Research Chairs programs. As a result, it has levers that it can use to shape the operations and performance of the system and its various institutions.

Additionally, control over rules and regulations related to immigration and trade gives the federal government other key levers to shape the PSE system with respect to, for example, international student enrolment; student and faculty exchanges; and the establishment of branch campuses, other institutions, or collaborative degrees abroad.

This report provides a conceptual framework and analysis of Canada's policy, legal, and regulatory environment for skills and post-secondary education. It examines the rationale behind PLRs and the role they play in supporting the structure and operation of the skills and PSE system. We recognize that PLRs evolve over time in response to changing circumstances. This report discusses PLRs, chiefly at the provincial/territorial, federal, and institutional levels. PLRs that give rise to beneficial outcomes are examined, as well as those where desired results were not achieved or were not achieved as intended. Our analysis strives to understand and make sense of past efforts, including successes and failures, and to identify priority areas for action on PLR reform that will lead to future, ongoing success in the skills and PSE environment.

Several key research questions frame the structure of this report:

- What are the key policies, laws, and regulations that govern the PSE system in Canada?
- How do PLRs affect the PSE system in terms of:
  - governance
  - funding
  - strategic direction
  - operation
  - performance?
- How effective are the PLRs governing the skills and PSE system in Canada in achieving desirable system outcomes?
- What role is played by governing bodies and institutions (e.g., boards of governors, senates, inter-institutional councils, accreditation bodies) in interpreting, applying, and being accountable for PLRs?
- What are the current and emerging challenges to the skills and PSE system?
- How are PLRs being leveraged to address these challenges?

- What other improvements or changes to PLRs can be made to address current and emerging challenges to the system?

The success of PLRs in achieving desirable PSE system outcomes is a key consideration throughout this report. How PLRs impose barriers or challenges to PSE system improvement or reform and the potential for improvement through PLR reform is another recurring theme.

In Chapter 2, the structure of the Canadian skills and PSE system, in terms of PLRs, is reviewed and common features and structures typically found across jurisdictions are highlighted.

Provincial and territorial PSE systems are analyzed under four broad models of PSE in Canada. Significant differences in PLRs, especially those related to governance, strategic direction, funding, operations, and performance, are discussed for each of the models. Federal-level PLRs are explored next.

Chapter 3 provides a conceptual overview of the role of PLRs in shaping skills development and PSE in Canada. It analyzes key challenges and opportunities for the PSE system today, such as attracting top talent, students, and funding. Finally, some of the key characteristics of an optimal PLR system for skills and PSE are introduced. These characteristics provide a framework for discussing the effectiveness of PLRs in achieving desirable system outcomes.

Key characteristics of an optimal PLR system are that it:

1. support skills development;
2. respond to labour market needs;
3. encourage research and innovation;
4. remove or reduce barriers to student access;
5. facilitate student mobility;
6. assure high-quality programming, management, and outcomes.

The next three chapters examine critical issues related to PLRs. Chapter 4 looks at the critical issues of how PLRs support skills development and facilitate the ability of the PSE system to contribute to the labour market. How PLRs support research within PSE is also considered. Chapter 5

looks at the critical issues associated with how PLRs impact the PSE experience for students. Specifically, the issues of how PLRs facilitate student access into and mobility within PSE are explored. Chapter 6 looks at the critical issue of how PLRs support quality assurance within PSE. In each chapter, the analysis of each critical issue concludes with a series of "lessons learned" to assist in the development of recommendations.

Chapter 7 reviews and summarizes the need for PLRs reform and improvements and discusses these in reference to the characteristics of an optimal PLR system. Finally, areas for action for PLR reform are made based on lessons learned in the analyses of the regional models of PSE and of the critical issues related to PLRs.

Methodology

Several research activities were undertaken in the creation of this report:

- Key federal, provincial, and territorial policies, laws, and regulations relevant to the structure and operations of the skills and PSE system in Canada were collected and analyzed.
- A literature review of relevant books, articles, reports, and documents provided further insights on PLRs in Canada.
- Telephone interviews with 15 PLR and PSE/advanced skills experts and stakeholders were conducted to explore more fully the research questions.
- Consultations with stakeholders were held to gain additional perspectives on research questions and initial findings and to receive feedback on preliminary report drafts.

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4   The Conference Board of Canada.

5   The Conference Board of Canada, *Centre for Skills and Post-Secondary Education*, 2.

CHAPTER 2

Policies, Laws, and Regulations of PSE in Canada: What Is Currently in Place?

Chapter Summary

- The delivery of post-secondary education in each province/territory has been shaped by historical circumstances, regional demographics, and the political priorities of their respective governments.

- The public post-secondary system in Canada includes universities, university-colleges, institutes, polytechnics, and colleges, which collectively offer various types of credentials to students who successfully complete prescribed programs.

- The federal government has mainly engaged in post-secondary education and research through various funding mechanisms; it also plays an important role in shaping the financial accessibility of post-secondary education.

In Canada, post-secondary education is the constitutional responsibility of the provinces and territories. While the federal government does influence PSE through various funding arrangements, it has no direct role in the PSE system. Indeed, Canada is the only industrialized country without a federal department of education. The provinces and territories have direct control of the development and implementation of the PLRs that govern PSE. The Canadian PSE system is best conceptualized as a patchwork of regional or provincial/territorial systems. The delivery of PSE in each province/territory has been shaped by historical circumstances, regional demographics, and the political priorities of their respective governments.

This chapter outlines the elements of Canadian PSE and the PLRs that have influenced its development. It first looks broadly at the PSE system in Canada: it examines the types of institutions within the system and the key PLRs that shape that system. It then discusses four regional models of post-secondary education in Canada— Eastern, Quebec, Western, and Northern. Finally, the federal government's role in PSE is examined.

Structure of PSE in Canada

Public Post-Secondary Institutions

The public post-secondary system in Canada includes universities, university-colleges, institutes, polytechnics, and colleges. They offer various types of credentials to students who successfully complete prescribed programs (See box "Post-Secondary Education Credentials.")

Universities

Universities in Canada focus on higher education and research and typically have the power to confer degrees. Legislation generally gives Canadian universities considerable autonomy over their day-to-day operations, including their financial affairs, hiring, admissions standards, and degree requirements.[1] For example, the *Carleton University Act* states that the governance of the university is vested in its board of governors, who have "*government, conduct, management and control of the University and of its work, affairs and business, and of its property and revenues, and all other matters ...."*[2] B.C.'s *University Act* specifies that the province must not interfere in a university's "*formulation and adoption of academic policies and standards; the establishment of standards for graduation; the selection and appointment of staff.*"[3]

Canadian universities typically have a bicameral governance structure, often consisting of a board of governors and a senate. The board of governors has senior oversight of the university and is concerned with the long-range planning and business affairs of the institution. University boards also monitor the performance of the university and the president and are involved in recruiting and determining the president's compensation package. Board members are not remunerated for their time, and have the same fiduciary duties as publicly listed corporations.[4] The senate is responsible for the academic affairs of the university. Up to half of all senate positions at most universities are held by faculty and students.[5] However, some universities have adopted alternative governance systems. For example, the University of Windsor has a unicameral system where the governing board has responsibility for both the academic and business affairs of the university. Other universities, including McMaster University and Queen's University, have a tricameral governance structure that includes a third body that integrates academic

1   Cheung, Guillemette, and Mobasher-Fard, *Tertiary Education,* 7.

2   *Carleton University Act*, *1952*.

3   *University Act.*

4   Chan and Richardson, "Board Governance in Canadian Universities."

5   Usher and Potter, *A State of the Field Review of Post-Secondary Education*, 12.

planning with resource management. Finally, a few universities, such as the University of Saskatchewan, have adopted a hybrid governance model that includes a board and senate, as well as a university council and a general academic assembly.[6]

There is considerable diversity in the programming offered by Canada's university sector. Most universities provide educational programming with a broad or theoretical focus, emphasizing critical thinking skills, communication, and problem-solving, in addition to subject matter expertise. Research-intensive universities, such as the University of Toronto, McGill University, and the University of British Columbia, offer a wide array of undergraduate, master's, and PhD programs. Comprehensive universities, such as Simon Fraser University and the University of Guelph, offer undergraduate and graduate programming and undertake a significant amount of research activity, but not to the same extent as research-intensive universities. Canada also has a number of teaching-intensive universities, such as Bishop's University and Saint Mary's University, that focus primarily on undergraduate education. Special-purpose universities, such as Royal Roads University and the Emily Carr University of Art and Design, offer professional degrees or degrees in specialized areas, such as art and architecture.[7]

In the past, provincial governments have allocated grants and resources to universities in an equitable manner. This led to a relatively homogeneous university system.[8] However, in recent years some provinces have altered their policy approach to universities. There has been some movement toward differentiation in Canada's university sector, as a way to increase access, quality, institutional competitiveness, and financial sustainability.[9] For example, in the mid-2000s, B.C. created five new teaching universities, in addition to its four existing

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6   Chan and Richardson, "Board Governance in Canadian Universities," 38.

7   Canadian Council on Learning (CCL), *Navigating Post-Secondary Education in Canada*, 8.

8   Shanahan and Jones, "Shifting Roles and Approaches."

9   See, for example, Weingarten and Deller, *The Benefits of Greater Differentiation of Ontario's University Sector.*

research-focused universities. These universities (e.g., Vancouver Island University, University of the Fraser Valley) were previously colleges, institutes, or university-colleges, but now offer a variety of undergraduate programming, skills and trades programming, and some graduate programs. Ontario is also actively exploring how differentiation might impact the university sector and be implemented within it.[10]

Colleges, Institutes, and Polytechnics

Canada has a large college sector that includes colleges, institutes, and polytechnics, and in Quebec, CÉGEPs (collèges d'enseignement général et professionnel[11]).[12] Canada's system of colleges and other institutes was developed in the 1960s and 1970s in response to increased demand for post-secondary education from the baby boom generation, technological changes that created a greater need for skilled workers, and a growing emphasis on the need to develop "human capital" through PSE.[13] Provincial governments ensured that colleges and institutes were established in both larger and smaller communities to ensure accessibility to PSE and to meet the needs of local economies. Institutional objectives remain focused on producing job-ready candidates with skills that can be readily applied to the labour market. While colleges, institutes, and polytechnics all offer similar credentials, programs at polytechnics tend to be of a more intensive nature.[14] Colleges, institutes, and polytechnics focus primarily on teaching and on undertaking applied research.[15]

Canada's colleges, institutes, and polytechnics have less autonomy than universities—they are typically governed by a government-appointed board of governors. In this sense, the governance of colleges, institutes,

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10 Moodie, "How to Differentiate Universities."

11 Generally translated as "general and vocational colleges."

12 Quebec's unique system of post-secondary education and the role of CÉGEPs are described in greater detail below.

13 Mikhail, *The Alternative Tertiary Education Sector,* 60.

14 Coates, "This is Canada's Polytechnic Moment."

15 CCL, *Navigating Post-Secondary Education in Canada*, 9.

and polytechnics is tied more closely than universities to the policy goals of the provincial government and current labour market needs.[16] For example, the *Ontario Colleges of Applied Arts and Technology Act* states that the government may issue binding policy directives for how colleges carry out their objectives and conduct their affairs. Furthermore, the Ontario government can intervene in the affairs of a college if it is of the opinion that the college is not providing services in accordance with government legislation, regulations, and directives or if it is in the public interest for the government to intervene.[17]

The programming offered by colleges, institutes, and polytechnics varies considerably between and within provinces. Colleges, institutes, and polytechnics may offer upgrading programs to prepare adults for PSE programs, as well as certificate, diploma, apprenticeship, and degree programs. Provincial/territorial ministries have given colleges, institutes, and polytechnics the mandate to grant bachelor's degrees to respond to a need for expanded opportunities for learners due to increased certification requirements for many occupations and needs identified by employers. As of 2014, 36 colleges, institutes, and polytechnics offer 189 bachelor's degree programs.[18] BCIT is unique in that it also has the legislated authority to offer graduate degrees. Currently, BCIT offers four master's degree programs in engineering and applied sciences.[19] In addition to degree programs that can be completed at a college, the college system in some provinces, such as B.C. and Alberta, also offers university transfer programs that allow students to complete their first two years of university courses at a college and then transfer to a university.[20] Colleges and institutes also offer post-graduate diploma and

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16 CCL, *Navigating Post-Secondary Education in Canada*, 9.

17 *Ontario Colleges of Applied Arts and Technologies Act*, *2002.*

18 Personal communication with Colleges and Institutes Canada.

19 BCIT, *Programs and Courses.*

20 Canadian Information Centre for International Credentials (CICIC), *Postsecondary Education Systems in Canada: An Overview.*

certificate programs. These are typically one-year programs in highly specialized areas or fields and require students to have a completed post-secondary diploma or degree.[21]

In addition to colleges and universities, some provinces have historically had university-colleges with the authority to grant undergraduate degrees in some fields, as well as offering technical and vocational programming. Until recently, Alberta, B.C., and Ontario had public university-colleges, but the status of these institutions has since been changed to teaching universities. Only one university-college remains in Canada—the University College of the North in Manitoba.[22]

Private Post-Secondary Institutions

Private post-secondary institutions offer a wide range of programming and credentials. (See box "Post-Secondary Education Credentials.") The Canadian Council on Learning groups private post-secondary institutions into four broad categories:

- **Private career colleges and institutes—**typically offer vocational training of a shorter duration. This category also includes language schools and some institutions offering programming of an academic nature.
- **Secular private universities**—have the authority to offer university degree programs (e.g., Quest University Canada, Yorkville).
- **Faith-based or denominational institutions—**provide faith-based education. Many of these institutions are located on the grounds of public universities and offer degrees in non-academic, religious programs (e.g., Master's of Divinity). Some faith-based institutions also offer academic degrees (e.g., Trinity Western University and Concordia University College).

21 Personal communication with Colleges and Institutes Canada.

22 CCL, *Navigating Post-Secondary Education in Canada*, 11; personal communication with Colleges and Institutes Canada.

- **International institutions operating in Canada**—are private universities based in other countries, particularly the U.S., that have set up satellite campuses in Canada for Canadian or international students. They include institutions set up in other countries that operate entirely online in Canada.[23]

In addition, private institutions can be either for-profit (e.g., Yorkville) or not-for-profit (e.g., Quest University Canada), with a corresponding impact on their institutional mandate.

With the exception of Quebec, where private colleges are subsidized by the provincial government, private post-secondary institutions generally do not receive direct public funding. However, students at many private institutions are eligible for student assistance programs such as student loans, grants, or tax credits.[24] The extent to which private post-secondary institutions are regulated varies by province—institutions may be "recognized," "authorized," or "licensed" by a province or they may be unregulated. Institutions that have been "recognized" or "authorized" have been given authority to grant academic credentials by provincial or territorial governments. Institutions that are "registered" or "licensed" typically are monitored by a provincial government primarily for consumer protection reasons, rather than program quality.[25] For example, in Alberta, vocational training programs offered by private post-secondary institutions must be licensed by the government in accordance with the *Private Vocational Training Act* and associated regulations.[26] In Ontario, the *Post-secondary Education Choice and Excellence Act, 2000*, requires organizations wishing to advertise and/or offer a program (or part of a program) leading to a degree to have the authorization of

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23 CCL, *Navigating Post-Secondary Education in Canada*, 13–15.

24 In some provinces, private post-secondary institutions, such as colleges with religious affiliations, do receive some government funding, although not at the same level as public post-secondary institutions.

25 CICIC, *Postsecondary Education Systems in Canada.*

26 Alberta Innovation and Advanced Education, *Private Vocational Training in Alberta.*

either the Minister of Training, Colleges and Universities or an act of the Legislative Assembly of Ontario.[27] These submissions are then reviewed by the Post-Secondary Education Quality Assessment Board.[28]

Post-Secondary Education Credentials

Canadian post-secondary education institutions offer four broad categories of credentials:

- **Degree programs—**are offered at three levels of study—bachelor's, master's, and doctoral. Bachelor's programs are typically three to four years of full-time study; master's degree programs are usually one to two years in length; and PhD programs are a minimum of three years in length. Degree programs for regulated professions (e.g., law, medicine, education) may also have a practicum component.[29]
- **Diploma programs**—generally require at least two years of full-time study and cover a wide range of academic and vocational programs. In some provinces, there are diploma programs that allow students to ladder to a bachelor's degree. In Quebec, CÉGEPs and some publicly subsidized private colleges offer a diploma of collegial studies after the completion of a two-year university preparatory program or a three-year technical program.[30]
- **Certificate programs**—are typically one year or less in duration and are offered at every type of post-secondary institution. At a university, a certificate may be given for a short post-graduate program.[31]
- **Trades certificate (apprenticeship programs)**—Professional organizations or regulatory bodies regulate many trades occupations in Canada. Apprenticeship programs are offered through colleges, institutes, and union training centres. While most of apprenticeship training happens on the job, about 15 to 20 per cent of apprenticeship training is taken in a classroom setting. To receive a

27 Ontario Ministry of Training, Colleges, and Universities, *Degree Authority in Ontario.*

28 *Post-secondary Education Choice and Excellence Act*, 2000.

29 CICIC, *Postsecondary Education Systems in Canada.*

30 CCL, *Navigating Post-Secondary Education in Canada*, 17.

31 Ibid., 17.

trades certificate, an apprentice must fulfill all training requirements and pass a qualifying entrance exam.[32]

Structures Shaping PSE Institutions in Canada

Governance

In each province and territory, there is a ministry responsible for PSE. In many provinces and territories, including B.C., Saskatchewan, and Ontario, that ministry sets the broad strategic direction for the public PSE system. In Manitoba, an advisory body has been set up to advise the government on post-secondary issues and give input into the strategic direction of PSE. Manitoba's Council on Post-Secondary Education consists of individuals knowledgeable about PSE issues and works as an intermediary between the provincial government and post-secondary institutions. It advises the Minister about public post-secondary institutions and is responsible for the allocation of funding and the approval of new programs, facilities, and services.[33] Post-secondary institutions may also work with other government ministries—for example, institutions that offer health credentials or apprenticeships may work with provincial ministries of health and labour.[34]

While each PSE institution also sets its own strategic priorities, these priorities typically are shaped by founding PLR documents and provincial priorities through funding mechanisms and other measures. In many provinces, including B.C., Alberta, and Saskatchewan, the government lays out its expectations and priorities for post-secondary institutions in letters of expectation or annual budget letters. Recently in Ontario, the Minister of Training, Colleges and Universities asked

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32 CCL, *Navigating Post-Secondary Education in Canada*, 18. A future Centre for Skills and Post-Secondary Education report will examine the apprenticeship system in depth.

33 Education and Advanced Learning Manitoba, *The Council on Post-Secondary Education;* Weingarten and Deller, *The Benefits of Greater Differentiation,* 32.

34 Interview findings.

each public university and college to submit a strategic mandate, as a first step in the process of negotiating strategic mandate agreements with each institution.[35] As universities in Canada are usually legislated as organizations independent of government, the extent to which governments can dictate priorities to universities is unclear. In some instances, these letters have been controversial, with some arguing they infringe on the legislated autonomy of universities.[36]

Funding

Particularly in the case of universities, which have considerable independence in setting their strategic priorities, funding is a policy lever that provincial governments can use to encourage and achieve particular priorities or institutional changes. The provinces vary in how they allocate PSE funding, but typically government provides block funding based on student enrolment that PSE institutions can use as they wish; strategic funding for specific government priorities; and capital funding for facilities maintenance, upgrading, and construction.[37] Some provinces, including Alberta and Ontario, also provide research funding to PSE institutions. Across Canada, in 2008, direct public funding accounted for 59 per cent of the revenues received by public post-secondary institutions.[38] (Another report for the SPSE examines PSE funding and economic impacts in more detail.)

In recent years, there has been an increase in the use of targeted funding mechanisms.[39] Provinces have increasingly earmarked a proportion of operational funds to ensure PSE institutions meet policy or performance objectives. The Ontario government determines a very small portion (less than 2 per cent) of its operating grants for universities

35 Ontario Ministry of Training, Colleges, and Universities, *Strengthening Ontario's Centres of Creativity, Innovation, and Knowledge.*

36 CUFA BC, *Analysis of the Government Letter of Expectations;* Mount Royal Faculty Association, *On Letters of Expectation*.

37 Funding for post-secondary institutions will be addressed in depth in a future report from the Centre for Skills and Post-Secondary Education.

38 Cheung, Guillemette, and Mobasher-Fard, *Tertiary Education*, 28.

39 Shanahan and Jones, "Shifting Roles and Approaches."

based on performance, as measured by graduation rates, graduate employment rates six months after graduation, and graduate employment rates two years after graduation.[40] In Quebec, 98.5 per cent of provincial funding to PSE institutions is based on the full-time equivalents of student enrolments, with the remainder based on performance.[41] Several provincial governments also use strategic funding to increase enrolment in areas where there are existing or projected skills shortages. The B.C. government allocates a very small proportion of block funding as strategic funding to support specific government priorities, such as Aboriginal education or skills and labour market needs (e.g., nursing).

In addition to government funding, PSE institutions receive a significant proportion of their funding from tuition fees, ancillary services, federal grants, donations, endowments, investments, and research revenue. Tuition fees typically account for 10 to 30 per cent of the revenue of PSE institutions—ranging from 10 per cent in Quebec to 30 per cent in Nova Scotia in 2009.[42] Many provinces have capped annual tuition fee increases. For instance, in 2013, Ontario capped undergraduate tuition fee increases at 3 per cent.[43]

Operations

Typically, universities in Canada set their own admissions requirements and curriculum, while other types of PSE institutions (e.g., public colleges, institutes of technology and advanced learning) are accountable to boards of governors or government approval for these decisions.[44] In many provinces, post-secondary institutions require some level of government approval for the creation of new degree programs, and in some cases, for significant changes to degree, certificate, and

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40 Council of Ontario Universities, *Performance-Based Funding*, 7; Ontario Ministry of Training, Colleges and Universities, *The Ontario Operating Funds Distribution Manual.*

41 Pakravan, *The Future Is Not What It Used to Be.*

42 Cheung, Guillemette, and Mobasher-Fard, *Tertiary Education, 28.*

43 Shaker and Macdonald, *Degrees of Uncertainty,* 28.

44 See, for example, *Post-Secondary Learning Act*; *Public Education Flexibility and Choice Act*; *Post-Secondary Education Choice and Excellence Act*.

diploma programs. Some provincial governments have established a separate entity whose function is to review all new university program proposals and proposed program modification for all public universities. For example, the Maritime Provinces Higher Education Commission, an agency of the Council of Maritime Premiers, performs this function for New Brunswick, Nova Scotia, and Prince Edward Island.[45] In B.C., the Degree Quality Assessment Board conducts quality assessments of all new proposed degree programs at public and private institutions and makes recommendations to the Ministry on the approval of new degree programs.[46]

In response to growth in the number of private post-secondary institutions operating degree programs in Canada, either through physical locations or through an online presence, many provinces are also taking steps to regulate which institutions within a province can call themselves a "university" and offer degree programs.[47]

Canada's Post-Secondary Education System— Four Models

While each province and territory has its own PSE system, there are regional similarities in how those PSE systems in Canada have developed. Four principal models stand out: Eastern, Quebec, Western, and Northern models. The four models describe the PLR-related structures that are common to each region, and they depict the traditional student pathways that each system was designed to facilitate. However, it must be noted that students take a wide range of pathways in their pursuit of a post-secondary education. Indeed, students are increasingly moving from a university to a college or polytechnic. The key features of each model are described below, as well as how they differ from the standard governance structures detailed above.

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45 Maritime Provinces Higher Education Commission (MPHEC), *Quality Assurance.*

46 British Columbia Ministry of Advanced Education, *Degree Authorization.*

47 Usher, *Expansion of Degree-Granting Status in the Province of Saskatchewan.*

The Eastern Model: Ontario, Nova Scotia, Prince Edward Island, New Brunswick, Newfoundland and Labrador

The Eastern Model comprises Ontario PSE as well as the PSE in the Atlantic provinces, but not Quebec. The PSE systems in these provinces share a number of key characteristics—different types of post-secondary institutions in these provinces are largely isolated from one another. Historically, there have been limited opportunities built into these systems for students to move easily throughout different types of institutions. This is changing, however, as the systems in these jurisdictions evolve. (See Exhibit 1.)

Exhibit 1

The Eastern Post-Secondary Education Model (Ontario, Nova Scotia, Prince Edward Island, New Brunswick, Newfoundland and Labrador)
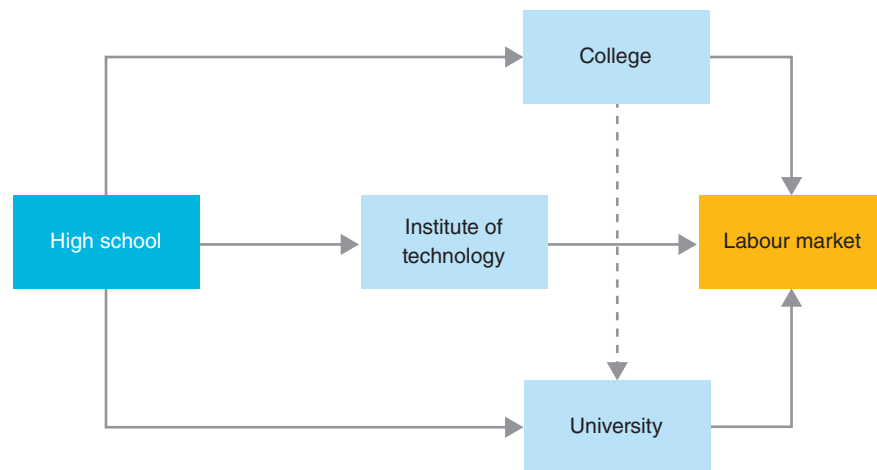
Source: Weingarten and Deller, *The Benefits of Greater Differentiation of Ontario's University Sector*.

PSE in Atlantic Canada

In Atlantic Canada, the post-secondary education systems of the four provinces (New Brunswick, Newfoundland and Labrador, Nova Scotia, and Prince Edward Island) have four categories of program delivery:

1. universities
2. colleges
3. apprenticeship
4. private training institutions

Public and private universities, public colleges, and private training institutions are/were established by separate legal acts in their respective provinces. The college systems in New Brunswick, Newfoundland and Labrador, and Nova Scotia are unique in that they are province-wide systems of colleges. For example, Nova Scotia Community College has 13 campuses in the province, as well as six community learning centres. The breakdown of type of PSE institution by province is as follows:

- New Brunswick: four public universities, three public colleges, several private universities, and a substantial number of private career colleges. The province is also home to a Maritime college that serves the region.[48]
- Newfoundland and Labrador: one public university, one public college, and a number of private training institutions.[49]
- Nova Scotia: nine universities, one college, and a large number of private career colleges.[50]
- Prince Edward Island: one public university, two public colleges, and a number of private training schools/career colleges.[51]

The *Maritime Provinces Higher Education Commission Act* establishes the Maritime Provinces Higher Education Commission (MPHEC), which has responsibility for the 15 publicly funded institutions offering university degree programs and two specialized applied arts and technology

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48 CICIC, *Recognized and Authorized Institutions in New Brunswick*.

49 CICIC, *Recognized and Authorized Institutions in Newfoundland and Labrador*.

50 CICIC, *Recognized and Authorized Institutions in Nova Scotia*.

51 CICIC, *Recognized and Authorized Institutions in Prince Edward Island*.

post-secondary institutions in New Brunswick, Nova Scotia, and Prince Edward Island.[52] The commission provides assessment of academic programs prior to their implementation and policies and procedures for institutional quality assurance monitoring. The commission is directly accountable to the Council of Maritime Premiers.[53]

In July 2000, the colleges of the four Atlantic provinces agreed on a credit transfer system. By September 2009, colleges and universities in Atlantic Canada had signed a memorandum of understanding to encourage transfer agreements in the region. The Association of Atlantic Universities and the Atlantic Provinces Community College Consortium and their member institutions have endorsed this initiative.[54]

PSE in Ontario

Ontario's post-secondary education system is diverse, which should come as no surprise given the regional, population, economic, and cultural diversity in the province. Post-secondary education in Ontario is delivered through:

• 20 public universities;
• 24 publicly assisted colleges;
• three agricultural colleges affiliated with a university or a school of horticulture;
• one applied health science institute;
• 17 privately funded institutions with restricted degree-granting authority;
• the federally funded Royal Military College;
• about 570 registered private career colleges;
• many more non-degree granting private institutions offering post-secondary education or training that do not have regulatory oversight in the province (e.g., language programs, programs less than 40 hours in length, programs costing less than $1,000, professional development programs, single-skill training programs).

52   MPHEC, *The Maritime Provinces*.
53   MPHEC, *Quality Assurance*.
54   CICIC, *Quality Assurance in Education in Canada*.

There are also a number of private (four) and out-of-province (six) institutions that have received the consent of the Minister of Training, Colleges and Universities (under the *Post-secondary Education Choice and Excellence Act*) to offer specified degree programs in Ontario.[55,56]

Publicly assisted universities in Ontario offer both undergraduate and graduate degree programs, although some (e.g., Brock, Trent) focus on undergraduate education. The University of Toronto, with 129 different academic departments, is the largest university in Canada and is a major centre for research and graduate studies. OCAD University is a specialized university that focuses on degrees in design and fine arts.

Colleges in Ontario are mandated to "offer a comprehensive program of career-oriented, post-secondary education and training to assist individuals in finding and keeping employment, to meet the needs of employers and the changing work environment and to support the economic and social development of their local and diverse communities."[57] Ontario colleges can do this through vocational training, adult basic education, apprenticeship training, and applied research. Unlike colleges in some Western provinces, Ontario's colleges do not have a legislated mandate to provide courses leading to an undergraduate degree, although many Ontario colleges are now providing these types of programs.

Responsibility for higher education in Ontario lies with the Minister of Training, Colleges and Universities. The Minister develops policy and directions for post-secondary institutions, authorizes institutions to grant degrees, distributes funds to colleges and universities, registers private career colleges, and provides financial assistance programs for post-secondary students.

55   Weingarten and Deller, *The Benefits of Greater Differentiation,* 8; CICIC, *Recognized and Authorized Institutions in Ontario*.

56   Jones and Skolnik, *Degrees of Opportunity,* 4.

57   *Ontario Colleges of Applied Arts and Technology Act*, 2002.

The Quebec Model: Quebec

Quebec's system for post-secondary education is unique among the provinces. Students complete their secondary studies in Grade 11 and then enter a CÉGEP through either a two-year pre-university stream or a three-year technical vocational training stream. Students who complete the pre-university stream receive a general education diploma, which is a requirement for admission into a university program. Students who complete the vocational stream are awarded a vocational education diploma. As the pre-university stream is equivalent to the first year of a bachelor's degree program, most undergraduate programs at Quebec universities are three years in duration rather than four. (See Exhibit 2.)

Exhibit 2
The Quebec Post-Secondary Education Model
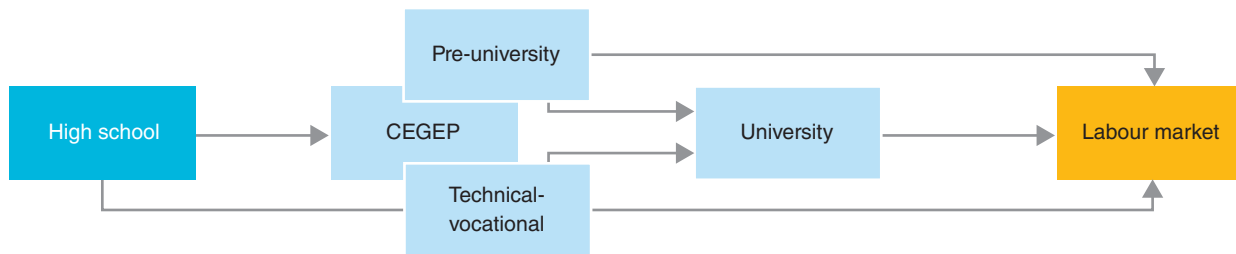
Source: Weingarten and Deller, *The Benefits of Greater Differentiation of Ontario's University Sector.*

Post-secondary education is provided in Quebec through more than 40 public CÉGEPs, a large number of subsidized and non-subsidized private colleges, and 11 public institutions governed by an agency other than the minister responsible for higher education in the province.[58] The university network includes 18 institutions offering a full range of degree programs at the undergraduate, graduate, and doctoral levels. Quebec is also home to several large research-intensive universities,

58 Weingarten and Deller, *The Benefits of Greater Differentiation,* 34; CICIC, *Recognized and Authorized Institutions in Quebec.*

such as McGill University and the Université de Montréal, which are both members of the U15 Group of Canadian Research Universities, an association of Canada's major research universities.[59] The University of Quebec is a unique institution in the province created by the *University of Québec Act 1968*, which was intended to expand access to higher education throughout rural Quebec.[60] Headquartered in Québec City, the University of Quebec coordinates programs of study in 10 establishments across 54 municipalities.[61] The Université du Québec à Montréal is an associate university and has authority to confer its own degrees.[62] The University of Quebec is the only university in the country that constitutes a province-wide system.

The Western Model: British Columbia, Alberta, Saskatchewan, Manitoba

Public post-secondary education in Canada's Western provinces is delivered through universities, colleges, technical institutes, and apprenticeship training. (See Exhibit 3.) In addition, Western Canada has a robust private PSE sector that includes vocational institutes, language schools, theological institutions, colleges, and universities. The PSE systems in the Western provinces focus on giving students the flexibility to move between different PSE institutions during the course of their studies, through extensive credit transfer efforts (although the Western provinces vary in the extent to which they facilitate this movement).

PSE in British Columbia and Alberta

The PSE systems in British Columbia and Alberta consist of research-intensive universities, teaching universities, colleges, institutes, and polytechnics. Alberta is unique in that it has legislated the mandate and role of six different types of public post-secondary institutions:

59 U15, *Our Members.*

60 *An Act Respecting the Université du Québec.*

61 Université du Québec, *Liste des établissments.*

62 *An Act Respecting the Université du Québec.*

Exhibit 3

The Western Post-Secondary Education Model (British Columbia, Alberta, Saskatchewan, Manitoba)
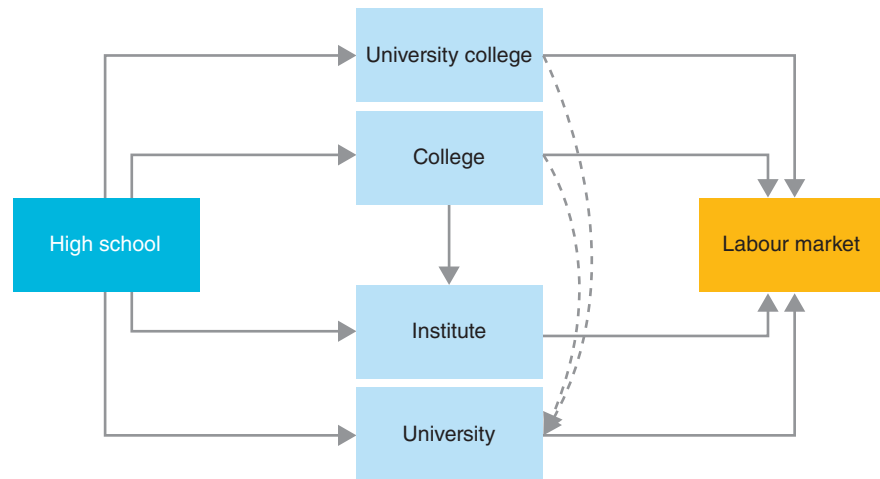
Source: Weingarten and Deller, *The Benefits of Greater Differentiation of Ontario's University Sector.*

research-intensive universities, teaching universities, polytechnics and institutes, colleges, independent faith-based institutions, and specialized arts and culture institutions.[63]

Research-intensive universities (e.g., University of British Columbia, Simon Fraser University, University of Calgary, University of Alberta) in both provinces offer a wide range of undergraduate and graduate programming and also focus on scholarly research. In the last 10 years, both provinces converted institutions previously designed as university-colleges or colleges into teaching universities (e.g., Vancouver Island University, University of the Fraser Valley, Mount Royal University). Teaching-intensive universities typically have a more regional focus than research-intensive universities. These institutions primarily focus on offering undergraduate degrees. They also offer applied and technical programming, utilizing the expertise they developed in this type of

63   Alberta Innovation and Advanced Education, *Six Types of Institutions.*

programming prior to gaining university status.[64] These institutions primarily focus on applied research and scholarly activities that support their programming.[65] In addition, Athabasca University in Alberta and Royal Roads University in B.C. are special purpose universities that focus on mature students, who must often balance a career while completing their studies. Athabasca offers undergraduate and graduate degrees through a distance education model, while Royal Roads offers primarily graduate degrees through a model that blends short-term on-campus sessions with distance education.[66]

B.C. has 11 publicly funded colleges, while Alberta has 12.[67] In both provinces, colleges generally offer upgrading programs to prepare adults for post-secondary programs, as well as certificate, diploma, associate degree, apprenticeship, and applied and bachelor's degree programs in trades, vocations, technical, and academic studies.[68] Colleges in B.C., and eight colleges in Alberta, as well as MacEwan University and Mount Royal University, offer university transfer programs. Colleges in B.C. are unique in Canada, in that they have the legislated authority to provide first- and second-year degree courses for transfer to a university, in addition to typical college programming.[69] University transfer programs allow students to take up to their first two years of university courses at a college and then transfer to a university as long as they meet the university's admissions requirements.[70] The college transfer system in

64 Alberta Advanced Education and Technology, *Roles and Mandates Policy Framework;* British Columbia Ministry of Advanced Education, *B.C. Post-Secondary Education.*

65 British Columbia Ministry of Advanced Education, *B.C. Post-Secondary Education;* British Columbia Council on Admissions and Transfer, *BC Post-Secondary System.*

66 Parliament of Canada, *Proceedings of the Standing Senate Committee on Social Affairs, Science and Technology.*

67 Alberta Innovation and Advanced Education, *Six Types of Institutions;* British Columbia Ministry of Advanced Education, *B.C. Post-Secondary Institutions—Colleges;* CICIC, *Recognized and Authorized Institutions in Alberta;* CICIC, *Recognized and Authorized Institutions in British Columbia.*

68 Alberta Advanced Education and Technology, *Roles and Mandates Policy Framework;* British Columbia Ministry of Advanced Education, *B.C. Post-Secondary Education.*

69 *College and Institute Act.*

70 Alberta Learning Information Service, *All About Transfers.*

these two provinces grew out of changing skill and labour market needs, as well as a desire to expand access to university education at a lower cost.[71]

Technical institutes in B.C. and Alberta (e.g., Northern Alberta Institute of Technology, British Columbia Institute of Technology) focus on apprenticeship certificates and diploma programs that are geared toward technical knowledge, as well as offering degree programs with an applied or technical focus.[72]

B.C. has numerous private post-secondary institutions that offer a wide variety of programs ranging from university degree programs to vocational programs to language institutes.[73] Alberta has over 140 vocational institutes, which must be licensed by the Alberta government.[74]

PSE in Saskatchewan and Manitoba

The PSE systems in Saskatchewan and Manitoba are similar to those in B.C. and Alberta. However, there is less integration of different types of post-secondary institutions in these provinces—colleges focus mostly on vocational programming, while universities in urban centres are the primary providers of degree programs. Indeed, *The University of Saskatchewan Act* states that the "*primary role of the university is to provide post-secondary instruction and research in the humanities, sciences, social sciences, and other areas of human intellectual, cultural, social and physical development.*"[75] Meanwhile, *The Regional Colleges Act* states that the mandate of colleges is to provide adult basic

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71 Cheung, Guillemette, and Mobasher-Fard, *Tertiary Education,* 10.

72 Alberta Advanced Education and Technology, *Roles and Mandates Policy Framework;* British Columbia Ministry of Advanced Education, *B.C. Post-Secondary Education.*

73 British Columbia Ministry of Advanced Education, *Private Post-Secondary Education.*

74 Alberta Innovation and Advanced Education, *Private Vocational Training in Alberta;* CICIC, *Recognized and Authorized Institutions in Alberta*.

75 *The University of Saskatchewan Act*, 6.

education; career training programming; university and technical institute courses provided via a contract between the college and university or technical institute; and career services.[76]

Saskatchewan's two universities (University of Regina and the University of Saskatchewan) and the University of Manitoba are research-focused universities that offer a wide range of graduate and undergraduate programming.[77] Manitoba has three additional public universities (University of Winnipeg, Brandon University, and Collége universitaire de Saint-Boniface) that concentrate on undergraduate education, but also offer a few master's programs in specialized areas.[78]

Manitoba has one university-college, the University College of the North, with campuses and regional centres in several northern communities; it offers certificates, diplomas, and some undergraduate degrees.[79] Similarly, Saskatchewan has four federated colleges (e.g., Campion College, Luther College), each of which is academically integrated with one of Saskatchewan's universities, but legally and financially independent. Federated colleges offer a variety of undergraduate arts and science degree programs and pre-professional studies.

Saskatchewan has a system of regional colleges. The programming offered by regional colleges includes university and technical institute courses provided by way of contract between the college and university or technical institute; joint university degrees; technical and career training leading to certificates or diplomas; and adult basic education.[80]

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76 *The Regional Colleges Act*, 4.

77 Weingarten and Deller, *The Benefits of Greater Differentiation,* 32.

78 Weingarten and Deller, *The Benefits of Greater Differentiation,* 32; CICIC, *Recognized and Authorized Institutions in Manitoba*.

79 Weingarten and Deller, *The Benefits of Greater Differentiation,* 32; CICIC, *Recognized and Authorized Institutions in Manitoba*.

80 Atkinson, *Saskatchewan's Regional Colleges,* 3; Manitoba Advanced Education and Literacy, *Post-Secondary Education: Colleges*.

Saskatchewan Polytechnic provides certificate, diploma, and degree programs, as well as apprenticeship and technical and vocational training.[81]

Both provinces also have a number of religious post-secondary institutions. Manitoba has four privately funded religious post-secondary institutions that grant degrees in theology and related fields. Saskatchewan has six affiliated colleges (e.g., College of Emmanuel and St. Chad, St. Peter's College, St. Andrew's College) that are similar to federated colleges, but not academically merged with a university. Affiliated colleges are generally theological and offer first- and second-year courses that fulfill university requirements or meet entrance requirements for professional colleges.[82]

There are numerous private vocational post-secondary institutions that operate in Saskatchewan and Manitoba. Both provinces require private post-secondary institutions to register with the province.[83]

The Northern Model: Yukon, Nunavut, Northwest Territories

Post-secondary education in Northern Canada (Yukon, Nunavut, and the Northwest Territories) is delivered through a small number of colleges that primarily offer vocational or pre-university courses. There are few degree programs offered in the North, which means that most students must leave the region to complete a degree. (See Exhibit 4.)

Yukon is home to one post-secondary institution, Yukon College, which has 11 campuses spread throughout the territory.[84] Yukon College offers apprenticeship trades, one-year certificate programs, and two-year diploma programs. In 2009, the Yukon government amended the *Yukon*

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81 Saskatchewan Polytechnic, *About Us.*

82 Manitoba Advanced Education and Literacy, *Post-Secondary Education: Religious Institutions;* Saskatchewan Advanced Education, *Post-Secondary Educational Institutions.*

83 Manitoba Advanced Education and Literacy, *Post-Secondary Education: Private Vocational Institutions;* Saskatchewan Advanced Education, *Private Vocational Schools.*

84 CICIC, *Recognized and Authorized Institutions in the Yukon.*

Exhibit 4

The Post-Secondary Education Model in Northern Canada
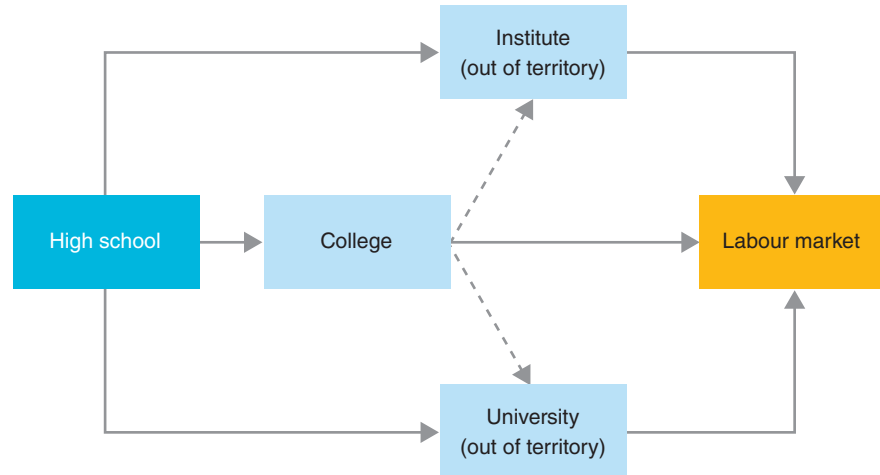
Source: The Conference Board of Canada.

College Act to give the institution degree-granting status.[85] The college offers baccalaureate and master's degree programs in circumpolar studies, public administration, social work, and environmental science and education, all in collaboration with other universities in British Columbia, Alberta, Saskatchewan, and Alaska. Yukon College, through its Yukon Research Centre, has six research departments: the Northern Climate ExChange, Biodiversity Monitoring, Cold Climate Innovation, Technology Innovation, Science Adventures, and Resources and Sustainable Development for the Arctic.

Yukon College is part of the B.C. Council on Admissions and Transfer (BCCAT), making Yukon College credits fully transferrable to B.C. post-secondary institutions. Credits are also transferable to Alberta institutions

85 Yukon Government, *Yukon College Act Amended.*

through an agreement with the Alberta Council on Admissions and Transfer (ACAT)[86] and to many institutions outside of B.C. and Alberta through individual arrangements.

Post-secondary education in Nunavut is delivered primarily through Nunavut Arctic College.[87] The college has three campuses and 24 community learning centres that provide adult basic education, trades training, skills development programs, and university-level transfer certificate and diploma programs. The college offers programs in the areas of teacher education, health careers, career development, and community administration. Nunavut Arctic College has transfer and cooperative arrangements with a number of institutions in Manitoba, Saskatchewan, Alberta, and British Columbia.[88]

Aurora College is the only post-secondary institution in the Northwest Territories.[89] The college is publicly funded and has three campuses in Inuvik, Fort Smith, and Yellowknife, as well as 23 community learning centres throughout the territory. Aurora College provides university-level transfer, certificate, and diploma programs, as well as adult education, literacy, skills development, and trades training programs. Aurora College has transfer agreements with institutions in B.C., Alberta, and Saskatchewan. The Aurora Research Institute is the research division of Aurora College, responsible for licensing, conducting, and coordinating research in accordance with the N.W.T. *Scientists Act*.[90] The mandate of the institute is to improve the quality of life for N.W.T. residents by applying scientific, technological, and indigenous knowledge to solve northern problems and advance social and economic goals.[91]

86 Yukon College, *Yukon College Forges New Ties.*

87 CICIC, *Recognized and Authorized Institutions in Nunavut.*

88 CICIC, *Postsecondary Education in Nunavut.*

89 CICIC, *Recognized and Authorized Institutions in the Northwest Territories.*

90 Aurora Research Institute, *About Us.*

91 Ibid*.*

Federal Level

While PSE is a provincial and territorial responsibility in Canada, the federal government has jurisdiction over a number of policy areas that intersect with PSE, such as economic development, Aboriginal affairs, and foreign affairs.[92] The federal government has influence and involvement in PSE activities primarily through the provision of funding to provincial and territorial PSE systems. These financial arrangements are materialized through federal-provincial/territorial transfers and distinct funding programs for student assistance and research and development.

Federal-Provincial/Territorial Transfers

The federal government provides financial support for PSE through the Canada Social Transfer (CST), a federal block transfer to the provinces and territories in support of PSE, social assistance and social services, and early childhood development and early learning and child care. While provincial and territorial governments determine the proportion of the CST spent on PSE, the transfer is notionally allocated to each of the major program areas.[93] In 2013–14, about 30 per cent of the transfer (about $3.8 billion) was allocated to PSE.[94]

Financial Assistance for Students

The federal government also provides significant financial support directly to post-secondary students in Canada through its student loan program.[95] When individuals apply for the Canada Student Loans program their eligibility for Canada Student Grants is also automatically assessed.[96] The Repayment Assistance Plan was introduced by the federal government in 2009 to provide borrowers with student debt

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92 Shanahan and Jones, "Shifting Roles and Approaches," 32.

93 Collin and Thompson, *Federal Investments in Post-Secondary Education and Training*, 17–18.

94 Department of Finance, *Canada Social Transfer.*

95 Collin and Thompson, *Federal Investments in Post-Secondary Education and Training*, 1–2.

96 CanLearn, *Canada Student Grants.*

relief during periods of unemployment and underemployment.[97] To help increase access for Aboriginal students to PSE, Aboriginal Affairs and Northern Development Canada (AANDC) funds the Post-Secondary Student Support Program (PSSSP). (See box "Federal Support for Aboriginal Post-Secondary Students" for details.)[98]

Federal Support for Aboriginal Post-Secondary Students

Post-secondary educational attainment by Aboriginal Canadians is considerably lower than that of non-Aboriginal Canadians. In 2011, 48 per cent of Aboriginal Canadians aged 25 to 64 had a post-secondary qualification, compared with 65 per cent of non-Aboriginal Canadians. While almost 27 per cent of non-Aboriginal Canadians have a university degree, fewer than 10 per cent of Aboriginals do.[99] The cost of attending PSE is a barrier for many Aboriginals, particularly those living on-reserve and/or in rural and remote communities.[100]

To help increase access to PSE for Aboriginal students, Aboriginal Affairs and Northern Development Canada (AANDC) funds the Post-Secondary Student Support Program (PSSSP). This program provides financial support to Registered Status Indians and Inuit (who have resided outside the Northwest Territories or Nunavut for at least 12 consecutive months) who are enrolled in a certificate, diploma, or degree program at an eligible post-secondary institution. The program also provides financial assistance for tuition and books, living expenses, and travel expenses to eligible students who must leave their place of permanent residence to attend school. The PSSSP is jointly administered by AANDC and band councils and Inuit organizations.[101]

Concerns have been expressed that PSSSP funding is inadequate to significantly improve Aboriginal access to PSE. Funding increases for the

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97 CanLearn, *Repayment Assistance.*

98 Issues specifically related to the PSE participation of Aboriginal students will be addressed in greater depth in future SPSE reports.

99 Statistics Canada, *The Educational Attainment of Aboriginal Peoples in Canada.*

100 Standing Senate Committee on Social Affairs, Science and Technology, *Opening the Door,* 50.

101 Aboriginal Affairs and Northern Development Canada (AANDC), *Post-Secondary Student Support Program (PSSSP).*

program have been capped at 2 per cent per year since 1996—a level of increase that has not kept pace with the rising cost of post-secondary education and the rate of Aboriginal population growth. As a result, increasing numbers of eligible Aboriginal students are being denied access to the program, or are receiving decreased amounts of funding.[102] In 2008–09, approximately 22,000 students received funding from PSSSP (at an average of more than $13,000 per student). Ten years prior, almost 30,000 Aboriginal students received funding from PSSSP.[103]

The Canada Graduate Scholarships (CGS) program provides financial assistance to master's and doctoral students—students at the master's level can receive $17,500 for one year, while doctoral students can receive up to $35,000 for multiple years. CGSs are administered by the federal granting councils (the Natural Sciences and Engineering Research Council of Canada, the Social Sciences and Humanities Research Council of Canada, and the Canadian Institutes of Health Research). The program was designed to develop research skills and assist in the training of highly qualified personnel.[104]

The Registered Education Savings Plan (RESP) program allows individuals to fund a child's future PSE though savings contributions that grow tax free, as well as elicit a grant. (Grants vary depending on a contributor's income.) The Canada Learning Bond is designed to stimulate PSE savings among low-income families—as long as they have opened an RESP, low-income families receive payments to the RESP.[105]

102 Assembly of First Nations, *Supporting First Nations Learners,* 12–13; Standing Senate Committee on Social Affairs, Science and Technology, *Opening the Door,* 50–51.

103 Standing Senate Committee on Social Affairs, Science and Technology, *Opening the Door,* 50–51.

104 Collin and Thompson, *Federal Investments in Post-Secondary Education and Training*, 7; Social Sciences and Humanities Research Council (SSHRC), *Doctoral Awards.*

105 Collin and Thompson, *Federal Investments in Post-Secondary Education and Training*, 12–13.

The federal government offers a number of tax measures to offset the cost of pursuing PSE. Since the late 1990s, tax measures have been increasingly used by the federal government to offset the cost of PSE, and since 1998 federal PSE-related tax expenditures have more than doubled.[106] PSE-related tax expenditures include tuition, textbook, and education credits; student loan interest credit; tax exemption for scholarship, fellowship, or bursary income; and the apprentice tools deduction. However, students do not benefit from tax credits until they have filed their income tax return and the academic year is complete.[107]

Research and Development

The federal government also plays a key role in funding research and development activities in PSE institutions. Federal funding for research and development activities in colleges and universities has increased substantially since the late 1990s—from less than $800 million in 1997–98 to more than $2.8 billion in 2008–09. Three federal granting councils provide grants, scholarships, and awards to support research and development activities and the training of highly qualified people and promote collaboration between universities, industry, and governments.[108] Federal programs to support research and development in Canadian PSE institutions include the following:

- *Canada Foundation for Innovation.* Funds infrastructure costs for research projects in Canadian universities, colleges, research hospitals, and non-profit research institutions.
- *Canada Research Chairs.* Provides funding for research chairs to help Canadian universities attract and retain world-class researchers.

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106 Collin and Thompson, *Federal Investments in Post-Secondary Education and Training*, 13.

107 Cheung, Guillemette, and Mobasher-Fard, *Tertiary Education*, 17.

108 Collin and Thompson, *Federal Investments in Post-Secondary Education and Training*, 15.

- *Indirect Costs of Research.* Federal spending on research and development in PSE institutions raises administration costs for these institutions. This program provides financial assistance to offset some of these costs.[109]

Conclusion

The governance frameworks of Canada's provincial and territorial PSE systems have a common base across jurisdictions, but vary according to funding availability; number, type, and size of institutions; and available student learning pathways. In the Western provinces (particularly Alberta and B.C.) and Quebec, the college or CÉGEP system developed as a way to increase the accessibility of post-secondary education, in the form of both technical programs and as a pathway to a university degree. In contrast, the post-secondary systems in Atlantic Canada and Ontario were established as binary models. While there are increasing linkages between the college and university sectors in these provinces, they historically have very different and separate mandates, and linkages between types of institutions are not as well established as in other provinces.

Due to a lack of constitutional power, the federal government has mainly engaged in post-secondary education through various funding mechanisms, such as those for capital infrastructure development, research, and student grants. Through funding, the federal government has influenced the research environment in post-secondary institutions. The federal government also plays an important role in shaping the financial accessibility of post-secondary education. However, it has little influence over the structures and programming of post-secondary institutions. The following chapters examine the PLRs that shape and constrain how the post-secondary system deals with several critical issues for post-secondary education in Canada.

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109 Cheung, Guillemette, and Mobasher-Fard, *Tertiary Education*, 31; Collin and Thompson, *Federal Investments in Post-Secondary Education and Training*, 14–17.

CHAPTER 3

Policy, Law, and Regulatory Solutions to PSE Challenges

Chapter Summary

- PSE institutions and the PSE system are challenged to provide a broad-based education with skills development opportunities while simultaneously responding to labour market demands.

- PSE institutions and the PSE system are pressured to reduce barriers to PSE access and mobility while assuring quality of programming.

- An optimal PLR system, or set of systems for PSE, would assist PSE institutions to overcome key challenges and would lead to the successful achievement of PSE objectives for learning, skills development, innovation, and other valued outcomes.

In addition to setting goals and priorities for PSE, governments provide a regulatory framework and funding (e.g., for core operations, capital costs, student assistance, and research) for PSE and help to ensure public accountability of the system.[1] Governments, as well as institutions, create and use policies, laws, and regulations (PLRs) to govern PSE and to shape its priorities, operations, and outcomes. Over time, PLRs have evolved to help refine PSE in Canada and to address new issues and changing needs.

Some key issues facing PSE institutions and the PSE system today include pressure to provide a broad-based education with skills development opportunities; pressure to respond to labour market demands; pressure to produce research with a demonstrable return on investment; pressures to reduce barriers to PSE access and mobility; a need to source funding and talent; and a need to assure quality. There is great potential for PLRs to be created or reformed in ways that will address these and other key challenges facing PSE today. This chapter considers how characteristics of a PLR system (i.e., a collective set of provincial/territorial-level or institutional-level PLRs) could be reformed to better serve the purpose of guiding the operations and outcomes of the system.

1 Council of Members of Education, Canada (CMEC), *A Report on Public Expectations*, 8.

PSE Institution Challenges and PLR Opportunities

Pressure to Provide Skills Development Opportunities

One of the formidable challenges faced by PSE institutions and the PSE system is balancing the need to provide students with a broad-based education with the demand for graduates with the skills needed by the economy.[2] This challenge strikes at the heart of PSE's purpose and represents two, sometimes opposing, camps: those who see PSE as its own good and those who see it as a means to an end. Both approaches have value and should be addressed or integrated by the PLR system.

All types of PSE provide skills development opportunities. (See box "Literacy and Basic Skills" for a discussion of how these skills are developed in Canada.) Some parts or aspects of PSE look to mould students into "job-ready" candidates. Colleges and polytechnics, especially, and apprenticeship programs support this model of skills development. Professional programs such as teaching, engineering, medicine, nursing, and law also seek to fit graduates to specific jobs in the workplace. Other aspects of PSE focus on providing a broad-based education that prepares people for many different careers and further education streams. For example, a graduate with a university degree in the humanities may possess advanced skills in research, writing, oral communications, critical thinking, problem-solving, time management, and teamwork. Although these skills are sometimes "*difficult to identify during the regular recruitment process*,"[3] they are needed and desired by a multitude of employers in virtually all sectors for a vast array of jobs. Both the specific and general forms of preparation are necessary and valuable; an optimal system of PLRs will support all types of skills development.

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2   Council of Members of Education, Canada (CMEC), *A Report on Public Expectations*, 1.

3   Burleton and others, *Jobs in Canada*, 23.

Literacy and Basic Skills

Literacy and basic skills are taught in elementary and secondary schools to a majority of the population. However, not all individuals are able to take advantage of these opportunities, for a variety of reasons. In addition, immigrants to Canada may not have received the same level of education as is provided in our elementary/secondary school system. In many cases, immigrants may have received the equivalent (or better) education, but may not have the language skills to work in one or both of Canada's official languages. For these cases, the adult education system provides opportunities for mature students to develop their literacy, language, and basic skills. These opportunities are typically offered through community organizations, local school boards, employers, and unions and through colleges and institutes that have a mandate to provide this type of training.[4] On the whole, though, PSE PLRs are focused beyond literacy and basic skills to advanced skills development and training.

Pressure to Respond to Labour Market Demands

PSE is also a prime source of future labour. Newly minted PSE graduates are fresh with knowledge, ideas, and energy. They are a source of innovative ideas and solutions to the challenges of work. However, the specific skills and labour needs of the job market in each sector of the economy are constantly evolving. As each sector looks to PSE graduates to take them forward, it is increasingly apparent that "*a flexible and adaptable postsecondary education system that is well integrated is a must for a well-oiled and efficient labour market.*"[5]

Added fuel to the demand for job-ready PSE graduates is that Canadian businesses lag far behind competitors in the U.S. and Europe in real spending on training and development, having gradually cut training investment levels, for the most part, over the past two decades.[6]

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4   Campbell, *Profiting From Literacy*, 16.

5   Burleton and others, *Jobs in Canada*, 42.

6   Lavis, *Learning and Development Outlook 2011*, 15.

Canadian employers increasingly expect PSE graduates to have the skills and knowledge needed immediately by the labour market, or that they will be able to apply the skills and knowledge they have to bridge any learning gaps. Colleges and institutes already tend to aim for graduates to be job-ready. There is increasing pressure for universities to do the same—it has been observed that governments now view universities as a major source of highly qualified personpower and build their policies around the development of a knowledge-based society, resulting in the drive (rightly or wrongly) for a *"pragmatic education."*[7] An optimal system of PLRs would allow PSE institutions to respond to labour market needs by setting the parameters around programming flexibility, input from business, and consideration of labour market information.

Pressure to Demonstrate the Return on Investment of Research

One of PSE's primary objectives, in addition to teaching, is conducting research. PSE "*research and scholarship contribute to the cultural, social, and economic development and health of communities, regions, Canada as a whole, and the global community.*"[8] The freedom and ability to perform theoretical and applied research is critical to the advancement of many fields and sectors. However, there is increasing pressure for researchers to demonstrate the "return on investment" in their research in the short to medium term. Funders wish to see regular progress being made when, in fact, scientific research is "*a creative process that's not necessarily linear, unlike 'creating widgets.' It's difficult to have an engineering model or a production model for science.*"[9] Some research findings and inventions, such as early nano-scale materials, do not necessarily find an immediate market, but may become hugely influential to future innovations or understanding. Moreover, while research findings cannot always be expected to produce measurable benefits in the short term, the processes of engaging in research present important learning

7   Robaire, "Challenges and Opportunities," 7.
8   CMEC, *A Report on Public Expectations*, 7.
9   Spears, "Need to Chase Funding."

opportunities to faculty, students, and other staff. An optimal system of PLRs would encourage PSE research for a variety of objectives and time frames for a return on investment.

Pressure to Lower Barriers to Access

Access to PSE is important to an individual's labour market prospects and economic gains, and is also "*a key instrument in social mobility.*"[10] However, some deserving candidates are not able to access a post-secondary education, for a variety of reasons. The costs of tuition, as well as other fees and expenses associated with attending PSE, are not always met by assistance programs, leaving a funding gap that may prohibit or discourage some who would otherwise participate.[11] Others may not be aware of the variety of financial assistance programs available. Some may decide to abandon their PSE goals rather than incur personal debt (from student loans)—viewing education as an unaffordable cost rather than an investment. An optimal PLR system would further efforts to reduce the barrier of costs for those who would otherwise be unable to obtain a post-secondary education.

Immigrants are especially challenged in accessing PSE by the need to have their prior learning and international credentials recognized. Otherwise, they are required to repeat advanced programs they have successfully completed elsewhere in order to qualify for jobs in Canada. The process of applying to have prior learning and credentials recognized can be costly and lengthy, and may not result in them being recognized after all. Accordingly, many immigrants take jobs outside of their field or remain underemployed indefinitely.[12] An optimal PLR system would shorten the process and the cost of having prior learning and

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10 Snowdon, *Without a Roadmap*, 1.

11 Standing Senate Committee on Social Affairs, Science and Technology, *Opening the Door*, 60.

12 Burleton and others, *Jobs in Canada*, 19.

international credentials recognized and allow highly skilled immigrants to maximize their contribution to the economy, society, and their own well-being.[13]

Some people with disabilities are also challenged to access PSE opportunities. Physical and other constraints can restrict their ability to participate in PSE activities such as climbing stairs to attend classes, standing to participate in laboratory settings, or hearing verbal instructions. An optimal PLR system would reduce or remove the barriers to PSE access for people with disabilities.

Pressure to Lower Barriers to Mobility

Although many skilled workers are willing to relocate to a different jurisdiction in order to find work in their field, *"differences in occupational standards and certification requirements in regulated occupations as well as the costs of re-location are ongoing barriers to interprovincial mobility."*[14] Within Canada, the restricted ability to move between PSE institutions of the same or different order, and in different jurisdictions challenges student mobility and limits their choice of learning pathways. For example, in many Canadian provinces university-college transfers are done on an ad hoc basis, where students have little prior information about courses that are transferrable. Too often, institutional protection of "turf" prohibits agreements and action-oriented discussions that would move PSE in Canada to a more fluid state. As a result, some students are caught in the cross-fire, finding it difficult to transfer and to obtain appropriate recognition for the programs and courses completed, and credentials received, in one type of institution when they move to the other. Excess time and money are then spent in following the chosen learning pathway that will set them on the road to personal and

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13 Bloom and Grant, *Brain Gain*. The gap between actual workforce earnings and expected earnings based on level of education credentials held is substantial. Immigrants no longer, as they once did, close the income gap with the Canadian-born over a period of years after they enter the labour force in Canada. The annual cost to immigrants of the lack of recognition of their educational credentials and the resulting higher unemployment and underemployment rates amounted to $3 billion to $4 billion in 2001.

14 Burleton and others, *Jobs in Canada*, 19.

professional fulfillment. An optimal PLR system would create a fluid state of PSE in Canada, where students can move freely between institutions, institutional orders, and jurisdictions.

Need to Source Funding and Talent

Another ongoing challenge—for PSE institutions especially—is the need to fund the ongoing operations of the organization. In other words, they must acquire sources of revenue to cover the expenses and debts incurred in order to keep their doors open. In each province and territory, PSE institutions receive funding support from the federal and provincial/ territorial governments, but must supplement these funds with other lines of revenue. Student tuition and administrative fees, research grant monies, private donations, and other sources (e.g. contract training provided to industry by colleges and universities) largely make up the remainder of PSE institution revenues.[15] Some of this money is restricted to a particular use, such as is the case for scholarship grants or government research contracts.[16]

When operational funding from any significant source is cut or frozen, the capacity of PSE to maintain and modernize its libraries, labs, buildings, equipment, and infrastructure is limited or threatened. Funding cuts also limit institutions' ability to hire leading researchers to sustain advanced research and development capacity, a key underpinning of innovation and productivity in the economy. Many PSE institutions react to funding challenges by striving to create an entrepreneurial culture within. The growing need to source funds from multiple sources often leads to new partnerships with industry and other external organizations.[17] However, the push toward resource acquisition within institutions can have the negative effect of making faculty, units, and institutions compete with one another, rather than share limited resources.[18]

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15 Snowdon, *Without a Roadmap*, 8–9.

16 Ibid.

17 Spears, "Need to Chase Funding."

18 Polster, "The Future of Academic Governance," 26.

Attracting top talent—in terms of faculty members as well as prospective students—is an ongoing challenge for PSE institutions. Top faculty will have many options to choose from around the world, and each individual PSE institution must fight to attract and retain such talent, even in the face of budget cuts. Similarly, prospective students with high potential also have choices before them in terms of PSE institutions and will make their decision based on the institution's reputation, quality of programming, and support, among other factors. PLRs can play a supporting role in helping PSE institutions attract the desired talent.

As large organizations, PSE institutions require skilled management and administrative teams to keep the wheels of operation in motion. Beyond day-to-day operations, institutions seek to "*strengthen their competitive profile by strategic marketing and positioning themselves in national and international league tables and rankings, to appeal to a wide variety of actual and potential stakeholders: consumers, students, faculty, granting agencies, industry, alumni, and other potential funders, sponsors, and benefactors*."[19] Increasingly, dedicated resources and personpower are needed to build up related specialty areas. The resulting growth in PSE administration has its own challenges and opportunities. PLRs can support academic activities as well as non-academic lines of business of PSE institutions, allowing the organizations to thrive and potentially grow in a competitive knowledge economy.

Quality Assurance

There is increasing pressure to assure quality in PSE due to growing international competition between education and training providers, increasing numbers and types of institutions offering degrees and other programs, growing student demands for mobility and flexible learning paths, and increased public awareness of PSE issues.[20] Credibility does not come about by chance; it is the result of stringent management, strategic visioning, and rigorous application. Some variation may exist

19 Schuetze, Bruneau, and Grosjean, *University Governance and Reform*, 9.

20 CICIC, *Quality Assurance Practices*.

between jurisdictions and institutions, though, as permitted by the PLR system and defined by resources at hand and other factors. To maintain high-quality PSE and to develop it further, it will be necessary for governments, PSE institutions, funders, and other organizations in the system to be vigilant in ensuring that the PLR system assures high-quality programming and management of PSE. The influence of PLRs on PSE outcomes must also be closely monitored and evaluated to ensure future sustainability and success.

Characteristics of an Optimal PLR System

An aspirational approach to PLR reform is to envision an optimal PLR system, or set of systems, for PSE and the core characteristics of that system. These characteristics would make it easier to achieve PSE objectives for learning, skills development, innovation, and other valued outcomes. They would also assist PSE institutions to overcome key challenges. An optimal PLR system is one that simultaneously:

1. **Supports Skills Development**
   An optimal system of PLRs for PSE supports skills development, including both hard and soft skills.
2. **Responds to Labour Market Needs**
   An optimal system of PLRs allows PSE systems and institutions to respond to national and regional labour market needs in a flexible, effective manner.
3. **Encourages Research**
   An optimal system of PLRs for PSE encourages and supports innovative research activities.
4. **Reduces Barriers to Student Access**
   An optimal system of PLRs reduces or removes barriers to access, such as costs, credential recognition, and physical barriers, for otherwise deserving PSE candidates.
5. **Facilitates Student Mobility**
   An optimal system of PLRs maximizes the opportunities for domestic and international student mobility across provinces and institutional categories.

6. **Assures High-Quality Programming, Management, and Outcomes**
   An optimal system of PLRs assures high-quality programming, management, and outcomes of PSE for all stakeholders, including students, funders, and employers.

   The following three chapters discuss how Canada's PLR system for PSE measures up against an optimal system in addressing some of PSE's key challenges.

CHAPTER 4

Critical Issues: How Policies, Laws, and Regulations Support Skills Development, Labour Market Needs, and Research

Chapter Summary

- PLRs that facilitate the development of hard/technical as well as soft/employability skills result in well-rounded, adaptable learners.

- When they encourage experiential learning opportunities, PLRs result in PSE graduates who are ready to fill skills and labour gaps and shortages.

- PLRs that determine research funding formulas and performance management processes should recognize both tangible and intangible results, outcomes, and impacts.

PSE institutions and the PSE system must satisfy a variety of stakeholders with different needs. Students expect to gain knowledge and skills that will help them advance to further education opportunities, find and keep good jobs, and fulfill their own personal need to learn. Governments anticipate graduates who can successfully attach to the labour market and contribute to the economy and to their communities. Governments also depend on PSE institutions to advance research and innovation in Canada in many areas. PLRs can support PSE institutions and the PSE system to address learning, skills development, and labour market needs and can also encourage research and innovation.

Skills Development

To allow PSE institutions and the PSE system to meet their objectives, PLRs are created to facilitate teaching or learning opportunities as well as opportunities to participate in research. In some cases, the language of PSE attempts to divide the learning outcomes of skills from general education. This is a false dichotomy, as the two are developed hand-in-hand. PLRs that support the value of acquiring knowledge for the sake of personal development or for use in further studies use terms such as "education," "educating the whole person," "education as a pure good," "developing the whole person," "educating leaders of tomorrow," and so on. At the same time, though, skills are developed during this education process.

Many different types of skills are developed in PSE students. Hard skills (i.e., usually technically specific) and soft skills (i.e., employability skills, essential skills) are developed to different levels, depending on the subject area and level of study. Examples of hard skills include doing precise, detailed work; using equipment; and selling products or services. Examples of soft skills include taking responsibility, adapting to change, problem-solving, accessing information, and performing under pressure. Each skill can also be classified as transferable (i.e., can be used in more than one situation), self-management (i.e., enable you to work in different situations or environments), or specialist (i.e., related to a specific job or task).[1] Hard/technical and soft/employability skills are often developed simultaneously (e.g., automotive repair apprentices working as part of a team to solve a mechanical problem). While hard/technical skills are clearly important for developing subject mastery, soft/employability skills are also critically important to developing a well-rounded learner.

Based on feedback from employers, The Conference Board of Canada identified employability skills as critical skills needed in any workplace. Employability skills include fundamental skills (i.e., skills that enable you to communicate, manage information, use numbers, and think and solve problems); personal management skills (i.e., skills that enable you to demonstrate positive attitudes and behaviours, be responsible, be adaptable, learn continuously, and work safely); and teamwork skills (i.e., skills that enable you to work with others and participate in projects and tasks). These skills help individuals enter, remain in, and progress in the world of work. Employability skills are developed through formal and informal learning opportunities throughout our lives. A post-secondary education gives rise to countless formal and informal learning opportunities to build employability skills. For example, a formal learning activity may involve attending classes on a regular schedule ("being responsible") or learning to solve complex equations ("using numbers"). Informal learning opportunities may involve completing a project with a

1   Careers New Zealand, *Figure Out Your Skills*.

group of other students ("working with others") or studying for and writing examinations according to published examination schedules ("being adaptable").

Employers recognize that a variety of skills, including employability skills, are developed by many types of education or training. Further, employers understand that employability skills, including the ability to adapt and learn new concepts, processes, and techniques in ever-evolving workplace environments, are critical to ongoing success. In an open letter to recent university graduates, Todd Hirsch, Chief Economist of ATB Financial, proposes that "*your university education, at least at the bachelor of arts level … was intended to make you a more complete thinker. It was intended to teach you how to absorb complex information and make reasoned arguments … Those are skills that you'll use in any field of work.*"[2] Allan Rock, President of the University of Ottawa, notes that major financial institutions tell him "*some of their best people come from the Faculty of Arts [as these graduates have] basic, adaptable skills: emotional intelligence, good decision-making, the ability to work as part of a team, and strong written and oral communication skills.*"[3] These quotations emphasize the importance and value of employability skills to employers who recruit recent PSE graduates. PSE PLRs facilitate the development of employability skills (as well as the acquisition of knowledge) by providing opportunities for individuals to participate in formal and informal learning activities.

Approaches Taken

Provincial and territorial statutes differ in the degree to which they emphasize the importance of "education" and/or skills development in the establishment of post-secondary education institutions. In university-related statutes, education is typically the focus rather than skills or a connection to labour market outcomes. University-related statutes that describe the functions of universities "*emphasize comprehensive*

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2   Hirsch, "Dear Undergrads."

3   Rock, "The 'Skills Mismatch.'"

teaching in all branches of learning and the conduct of original research."[4] For instance, British Columbia's *University Act* specifies that a university must (resources and time permitting) perform several duties and functions, including (but not limited to) providing instruction in all branches of knowledge; and providing a program of continuing education in all academic and cultural fields throughout British Columbia.[5]

College and institute-related statutes tend to focus more broadly on the importance of providing "*education and training and related services*."[6] In Ontario, it is clarified that colleges may "*undertake a range of education-related and training-related activities*" in fulfillment of their ultimate purpose of meeting labour market needs. A connection to skills is made specifically in regard to Ontario colleges' option to provide basic skills and literacy training.[7] Colleges in British Columbia are obliged to provide post-secondary education or training (including adult basic education) as well as continuing education.[8]

Assessment

The purposes, structures, and activities of PSE institutions in Canada vary as to how they frame their approach to "education" and/or "skills" development. The importance of skills as a learning outcome is not always formally recognized or respected in the PSE system. The relatively limited emphasis on skills development inhibits PSE's ability to serve the needs of some stakeholders. Employers, for instance, place a very high value on finding PSE graduates who can perform needed job tasks, both general and specialized. The ability to act and perform in the workplace—to apply the learning—depends on the skills that have been developed through education and training exercises. PSE does not have to be a homogenous system or collections of systems in order to work

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4   Stelmach, *What Is a "University"?*, 3.

5   *University Act*.

6   *New Brunswick Community Colleges Act*.

7   *Ontario Colleges of Applied Arts and Technology Act*, 2002.

8   *College and Institute Act*.

well. However, a shared awareness of what skills are developed through PSE participation, and of the value of those skills, is lacking across the different orders of educational institutions.

Lessons Learned

Provincial and territorial PSE systems that do not yet clearly articulate the specific skills (both hard and soft) gained through the different orders of PSE and/or programming should consider doing so in order to help institutions plan and evolve in line with the broader needs of their region. The processes of defining which skills are, and which skills should be, developed through PSE are best made in consultation with the relevant stakeholder groups, including representation from the PSE institutions, employers, and communities. These processes must remain open and subject to change over time, as needed.

All PSE programs exist—in a general sense—to provide opportunities to gain an education and develop skills. The common denominator across regions, provinces, territories, and institutions that are involved in PSE is the desire to build knowledge and skills in meaningful ways. Those ways include the development of advanced critical thinking skills as well as applied vocational skills and employability skills. All the skills and knowledge that are developed through a post-secondary education are valuable and have the potential to help improve Canada's economic and social well-being. The key to effective PSE systems is to develop PLRs that maximize the systems' abilities to develop skills and build knowledge in meaningful ways.

Labour Market Needs

Societal and economic functions depend on a steady flow of skilled workers into public and private organizations that provide goods and services. PSE institutions and the PSE system play a vital role in producing graduates who can help address labour market needs. Institutions, students, and employers rely on PLRs that can facilitate this role in a timely, effective manner. The ability to provide an appropriate

mix of skills depends on a robust labour market information system. PLRs that focus on the importance of responding to labour market needs use terms such as "skills needs," "engine of the economy," "aligning with government labour market forecasts," "filling labour market needs," etc. They allow PSE institutions and the PSE system to adapt and evolve in response to changing learning and labour opportunities. For instance, PLRs facilitate decisions around experiential learning opportunities, collaborations and partnerships, and domestic and international credential recognition. These are examples of strategies to produce graduates who can help to fill skills and labour gaps and shortages.

Approaches Taken

Some provincial or regional statutes strongly emphasize the connection between post-secondary education and labour market entry. The Maritime Provinces Higher Education Commission, in carrying out its duties to "*give first consideration to improving and maintaining the best possible service to students as life-long learners,*" must, among other things, promote smooth transitions between learning and work.[9] In Saskatchewan, the Ministry of Post-Secondary Education and Skills Training was created to provide residents with "*the opportunity to participate in programs and services related to post-secondary education, training, career and employment services ...*"[10] The same ministry is also responsible for managing the collection and dissemination of labour market information for the purpose of improving "*the employability of the workforce in Saskatchewan.*"[11] Aligning the two areas of PLRs—education and training—in one ministry demonstrates that they are considered closely related and interconnected in that province.

9   *Maritime Provinces Higher Education Commission Act.*

10 *Post-Secondary Education and Skills Training Act.*

11 Ibid.

College- and institute-related PLRs tend to focus strongly on addressing labour market needs. For example, Nova Scotia's *Community Colleges Act* stipulates that "*the College is ... responsible for enhancing the economic and social well-being of the Province by meeting the occupational training requirements of the population and the labour market of the Province.*"[12] In Ontario, the purpose of colleges (of applied arts and technology) is clearly aligned with labour market needs: colleges in that province must "*offer a comprehensive program of career-oriented, post-secondary education and training to assist individuals in finding and keeping employment, to meet the needs of employers and the changing work environment ...*"[13] Colleges and institutes in Canada strive to provide "*high-quality, job-focused education*" and purposefully involve industry stakeholders in the development of curricula to ensure it remains relevant to industry needs.[14] Colleges and institutes use program advisory committees to ensure program relevancy and quality to industry, community, and society. Committee members are primarily external leaders in their field and generally invited to sit for a defined term.

Experiential Learning

PLRs facilitate experiential learning, also known as "hands-on" learning, which takes students beyond the theoretical and into the practical world of experience. Incorporating experiential learning opportunities into PSE programs allows students to observe, attempt, and reflect on the skills they are developing. It relies on the application of knowledge to solidify the student's understanding of their project, task, or assignment. Experiential learning opportunities take many forms, including apprenticeships, internships, co-operative placements, mentorships,

12 *Community Colleges Act.*

13 *Ontario Colleges of Applied Arts and Technology Act, 2002.*

14 Polytechnics Canada, *The Polytechnic Advantage.*

fieldwork, and others. The University of Waterloo operates the largest post-secondary co-op program of its kind in the world, with 17,300 students in over 120 programs and over 5,000 employers.[15]

Some PSE programs require students to participate in experiential learning, while others offer it as an option. For example, the 300 apprenticeship programs from across Canada incorporate both in-class training and on-the-job experience. On average, 80 to 90 per cent of the apprenticeship training takes place on the job.[16] Another example is the Ontario Centres of Excellence Experiential Learning Program, which matches PSE students—who are also entrepreneurs—with industry leaders who provide them with the training and experience needed to turn their ideas into market-ready products and jobs.[17] Participation in experiential learning helps students explore their chosen field and develop networks within it as they further develop their skills. By creating experiential learning opportunities, PSE institutions work to ensure their programming remains relevant to students and employers. Participating employers have the opportunity to help develop the next generation of skilled workers and gain easy access to skilled new recruits once they graduate.

Education-Business Partnerships

Some PSE-funding-related PLRs actively encourage PSE institutions to seek out new relationships. Many PSE institutions are making judicious use of partnerships to obtain needed funding and to help ensure that their programs and research activities are relevant and current to employers and marketplaces. In fact, partnerships between PSE institutions and industry, government, and other stakeholder groups serve multiple purposes: they bring employers and industries into the curriculum development and evaluation processes; they bring funding in the form of investments in the institution or specific research initiatives, etc.; and they open up new experiential learning opportunities, including

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15   University of Waterloo, *About Co-Operative Education*.

16   Employment and Social Development Canada (ESDC), *Trades and Apprenticeship*.

17   Ontario Centres of Excellence, *Experiential Learning*.

internships and co-operative placements, as well as post-graduate employment positions. New partnerships involving PSE institutions are cropping up on an almost-daily basis. The following are examples of recent announcements:

- Memorial University will use a $1.98-million contribution from Hibernia Management and Development Company Ltd. (HMDC) to support geophysics field-based studies, student and faculty research projects, and the purchase of specialized equipment for geophysical exploration. HMDC recognizes that the university is educating some of its future employees and that "*the collaboration between industry and academia is enhancing the province's geophysical expertise.*"[18]

- Siemens Canada and Mohawk College have signed a memorandum of understanding that will drive opportunities for them to "*collaborate on developing curriculum, delivering training, conducting applied research, serving on program advisory committees and offering co-operative work terms and internships.*"[19]

- Viterra will invest $5 million in the Crop Development Centre (CDC) at the University of Saskatchewan to support the nationally and internationally recognized wheat-breeding programs at CDC. The university will set the breeding priorities, and Viterra will provide industry knowledge to ensure the programs are responsive to an evolving global marketplace.[20]

- SaskPower will invest $1 million in both the Saskatchewan Institute of Applied Science and Technology and the Saskatchewan Indian Institute of Technologies to fund training and programs that align with the power corporation's need to renew the power grid in response to the growing demand for electricity and to help ensure that Saskatchewan has the skilled tradespeople it needs.[21]

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18   Memorial University, *Hibernia to Bolster Geophysics*.

19   Siemens Canada, *Siemens Canada and Mohawk College*.

20   University of Saskatchewan, *Viterra and Crop Development Centre*.

21   The Star-Phoenix, "SaskPower Funds SIAST, SITT."

Credential Recognition

PLRs are important tools used by governments and PSE institutions to address labour market needs through the recognition of education credentials. The validity of some domestic credentials, such as professional licences and trade certificates, are generally limited to the province where the credential was obtained. If affected individuals, such as elementary and secondary school teachers, medical doctors, etc., relocate to another province, they are not permitted to practise their profession until they have completed the prescribed process to have their credential recognized there. Since 1995, Canadian First Ministers have been working to resolve labour mobility issues related to credential recognition through the Agreement on Internal Trade. (See box "Agreement on Internal Trade and Labour Mobility" for more details.) When governments and PSE institutions improve the efficiency of credential assessment and recognition, they promote talent mobility.

Agreement on Internal Trade and Labour Mobility

The Agreement on Internal Trade (AIT) is an intergovernmental trade agreement that aims to address barriers to the "*free movement of persons, goods, services, and investment within Canada and to establish an open, efficient, and stable domestic market*."[22] Chapter Seven of the AIT deals with the free movement of workers within Canada, including those in regulated occupations. The Labour Mobility Coordinating Group (LMCG), consisting of governments, regulatory bodies, and other stakeholders, was established by the Forum of Labour Market Ministers to lead a national cooperative process to make full labour mobility compliance a reality. The LMCG's efforts are guided by the need to ensure that the public interest is protected, that governments and regulatory authorities maintain their abilities to set standards, and that a variety of different pathways to certification are acknowledged.

Amendments to the AIT now push for full labour mobility compliance to ensure that a worker whose credential is recognized in one province or territory is able to apply to have that credential recognized in another province or territory

22 Agreement on Internal Trade, *Introduction*.

without being required to undertake any material additional training, examination, or assessments. For example, all of the provinces and territories are now obligated to recognize trade certificates of qualification with or without a Red Seal endorsement. The LMCG has published guidelines for provincial regulators to use in assessing credit transfers on a case-by-case basis.

Sources: Agreement on Internal Trade; Forum of Labour Market Ministers Labour Mobility Coordinating Group.

Recognizing foreign credentials is another key area where governments and PSE institutions use PLRs to address labour market needs within Canada. Foreign credential recognition (FCR) refers to the process of "*verifying that the education and job experience obtained in another country are equal to standards in Canada*."[23] The purpose is to facilitate the employment and mobility of workers with foreign credentials. The Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications is not a legal document, but is an articulation of a shared vision between federal, provincial, and territorial governments to commit to improving the labour market integration of internationally trained professionals.[24] The Framework's principles of fairness, consistency, transparency, and timeliness guide regulators, stakeholders, and governments in their foreign qualification assessment processes.

Bridging programs are an example of how immigrant talent can be merged into the Canadian labour market and foreign credentials leveraged. It is now policy in many regions and industries to offer bridging programs to skilled immigrants to assist them in obtaining a Canadian equivalent to their foreign credential. Examples include the following:

- Ontario Bridge Training programs help skilled newcomers to Ontario obtain the licence or certificate relevant to their profession or trade to enable them to work at their desired level.[25] The Ontario Ministry

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23 ESDC, *Credential Recognition*.

24 ESDC, *Funding*.

25 Government of Ontario, *Ontario Bridge Training*.

of Training, Colleges and Universities now provides bursaries of up to $5,000 to internationally trained individuals participating in eligible Ontario Bridge Training programs through the Ontario Bridging Participant Assistance Program.[26] Funding for employers, colleges and universities, occupational regulatory bodies, and community organizations to deliver bridge training programs is provided by the Government of Ontario and supported by the Government of Canada.

- Manitoba's bridging programs and language programs are available for specific occupations in order to assist those with foreign credentials to move more quickly into their chosen careers.[27] In addition, Manitoba offers loans of up to $10,000 to low-income, skilled immigrants through its Recognition Counts program as they try to become qualified to work in their field.[28] This program is funded by the Government of Manitoba and is supported by the Government of Canada. Such programs aim to help skilled immigrants overcome barriers to credential recognition and join the labour market at a level commensurate with their education and experience.

Assessment

PLRs that push PSE to address labour market demand are increasingly being called for by government funders and other stakeholders. The potential for direct application of a post-secondary education to the workplace is fast becoming the standard solution—rightly or wrongly—to address labour needs and shortages in the economy. However, as approval for applications to establish new programs or increase capacity can take years, PSE institutions often find it difficult to be nimble in addressing labour market needs.[29] Moreover, the increased production of credentials and related outputs is not necessarily equivalent to

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26   Government of Ontario, *Ontario Bridge Training*.

27   Government of Manitoba, *Working in Manitoba: Bridging Programs*.

28   Government of Manitoba, *Working in Manitoba: Recognition Counts*.

29   Interview findings.

producing more skilled people. More research is needed to understand whether the push for job-ready PSE graduates is truly providing what employers need.

The efforts of the LMCG in furthering labour mobility are a strong start toward the goal of free movement of workers within Canada. This initiative has the potential to resolve long-standing labour mobility issues to the benefit of workers, organizations, and communities. Future reporting of results would be more powerful if reference was made to the impacts of the AIT on the mobility of workers, the ability of employers to fill skills and labour gaps, and the resulting economic benefits for Canada.

Under the Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications, the service standard for internationally trained individuals in target occupations to have their qualifications assessed is set at one year. This time frame is seen as a marked improvement on the process length that existed prior to the establishment of the Framework.[30] While progress is always laudable, it seems that there is still considerable work to do to maximize the efficiency of assessment processes. Qualification assessment is an important link to meaningful employment and labour market attachment for internationally trained individuals. Without assessment answers, they are more likely to remain underemployed or unemployed and outside of their chosen field of work.

Lessons Learned

While there are many valid reasons for pursuing a post-secondary education, graduates who can enter the job market with relevant and useful skills and knowledge will always be in demand. The question remains of whether or how well this is happening in Canada. There is no national employer survey of recent PSE graduates' skills in Canada, and provincial surveys are not conducted on a regular basis. New, ongoing

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30 ESDC, *Funding*.

research on how well PSE graduates are meeting the needs of the labour market is needed before the effectiveness of related PLRs can be established.

Information on developing and maintaining post-secondary education-business partnerships is scarce, but greatly needed in the face of the numbers and scope of partnerships currently being forged. Advice and guidelines on how to establish and operate effective partnerships would aid partners in their efforts and streamline their partnership development processes. The Conference Board of Canada recently developed such guidelines for post-secondary education-business partnerships and published them in 2014.

Support Research

Canada is part of a global PSE market in that its PSE institutions must compete globally for brand recognition, top staff and educators, and international students. Research at post-secondary institutions plays an important role in Canada's PSE system's competitive edge. To stand out, research emerging from Canada's PSE system must be innovative, relevant, and useful and must contribute to other or further research. In addition, research is a core function of PSE institutions and public and private sector stakeholders expect high-quality research as an output of the Canadian PSE system.

Approaches Taken

Federal, provincial, and territorial government PLRs often support and influence academic activities by tying funding to particular subject areas and other criteria. The funding programs are limited or targeted to efforts that reflect the funding government's priorities and policy directions.

Examples of key federal funding programs for research include:

- Natural Sciences and Engineering Research Council of Canada (NSERC)
- Social Sciences and Humanities Research Council of Canada (SSHRC)

- Canadian Institutes of Health Research (CIHR)
- Canada Foundation for Innovation (CFI)
- Canada Research Chairs

The Natural Sciences and Engineering Research Council of Canada, a departmental corporation of the Government of Canada, was established in 1978 through the *Natural Sciences and Engineering Research Council Act*.[31] The Council functions primarily to promote and assist research in engineering and the natural sciences (other than the health sciences).[32] NSERC supports primarily university students in their advanced studies, promotes and supports discovery research, and fosters innovation by encouraging Canadian companies to participate and invest in post-secondary research projects.[33] NSERC has invested just over $1 billion in research annually in recent years.[34] Council members set strategy and high-level policies for NSERC and represent "*the academic research and private sector R&D communities in natural sciences and engineering, as well as other stakeholder groups in the Canadian innovation system*."[35] The Council is permitted to publish and sell or otherwise distribute scholarly, scientific, and technical information arising from its efforts.[36]

The Social Sciences and Humanities Research Council of Canada, a federal research funding agency, was established in 1977 through the *Social Sciences and Humanities Research Council Act*.[37] SSHRC supports primarily university-based research and training in the humanities and social sciences with the stated aim of enhancing understanding of modern social, cultural, technological, environmental, economic, and wellness issues.[38] The value of all grants, fellowships,

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31 Natural Sciences and Engineering Research Council of Canada (NSERC), *Governance.*

32 *Natural Sciences and Engineering Research Council Act*.

33 NSERC, *NSERC.*

34 NSERC, *What We Do*.

35 NSERC, *Council's Role.*

36 *Natural Sciences and Engineering Research Council Act*.

37 *Social Sciences and Humanities Research Council Act*.

38 Social Sciences and Humanities Research Council of Canada (SSHRC), *About SSHRC*.

and scholarships supported by SSHRC in 2012–13 was $337 million.[39] Similar to NSERC's governing council, SSHRC's governing council sets strategy and policy priorities for SSHRC.[40] The Council is also permitted to publish and sell or otherwise distribute scholarly, scientific, and technical information arising from its efforts.[41]

The federal government established the Canadian Institutes of Health Research in 2000 as a national-level health research investment agency (Bill C-13, April 13, 2000).[42] Operating under the authority of the *Canadian Institutes of Health Research Act*, CIHR enables the creation of new scientific knowledge that translates to improved health and more effective health services and products.[43] CIHR provides funding opportunities to eligible institutions (including universities, colleges, health authorities, health institutes, and other research institutes) for four themes of health research: biomedical; clinical; health systems services; and social, cultural, environmental, and population health.[44] In 2012–13, CIHR investments in strategic initiative research amounted to $248.3 million.[45]

The Canada Foundation for Innovation was created in 1997 with the intention of bolstering Canada's capacity to undertake world-class research and technology development. Its support for advanced facilities and equipment is designed to help universities, colleges, research hospitals, and non-profit research institutions to attract and retain top global talent, train new researchers, support private sector innovation, and create meaningful jobs.[46] The federal government has invested funds into CFI on an irregular basis, including $500 million in 2012.[47] It

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39   SSHRC, *Facts and Figures*.

40   SSHRC, *Council*.

41   *Social Sciences and Humanities Research Council Act*.

42   Canadian Institutes of Health Research (CIHR), *CIHR Three-Year Implementation Plan.*

43   CIHR, *About Us.*

44   CIHR, *Funding Overview.*

45   CIHR, *CIHR Three-Year Implementation Plan.*

46   Canada Foundation for Innovation (CFI), *About Us*.

47   CFI, *Annual Report 2012–2013*.

recently announced an investment of $63 million to support research infrastructure, including research equipment, laboratories, and tools. Most of that investment ($48.4 million) will be used to help universities attract top research talent through CFI's John R. Evans Leaders Fund, while the remaining $14.6 million will be put toward CFI's Infrastructure Operating Fund.[48]

In recognition of the growing applied research capacity of colleges and institutes, the granting agencies and CFI introduced a college-focused research funding stream, the College and Community Innovation (CCI) Program, in 2007. Managed by NSERC in collaboration with SSHRC and CIHR, the CCI Program offers Innovation Enhancement Grants "*to foster partnerships between colleges and the private sector that will lead to business innovation at the local, regional and national levels.*"[49] The CCI Program supports applied research and the development of partnerships that will lead to commercialization and also supports technology transfer, adaptation, and adoption of new technologies.[50] Representing roughly half of federal funding for college and institute research, the CCI Program provided $35.6 million in 2012–13.[51]

The federal government established the Canada Research Chairs program in 2000 to provide for research professorships in eligible degree-granting institutions across Canada. Annually, $300 million is invested in attracting and retaining top minds from around the world in engineering and the natural sciences, health sciences, humanities, and social sciences. The goal of the program is to strengthen Canada's international competitiveness and contribute to the next generation of highly skilled people through teaching, research, and supervision of others' research.[52]

48   CFI, "Research Infrastructure."

49   NSERC, *College and Community Innovation Program*.

50   Association of Canadian Community Colleges, *College and Institute Applied Research 2012–13*, 18.

51   Ibid., 17.

52   Canada Research Chairs, *About Us*.

The Canada Excellence Research Chairs program was established in 2008 specifically to support research professorships at the university level. Selected universities receive awards of up to $10 million over seven years to support world-renowned researchers and their project teams.[53] The first group of Canada Excellence Research Chairs was announced in 2010 and focused on priority research areas of the federal government's science and technology strategy:

- environmental sciences and technologies;
- natural resources and energy;
- health and related life sciences and technologies;
- information and communications technologies.[54]

Ten new awards were announced in 2011, including three Chairs in areas related to the digital economy (under the information and communications technologies priority area), one Chair in each of the remaining three priority areas, and four Chairs in other areas of inquiry.[55]

Provincial governments also support and fund research conducted by PSE institutions and their employees. Some provincial programs are tied to matching funding from federal research funding programs, such as the Canada Foundation for Innovation. The Ontario Research Fund—Research Excellence allows PSE institutions (and other research institutions) to apply for up to one-third of the operational costs of "*large-scale transformative research*"[56] proven to be of strategic value to the province. Funding is normally in the $1 million to $4 million range per project.[57] In Quebec, the Fonds de recherche du Québec promote and financially support research, knowledge dissemination, and researcher training in the areas of nature and technology, health, and society and culture.[58] In 2012–13, the Fonds invested nearly $197 million in university

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53 Canada Excellence Research Chairs, *About Us*.

54 Ibid.

55 Ibid.

56 Government of Ontario, *Ontario Research Fund*.

57 Ibid.

58 Gouvernement du Québec, *Fonds de recherche du Québec*.

research.[59] B.C.'s Knowledge Development Fund provides up to 40 per cent of the cost of a research project and focuses on research that will offer long-term economic and social benefits to the province. The government of B.C. has invested over $415 million through this fund since its inception in 2001.[60] These are only a selection of a wide range of provincial efforts to support research activities in Canadian PSE institutions.

As research is designed, conducted, and completed, researchers and stakeholders consider the potential uses and impacts of its results. PLRs at the PSE institution-level often permit or promote commercialization of research and research-related partnership activities. The commercialization of research provides investors with different ways to measure the returns on their investments. It also provides PSE institutions with additional revenue sources or new lines of business, new connections and partnership possibilities, and fresh opportunities to market their expertise and capacity to future investors, staff, and students. Research networks, clusters, and spin-off research organizations are examples of commercialization and/or government-industry-PSE partnership research activities. Current initiatives include the following:

- In 2013, the federal government, Dairy Farmers of Canada, the Canadian Dairy Commission, and the Canadian Dairy Network collaborated to invest over $18 million in a new dairy research cluster. The five-year research plan will focus on promoting innovation, nutrition, and health and will include projects on understanding dairy product nutrition, improving environmental sustainability, and developing better dairy genetics. This funding follows on $12 million of previous partner funding for the cluster.[61] PSE partners on Dairy Research Cluster projects

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59 Gouvernement du Québec, *The Fonds de recherche du Québec: An Overview*, 7.

60 British Columbia Ministry of Technology, Innovation and Citizens' Services, *Examples*.

61 Canadian Dairy Research Portal, *Dairy Research Cluster*.

include the University of Guelph, the University of Saskatchewan, the Nova Scotia Agricultural College, and the University of Prince Edward Island.

- McMaster University is partnering with Chrysler, the federal government, and other auto industry leaders to develop energy-efficient, high-performance electrified and lighter weight vehicles. The partnerships will see over $24 million invested in several McMaster University projects and will build research capacity, drive innovation, and increase the competitiveness of the industries involved.[62]
- The Networks of Centres of Excellence (NCE) program was launched in 1989 to help mobilize Canada's research talent in order to develop the economy and improve the quality of life of Canadians. The NCE is a joint initiative of NSERC, SSHRC, CIHR, Industry Canada, and Health Canada.[63]
  - Under the NCE, the Centres of Excellence for Commercialization and Research (CECR) program "*matches clusters of research expertise with the business community to share the knowledge and resources that bring innovative products and processes to market faster.*" CECR prioritizes four research areas: the environment; natural resources and energy; health and life sciences; and information and communications technologies. New investments for CECR in the next five years include over $22 million for marine monitoring technology, digital media technologies, and "green" chemistry.[64]
  - A specific example of CECR investments at work is the Centre for Imaging Technology Commercialization (CIMTEC), which provides technology development and business development services that help researchers, start-ups, and small and medium-sized enterprises "*bring their imaging innovations to the marketplace.*"[65] A not-for-profit corporation funded by the federal and Ontario governments through CECR and the Ontario Institute for Cancer Research, CIMTEC partners

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62 McMaster University, *McMaster Receives More Than $24M*.

63 Government of Canada, *Networks of Centres of Excellence Program*.

64 Government of Canada, *Centres of Excellence for Commercialization and Research Announcement*.

65 CIMTEC, *About Us*.

with Western University; Sunnybrook Health Sciences Centre (a fully affiliated teaching hospital of the University of Toronto); and MaRS Innovation, a not-for-profit organization with several universities as members.[66]

Assessment

Major research funding programs typically publish annual reports that share details on the dollars of investments made, the number of projects funded, and other key achievements. Documenting and sharing this information is important to establish transparency and to help stakeholders (including the public taxpayer) to understand where and how their investments are being used. Regular reporting is also a key element of the programs' accountability frameworks. In addition, major research funding programs undergo periodic reviews that examine the programs' structure, roles, policies, financial framework, and other governance issues. The impacts of a program and how well its achievements measure up to its objectives are also analyzed. The following are examples of published performance measures of federal research funding programs:

- A special report on the Canada Research Chairs program was conducted for the program's 10th anniversary. The evaluation examined the program's continued need and relevance; its success; efficiency and effectiveness; governance, design, and delivery; and equity for four designated groups (women, members of visible minorities, persons with disabilities, and Aboriginal people). The program was deemed to have been well implemented, relevant, and effective. Recommendations for future improvements (distilled from 52 findings) focus on financial sustainability and supporting organizations in implementing the CRCP and, in turn, supporting chairholders.[67]

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66 CIMTEC, *Our Partners*.

67 Science-Metrix, Inc., *Tenth-Year Evaluation*.

- A recent evaluation of the Networks of Centres of Excellence program found that its rationale remains current and that the need for the program continues. Among other findings, the NCE's networking approach has been shown to enhance research, development, and innovation in targeted areas. Partner engagement is partially evidenced by their own cash and in-kind contributions, which almost doubled the NCE program's grant expenditures over the period under review. Recommendations focus on options for program renewal and considerations for a planned future summative evaluation.[68]

- In 2013–14, the Governing Council of the Canadian Institutes of Health Research plan to undertake an institutes model review, in keeping with the provisions of the *CIHR Act*. The review will assess the structure, role, policies, financial framework, and activities of each CIHR institute to evaluate its effectiveness in responding to current and emerging health research challenges and other issues, such as national and international scientific opportunities.[69]

The research funding programs from across Canada primarily target university-level work and are producing positive results in terms of specific research findings, establishing new partnerships and networks, and developing the research capacity of individuals, organizations, and communities of practice. These opportunities to share resources and risks have made possible many of the achievements to date. At the same time, an ongoing challenge for institutions and individual researchers is the need to apply continually for research project funding. The need to devote time and energy on each application is said to be a strain on resources at the institutional level. Some are finding that the need to source research funds is increasingly taking up time that used to be spent conducting the research itself.[70] Applying and canvassing known (e.g., federal funding agencies) and unknown (i.e., potential new industry partners) funders requires a set of skills akin to fundraising or

68 Performance Management Network Inc., *Review of Relevance and Effectiveness*.

69 Government of Canada, *Message From the President*.

70 Spears, "Need to Chase Funding."

salesmanship that some researchers do not have.[71] Larger organizations devote individuals or departments to assist researchers with application processes and interpretation of requirements. However, smaller institutions still face challenges in navigating the complexity of current research funding opportunities and in absorbing the indirect costs of research.

Lessons Learned

Most government funding for post-secondary research goes to universities. However, colleges and other institutes are increasingly undertaking applied research and have strong attachments to industry. Their relationships with industry allow them to move projects forward quickly through mobilization and commercialization stages. Arguably, an increased commitment and share of funding for applied research for colleges and institutes would strengthen Canada's innovation capacity and competitiveness.

Given the administrative burden on institutions, departments, and individuals applying for research funding, several questions arise. Can application processes be streamlined? Are there other options that could work as effectively? For example, are there instances where the submission of an initial, brief concept paper could be followed up by a more detailed proposal at the next level of evaluation? Or should eligible researchers be provided with a baseline grant?[72] In an effort to reduce the indirect costs of research, funding bodies and investors should review their application processes to consider alternative and innovative possibilities.

In assessing the performance of research to funders and other stakeholders, there is a growing demand to demonstrate tangible, practical, or applied results, outcomes, or impacts. However, it is important to consider whether this one-size-fits-all approach is realistic and reasonable for different disciplines. There is much research being

71 Interview findings.

72 Polster, *The Future of Academic Governance*, 27.

conducted and considered that does not lead to immediately measurable outcomes, but is valuable for other reasons. The challenge of finding a place or fit for this type of research in funding formulas and performance measurement processes should not be underestimated, but neither should they be avoided. More options for reporting of research results may be called for.

CHAPTER 5

Critical Issues: Policies, Laws, and Regulations and the PSE Experience

Chapter Summary

- Although student loan, scholarship, and grant programs help to lower the financial barriers to PSE participation, they are not sufficiently marketed to prospective users, especially high school students and adult learners.

- Better information about higher education options and benefits is needed to raise the awareness of rural youth, their parents, and secondary school teachers and counsellors about what is available.

- Developing a comprehensive and integrated approach to the recognition of prior learning is critical to Canada's future economic competitiveness.

- An effective PSE credit transfer system should include interprovincial transfer pathways.

Student experiences with the PSE system are affected by their ability to access and enter the system, and also by their ability to move within it to create their own post-secondary education pathway. This chapter examines student access and student mobility issues that play a role in shaping how Canadians experience PSE.

How PLRs Reduce Barriers to Student Access

As stated in Chapter 3, an optimal PLR system would reduce or remove barriers to access, such as costs, credential recognition, and physical barriers, for deserving PSE candidates. Key challenges to student access include limited funding availability, restricted program space, geographic accessibility issues, and inadequate recognition of prior learning. A discussion of each of these issues follows.

1. Funding Availability

Background

In Canada, PSE is largely considered a public good, yet the costs (and, sometimes, the perceived costs) of taking part discourage some from attending. At both public and private institutions there are costs borne by learners for participation. These include tuition, textbooks, other school fees, and for many, the costs of living incurred while studying (e.g., rent, utilities, transportation). These costs may be financed through personal resources, family resources, student loans (from the government and private banks), employment income, grants, and scholarships.

The availability of funding for post-secondary students is an important determinant of the financial accessibility of the PSE system. A financially accessible system is one where there are minimal financial obstacles for prospective students. Options for financing a post-secondary education include personal, private, and public funding, or a combination of

these. Governments and institutions have adopted various policies to help students and their families overcome major financial barriers to post-secondary education.

Approaches Taken

Governments provide funding directly and indirectly to PSE students. The federal government funds students within the framework of the *Canada Student Financial Assistance Act* and the Canada Student Financial Assistance Regulations.[1] These regulations govern the Canada Student Loans Program, which is the primary avenue through which the federal government provides funding directly to students. Since the program was created in 1964, it has provided 4.3 million students with $32 billion in student loans.[2] Federal loans are up to $210 per week of full-time study, or 60 per cent of the student's assessed need, per year.

Loans issued through provincial and territorial programs typically provide students with enough funding to cover the balance of their assessed need. Provincial/territorial student loan programs may be integrated with the Canada Student Loan Program, offering students a "one-student, one-loan" service. In practice, this means that students apply for loans to the provincial or territorial government, are automatically considered for funding under both federal and provincial/territorial programs, and receive one integrated loan. In some provinces and territories, students are assessed for both programs but will receive two separate loans and some jurisdictions offer students only provincial/territorial loans.[3] Approximately 60 per cent of assistance is provided by the federal government and about 40 per cent by the provinces and territories.[4]

1   ESDC, *Acts and Regulations*.

2   ESDC, *Summative Evaluation.*

3   B.C., Saskatchewan, New Brunswick, and Newfoundland and Labrador work with the federal government to provide one integrated loan. Alberta, Manitoba, Nova Scotia, and Prince Edward Island provide funding separate from federal funding. Nunavut, the Northwest Territories, and Quebec do not participate in the federal program.

4   Cheung, Guillemette, and Mobasher-Fard, *Tertiary Education*, 16.

For Aboriginal students, financial support is provided by the federal government through the Post-Secondary Student Support Program. Funding for tuition and books, living expenses, and travel expenses is available to Registered Status Indians and Inuit (who have resided outside the Northwest Territories or Nunavut for at least 12 consecutive months) who are enrolled in a certificate, diploma, or degree program at an eligible post-secondary institution.[5]

All PSE students may apply for financial assistance from the federal government through the Repayment Assistance Plan or the Canada Student Grants Program. Additional programs target specific under-represented groups, such as the Canada Student Grant for Persons from Low-Income Families and the Canada Student Grant for Persons with Permanent Disabilities. Some provincial governments also offer loan forgiveness programs.[6] In some instances, these programs are directed at students who study and seek employment in priority areas for government. For example, as of April 2013, the Saskatchewan government has provided nurses and nurse practitioners who work in designated rural and remote Saskatchewan communities with up to $4,000 per year through the Saskatchewan Student Loan Forgiveness program, to a maximum of $20,000 over five years.[7]

Provincial and territorial governments and institutions provide further financial assistance by managing the cost of PSE through tuition fee policies and the tax system. Tuition rates may be managed through maximum allowable increases, freezes on "hikes," or policies that correlate increases to inflation or the national average. Through the tax system, governments take measures to lighten the financial burden on students by providing tax refunds for tuition and textbooks and by giving tax breaks on income earned after graduation while student loans are being paid off.

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5   AANDC, *Post-Secondary Student Support Program (PSSSP).* Issues specifically related to the PSE participation of Aboriginal students will be addressed in greater depth in future SPSE reports.

6   Cheung, Guillemette, and Mobasher-Fard, *Tertiary Education*, 16*.*

7   Government of Saskatchewan, *Saskatchewan Student Loan Forgiveness.*

There are also a wide variety of scholarships and grants available to learners from federal and provincial/territorial governments, institutions, and the private sector. For instance, the University of Alberta awards $25 million in scholarships each year based on funds from donors.[8] A specific example of a U of A scholarship is the Schulich Leader Scholarship, which awards $60,000 ($15,000 per year) to students enrolling in science, technology, engineering, or mathematics. The Natural Sciences and Engineering Research Council of Canada and the Social Sciences and Humanities Research Council are two important sources for scholarships, offering a variety of funding through, for example, NSERC's Undergraduate Student Research Awards and SSHRC's Talent program, which support students and postdoctoral fellows. Scholarships and awards are generally based on merit and do not require repayment.

Assessment

There is some debate about the extent to which financial issues act as a barrier to PSE participation. Some literature suggests that potential students are not attending due to costs, while other research suggests that other issues are at play. Future Conference Board research will explore this further.

Student loans are widely used. Statistics Canada reported in 2005 that 45 per cent of college graduates and 54 per cent of graduates with a bachelor's degree financed their education with student loans.[9] However, critics of funding for post-secondary students point to the high debt levels of university and college graduates. A recent survey conducted by the Bank of Montreal found that PSE students in Canada expect to graduate with an average of $26,297 in debt.[10] Statistics Canada has calculated the actual average graduating student debt load (from all funding sources) to be $18,800 (for the class of 2005).[11] According

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8   University of Alberta, *Scholarships and Awards.*

9   Luong, *The Financial Impact of Student Loans.*

10 BMO Financial Group, *2013 BMO Student Survey*.

11 Luong, *The Financial Impact of Student Loans,* 15.

to Canada Student Loan Program data, most students take 10 years to pay off their loans. Furthermore, there still exists a disparity in the participation rates of low-income students compared with their middle- and high-income peers. A study by Statistics Canada found that students in the top income bracket, based on parental income, have a 50 per cent chance of going to university, whereas only 31 per cent of students in the bottom income bracket attend university.[12] However, it should be noted that this gap is attributed to a number of factors, such as previous school performance, parents' level of education, and financial constraints.[13] The high debt loads of some post-secondary students in Canada and the continued lag of low-income students participating in PSE have led some stakeholders, most notably the Canadian Federation of Students, to call for dramatic reductions in tuition fees in Canada, and eventually free post-secondary education.[14]

Lessons Learned

There is a fine balance to be struck between delivering a quality post-secondary education experience and maintaining the affordability of the system for learners. The current PLRs governing student funding are helping a significant proportion of the population obtain a higher education, but long-term sustainability may be a challenge if current trends in public spending continue. Furthermore, a gap persists in the participation of low-income students. While there is evidence attributing this gap to other factors, such as parental influence and perceived benefits of a post-secondary education,[15] financial accessibility is an issue that can be alleviated through targeted measures. Better information on the benefits of attending PSE—framing the messaging for students and their families as a long-term investment that can yield real

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12   Standing Senate Committee on Social Affairs, Science and Technology*, Opening the Door,* 24.

13   Ibid.

14   See, for example, Canadian Federation of Students—Ontario, *Free Post-Secondary Education in Ontario.*

15   Standing Senate Committee on Social Affairs, Science and Technology*, Opening the Door,* 23.

returns—would help alleviate reservations about shorter-term costs.[16] Funding programs for low-income students could be expanded or loan criteria could be amended to better cater to different needs, supporting greater equity and system accessibility. A lack of knowledge among high school students and their parents about financial aid programs and the actual costs of post-secondary education has also been identified as a barrier to participation.[17] Additional efforts should be made to raise awareness of the information available about student loans, scholarships, and grants and to target these efforts at both high school students and adult learners.

2. Institutional Capacity

Background

An accessible PSE environment provides spaces for students who qualify. The number of spaces allocated to a PSE program must balance student and labour market demand, as well as available resources. The capacity of each class, program, and institution is constrained, to varying degrees, by the available resources for space, infrastructure, class time, and teaching capacity. Depending on resources and a given program's popularity, there may be competition for admission (i.e., not everyone who applies and qualifies will be admitted). Competition for space varies by school, program, and types of students being admitted. Demand for a program can be driven by such considerations as expected labour market outcomes, career pathways, or the reputation of an institution or some of its faculty members.

Approaches Taken

Admissions policies are set by institutions, in compliance with applicable human rights laws and equity and diversity policies. Prospective students must go through an application process, whereby they are selected

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16 The returns on an investment in a post-secondary education are discussed further in another SPSE study, *The Economic Impact of Post-Secondary Education in Canada.*

17 Standing Senate Committee on Social Affairs, Science and Technology*, Opening the Door,* 23.

based on a number of criteria such as their preparedness, their previous academic performance, achievements in standardized tests, extra-curricular and volunteer activities, and other personal attributes. These applications are generally reviewed by an admissions committee, which often includes admissions staff as well as program-specific experts.

Special consideration and priority admission may be given to certain groups to ensure equitable access to PSE. Many institutions have an equity program, whereby they reserve a number of spots for certain groups. For example, Saskatchewan Polytechnic has an Education Equity Program to help the institution "*work toward a student body that represents every segment of Saskatchewan's population*."[18] The program seeks to ensure the enrolment and graduation of women interested in trades or technology, people with one or more disabilities, members of visible minority groups, and people of Aboriginal ancestry. Saskatchewan Polytechnic allocates spaces for applicants in these groups and takes additional measures to support accessibility, such as providing culturally sensitive counselling and pre-admission consultations and coordinating technical aids. These programs help institutions to achieve the objectives of access, equity, and diversity.

Assessment

Despite policies in place at institutions to help achieve equitable access, there are still some students who are delayed in their studies or must find alternative programs or institutions because of a lack of space. Colleges and Institutes Canada has raised the issue of wait lists that are preventing students from timely registration for many college programs, in some cases for up to two years.[19]

Some institutions have responded to growing demand by increasing their capacity and the number of available seats in a program. For instance, available spots in PSE in Ontario have more than doubled over the past two decades in response to increasing demand. In 2005, the Ontario

18 Saskatchewan Polytechnic, *Education Equity Program.*

19 Standing Senate Committee on Social Affairs, Science and Technology*, Opening the Door,* 11.

government announced it would increase operating grants to colleges and universities by $1.2 billion, a 35 per cent increase, by 2009–10 to support enrolment growth, hiring faculty, improving student resources, and enhancing the student experience.[20] While allocating more financial resources to meet demand is one way to ensure adequate space, it may not be sustainable in the face of continued future demand. Some institutions have responded to increasing demand for space by offering alternative program delivery options, such as online and distance courses or blended delivery.

Lessons Learned

Institutions are already leveraging technological developments to expand their capacity and will need to continue to integrate technology into new modes of program delivery. There are, however, missed opportunities in the current PSE system due to a lack of transferability (discussed later in this chapter) and collaboration. In a truly mobile system, students could move between jurisdictions and institutions to go where there is capacity. Institutions could also collaborate more to leverage their collective capacity, such as through offering more university courses at colleges (particularly in rural and remote regions) and sharing technologies. At the same time that students are offered more choices and improved access to their chosen courses of study, it is important to ensure that current labour market information, including expected returns on their investments of time and money in their education, is also made available to them. Limited demand for graduates of some programs may well play an influencing role on students' choices of learning pathways.

3. Geographic Accessibility

Background

Canada has a large and widespread rural population living in small communities across the country. Many of these communities do not have a PSE institution located nearby. Research by Statistics Canada has

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20 Ontario Ministry of Finance, *Ontario Budget 2005*.

found that students who live further than 80 kilometres from a university are 58 per cent less likely to enrol in a post-secondary institution than those who live within 40 kilometres of an institution.[21] This is cause for concern, because approximately 20 per cent of Canadians live more than 80 kilometres from a university. A large proportion of Canada's Aboriginal population lives in rural communities and on-reserve. While geography is not the only cause for the low participation rates of Aboriginals in PSE, it is a contributing factor. In order to participate in higher education, rural and remote residents are typically forced to consider distance learning opportunities, for which they often must have specific technology and connections as well as the ability to self-direct their own learning. At the same time, connectivity is often an issue since "*the critical infrastructure required to support broadband and even basic telecommunications in many regions of the North requires renewal and reinvestment.*"[22] Often, the only other option is to move away, which can pose a substantial financial burden on students as they pay for accommodations and other major living expenses, including utilities, groceries, and transportation costs.[23]

Approaches Taken

Most post-secondary education institutions have developed policies to help overcome geographical barriers by offering distance learning and making use of modern technology. Common methods used for distance education include independent/home study, online or televised courses, or a traditional face-to-face class offered off-campus. The extent to which post-secondary institutions offer online and distance learning options varies considerably. Some limit off-campus offerings to specific courses; others offer entire programs. For example, Athabasca University has a mandate to focus on distance education and offers over 55 undergraduate and graduate programs.[24] Thompson Rivers University's

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21   Statistics Canada, *Distance as a Postsecondary Access Issue.*

22   Fiser, *Mapping the Long-Term Options for Canada's North*, 64.

23   Issues specifically related to PSE access for rural and remote learners will be addressed in greater depth in future SPSE reports.

24   Athabasca University, *Athabasca University at a Glance*.

Open Learning is the university's distance education provider, providing access to 55 degree, diploma, and certificate programs and over 550 courses.[25] These initiatives are most often created and operated independently by institutions. In some cases this is done in collaboration with government, although there are a few cases of institutions partnering with each other for this purpose. An example of such a partnership is the Canadian Virtual University, which is an association of public universities specializing in online and distance education that are collaborating to increase access to a university education and that offer complete programs online or through distance education.[26]

Both the federal and provincial governments have policies focusing on access to post-secondary education for rural residents. These policies primarily focus on enhancing access by alleviating some of the financial burden imposed on rural students who may need to relocate to study. Through the Canada Student Loans Program, the federal government assists rural residents with financial assistance to make return trips to their permanent homes and by including living costs in their needs assessments for student loans. Most provinces also provide some form of financial assistance, most commonly in the form of a grant, for rural residents who must relocate for school.[27]

Assessment

Colleges especially appear to be filling some of the access void for rural residents. The vast majority of Canadians live near a college, with only 3 per cent not having access to a college within an 80-kilometre radius.[28] While this type of participation gap is attributed, in part, to financial barriers, there is also research pointing to informational and motivational

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25 Thompson Rivers University, *TRU Open Learning*.

26 Canadian Virtual University, *About Us.*

27 For example, the Government of Manitoba offers the Rural/Northern Bursary to provide rural and Northern residents with an additional $600 to help offset the increased costs of accessing their education.

28 Standing Senate Committee on Social Affairs, Science and Technology*, Opening the Door.*

barriers.[29] Research suggests lower educational aspirations as well as a lack of knowledge about options for attending PSE and the associated costs among youth in rural communities.[30] These findings point to information-sharing gaps and a need for further dissemination of higher education options and benefits to raise awareness in rural youth, their parents, and secondary school teachers and counsellors.

Lessons Learned

Modern technology and other innovations in program delivery have the potential to level the participation gap between rural and urban residents in post-secondary education. With more institutions offering distance courses and programs, learners can participate in some form of PSE from anywhere in the country. However, infrastructure issues—particularly the availability and affordability of broadband and connectivity access—continue to hamper technology solutions to PSE access in remote regions.

Policies targeted at increasing the participation of rural residents in PSE have largely been focused on easing the additional financial burden placed on these students. While financial consideration is significant, it is not the sole, or even the dominant, determining factor in accessing PSE. Governments and institutions should also focus efforts on promoting the benefits of a post-secondary education to rural residents and their families and providing adequate information on the learning options available to them. Furthermore, given the proximity of Canadians to colleges, greater transferability between post-secondary institutions (from college to university and college to college) could help improve rural access. (Transferability is discussed in further detail in this chapter.)

29 Looker, *Regional Differences,* 1.

30 Ibid.

4. Recognition of Prior Learning

Background

Recognition of prior learning (RPL) is a tool to help leverage the existing skills and abilities of Canadians and immigrants, and is a key part of a successful knowledge-based economy. RPL is a process used to assess an individual's knowledge and skills, which may have been acquired through formal education at an educational institution or which may be informal learning acquired through diverse settings such as the workplace, the community, volunteer work, and other life experiences. RPL can be applied toward the prerequisites of education and training programs, occupational and/or professional certification, and labour market entry and advancement. It helps facilitate learner mobility between institutions and jurisdictions and acts as an important bridge to fully recognizing and valuing individual skills and abilities.

Approaches Taken

RPL practices and policies in Canada started to take form in the 1970s and the early 1980s. Developments were driven at the local level through pilot projects, primarily by colleges. During the 1990s, provincial governments began to show increased interest in RPL, with several provinces moving toward a more coherent and comprehensive RPL framework. Manitoba, for instance, is considered a leader in RPL for being the first jurisdiction to establish a formal network of individuals interested in prior learning, the Manitoba Prior Learning Assessment Network.[31] Quebec is also considered to be a leader in RPL policy. This policy area became a priority in Quebec in 1985 with the introduction of funding legislation.[32] Colleges in Quebec receive RPL funding equal to standard course-delivery funding.

While RPL policy development has largely been managed at the provincial and institutional level, the federal government, through Employment and Social Development Canada (ESDC), is also a major

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31   Conrad, "Revisiting the Recognition of Prior Learning (RPL)," 92.

32   Ibid.

funder and supporter of RPL practices. ESDC's work in this area has primarily focused on the recognition of foreign credentials. Through the Foreign Credential Recognition Program, the department has funded 163 projects across Canada since 2003 and, in 2012, launched the Foreign Credential Recognition Loans Pilot Project, committing $18 million over three years to help internationally trained individuals cover the cost of licensing exams, training, skills upgrading, and other costs of the foreign credential recognition process.[33]

Practical approaches widely used in Canada to evaluate and recognize an individual's prior learning can be broken down into three broad categories: academic and professional credential assessment, credit transfer, and prior learning assessment and recognition. Academic and professional credential assessments are for the purposes of recognition by one academic or professional body of qualifications awarded by a different body, from either within Canada or overseas.[34] Credit transfer (discussed in detail later in this chapter) facilitates mobility between institutions and awards learners advanced standing in a program so they do not have to repeat courses for which they have already acquired the knowledge. Prior learning assessment and recognition (PLAR) is the evaluation and recognition of informal and/or experiential learning. This is the approach used to assess the extensive knowledge that individuals acquire outside of formal educational institutions. Approaches are commonly used in combination with one another and share a common intention to identify and evaluate a person's abilities and potential on the basis of the person's prior learning.[35]

Assessment

Colleges have made substantial progress in implementing RPL policies, with many having developed RPL programs and infrastructure with dedicated resources in the form of assessment centres and trained RPL professionals on staff. A 2007 pan-Canadian study of college

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33 ESDC, *Departmental Performance Report 2011–2012.*

34 PLA Centre, *Achieving Our Potential*, 18–19.

35 Ibid., 22.

student experiences reported that more than 80 per cent of colleges and institutes had implemented an RPL program.[36] RPL policies are not as widely developed in the university sector; however, several institutions have emerged as leaders on this issue. Athabasca University, Royal Roads University, and Ryerson University have all made specific policy commitments to recognizing prior learning.[37] (See box "Royal Roads University.")

Royal Roads University

Royal Roads University has a flexible admission policy that allows prospective students who do not have an education credential (e.g., certificate of secondary school completion) to qualify for admission based on an assessment of both their formal education completed to date and any informal learning acquired. As part of the assessment process, applicants must provide a personal statement, a detailed resumé, two or more letters of reference, and official transcripts. In certain cases, applicants may be required to provide a portfolio of their learning achievements, write an exam, demonstrate competencies, or be interviewed. Royal Roads has also signed a memorandum of understanding with Colleges and Institutes Canada to facilitate the block transfer and recognition of learning of students with appropriate prerequisite qualifications from Canadian colleges that are members of CICan into the third year of its bachelor's degree programs.

The objective of this policy is to recognize evidence of prior learning accomplishments and to assure a high probability of successful program completion for the students and the university. Due to its flexible admission, the university attracts a diverse group of learners with a wide variety in ages and life experiences. Students enrich their learning environments by sharing professional, personal, and cultural experiences with one another.

Sources: Royal Roads University, *Flexible Admission*; Association of Universities and Colleges of Canada, *Royal Roads University*; Association of Canadian Community Colleges, *Transferability and Post-Secondary Pathways,* 3.

36 Human Resources and Social Development Canada and Association of Canadian Community Colleges, *Pan-Canadian Study,* 19.

37 PLA Centre, *Achieving Our Potential*, 128.

Issues of governance, structure, and economics have led to discrepancies between policy and implementation of RPL across the country. Conference Board research in 2001 identified a major learning recognition gap in Canada that, if eliminated, would give Canadians an additional $4.1 billion to $5.9 billion in income annually.[38] In a survey of nearly 12,000 households, the Conference Board found that three groups would gain the most in getting their learning recognized and rewarded: immigrants; people with prior learning gained through work and training; and transferees between post-secondary institutions or, in the case of licensed professions, between provinces.[39]

Lessons Learned

With consideration for Canada's aging population and real and projected labour shortages, a more comprehensive and integrated approach to RPL is imperative for Canada's economic competitiveness. Provinces, territories, and institutions will need to adopt system-wide RPL policies and invest in adequate human and financial resources in order to implement those policies. Previous research has shown that provincial governments have few to no policies in place to monitor RPL activities related to education, employment, or regulated occupations.[40] In addition, quality assurance policies will need to be integrated into RPL practices to ensure consistency and equity.

How PLRs Facilitate Student Mobility

As stated in Chapter 3, an optimal PLR system would maximize the opportunities for domestic and international student mobility across provinces and territories and among institutional categories. Credit transferability is the key issue hindering student mobility. A discussion of this issue follows.

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38 Bloom and Grant, *Brain Gain,* i.

39 Ibid.

40 PLA Centre, *Achieving Our Potential,* 49.

Credit Transfer in Post-Secondary Education

Background

Post-secondary education transfer systems with formal and transparent protocols facilitate the student movement into and through post-secondary institutions, thereby increasing access to PSE and the completion of credentials. The Canadian Undergraduate Survey Consortium's 2000 and 2003 graduating surveys found that about one in three university students transferred credits between post-secondary institutions in those years.[41] In B.C., 18.1 per cent of post-secondary students transferred to different post-secondary institutions in the 2010–11 school year.[42]

Effective transfer systems allow students who move or discontinue post-secondary education at one institution to transfer credits from courses completed to another institution where they complete their education. Transfer systems in some provinces allow students living in a region without a local university to take some of their courses at a local college while living at home and then transfer to a university or another institution to complete their program. As Junor and Usher note, *"Credit transfer systems provide the lubricant to ensure seamless academic mobility."*[43]

Credit transfer systems that function well can increase the accessibility of post-secondary education for under-represented groups. A review of post-secondary transfer systems in Canada and the U.S. found that students who enrol in college-to-university transfer programs disproportionately come from groups under-represented among direct-entry university students (e.g., students from lower-income families, Aboriginal students, and students with disabilities).[44]

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41 Junor and Usher, *Student Mobility and Credit Transfer,* 23.

42 British Columbia Council on Admissions and Transfer, *Expanding Pathway Options for BC Students,* 23.

43 Junor and Usher, *Student Mobility and Credit Transfer*, 20.

44 Trick and Lawrance, *College-to-University Transfer Arrangements and Undergraduate Education.*

The creation of effective transfer systems is challenging because of the large number of partners involved in their creation (e.g., provincial/territorial governments, individual post-secondary institutions, academic departments). Credit transfer systems have important implications for both post-secondary institutions and provincial/territorial governments. Post-secondary institutions want to ensure that any credits awarded for work completed at another institution are equivalent to those it awards, thus ensuring the continued quality of its own credentials.[45] Credit transfer is a significant issue for federal and provincial/territorial governments: an effective transfer system can facilitate the attainment of post-secondary credentials and positively benefit labour market outcomes by giving students greater flexibility to move between academic institutions as their personal and professional circumstances dictate. Transfer systems can also save governments money by ensuring students do not unnecessarily have to retake courses and are able to complete their studies in a timely manner.[46]

Approaches Taken

Transfer systems for post-secondary education vary widely by province or territory. Many provinces (e.g., B.C., Alberta, Ontario, and New Brunswick) have created transfer councils, which operate at arm's length from government and post-secondary institutions and whose primary function is to facilitate admission, articulation, and transfer arrangements among post-secondary institutions within their jurisdiction.[47] A number of provinces and territories also offer online credit transfer guides that list courses and blocks of courses that can be transferred between institutions (e.g., B.C., Alberta, Ontario).[48]

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45 Junor and Usher, *Student Mobility and Credit Transfer*, 19.

46 Ibid.*,* 19–20.

47 Association of Canadian Community Colleges, *Transferability and Post-Secondary Pathways;* Junor and Usher, *Student Mobility and Credit Transfer,* 23.

48 Junor and Usher, *Student Mobility and Credit Transfer*, 23.

The development of transfer systems in different provinces has been shaped by the broader development of their PSE systems. For example, B.C.'s credit transfer system was designed in the 1960s, when two new universities (Simon Fraser University and the University of Victoria) were opened and when the college system was being developed. Colleges in B.C. were given a legislative mandate to provide both academic and vocational programming, while universities were expected to work with the colleges and accept transfer students.[49] In contrast, Ontario's college system was designed to provide vocational programming separate from the university system, and this model remains largely intact today.[50]

B.C. and Alberta have the most well-developed transfer systems in Canada, with comprehensive transfer arrangements among post-secondary institutions. The provinces both maintain highly accessible websites that post all transfer arrangements. The transfer systems in these provinces also allow students to complete the first two years of a degree program at a college and then transfer those credits as a block to a university, where they can complete their degree. (See box "B.C.'s Credit Transfer System.")

In other provinces, transfer systems are less comprehensive. Post-secondary institutions may form bilateral or multilateral agreements for credit transfer, but these agreements are often limited to specific programs or between just two institutions. In many cases, credit transfer is completed on an ad hoc, case-by-case basis. In these instances students may have little prior information about what courses will be accepted for transfer. Credit transfer may be particularly challenging when students are looking to transfer credits from different types of post-secondary institutions (i.e., from a college to a university). For example, Nova Scotia has no formal organization to facilitate credit transfer between its post-secondary institutions; the flexibility and details of credit

49 Interview findings; Gaber, *The BC Transfer System.*

50 Skolnik, "A Look Back at the Decision on the Transfer Function," 2.

transfer procedures vary by post-secondary institution.[51] Nova Scotia is working with other Maritime provinces to increase the number of credit transfer agreements between post-secondary institutions.

B.C.'s Credit Transfer System: A Leader in Creating Pathways to Opportunities

The transfer system in B.C. includes all 25 public post-secondary institutions, 11 private post-secondary institutions based in the province, and two public out-of-province post-secondary institutions (Athabasca University and Yukon College).[52] Post-secondary students in B.C. can transfer credits on a course-by-course basis or as a block. Block transfers occur when a group of courses (often in the form of a certificate, diploma, or associate degree) is recognized as a whole for transfer credit. Both forms of transfer may involve a minimum GPA or other conditions.[53]

Originally, a primary goal of the transfer system in B.C. was to accommodate increased demand and increase access to PSE, as there were only three universities in B.C. that offered bachelor's degrees. However, as B.C. has expanded its university system, and all types of post-secondary institutions in the province are now able to offer degrees, there has been a decrease in transfer rates between post-secondary institutions.

The B.C. Council on Admissions and Transfer (BCCAT) facilitates admission, articulation, and transfer arrangements between post-secondary institutions in the province. Created in 1989, BCCAT is a formal government agency with provincial government funding, but no legislative authority.[54] BCCAT

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51 CICIC, *Quality Assurance Practices in Canada.* In some instances, articulation agreements and formal affiliations have been established between post-secondary institutions in Nova Scotia. However, these agreements are limited and apply only to specific academic programs.

52 BCTransferGuide.ca, *BC Transfer System.*

53 Trick and Lawrance, *College-to-University Transfer Arrangements and Undergraduate Education,* 9.

54 Gaber, *The B.C. Transfer System,* 4.

has facilitated the development of a complex and robust transfer system that includes:

- more than 85,000 course-to-course articulation agreements;
- more than 900 block transfer agreements;
- more than 50 degree partnerships with guaranteed admissions pathways.[55]

BCCAT sets principles and guidelines for transfers, as well as transfer system membership policies. It also advocates for transfer spaces and promotes program partnerships.[56] Transfer agreements in the province are facilitated through 68 provincial articulation committees that represent different types of programs (academic, professional, trades, developmental) offered through B.C.'s post-secondary system. The committees meet once a year and consist of representatives from each institution that offers a type of program. While articulation committees have no authority to make decisions for institutions, they facilitate credit transfer by increasing understanding and trust among faculty.[57]

One of BCCAT's main functions is to conduct extensive research on student mobility patterns, including why students transfer and student success. This helps to create further transparency and trust among post-secondary institutions by giving them detailed information about what is actually happening in the transfer system.[58]

BCCAT runs two web resources to provide students with information on credit transfer. The B.C. Education Planner allows students to compare different post-secondary programs.[59] The BC Transfer Guide provides information on the transfer system and allows students to search transferable courses and block transfer programs by sending and receiving institutions.[60] In 2012, the BC Transfer Guide was used by approximately 1 million unique visitors.[61] BCCAT

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55 FitzGibbon, "An Introduction to the BC Council on Admissions and Transfer and the BC Transfer System."

56 Ibid.

57 Ibid.

58 Interview findings.

59 See www.educationplanner.ca.

60 See www.bctransferguide.ca.

61 British Columbia Council on Admissions and Transfer, *Expanding Pathway Options for BC Students,* 28.

also reaches out to students through advertising and participation in education and career fairs.[62]

The B.C. transfer system has enabled significant student movement between all types of post-secondary institutions. A survey of B.C. students who transferred public post-secondary institutions in 2010–11 found that 80 per cent were satisfied with their transfer experience. While only 42 per cent of students who expected to transfer credits from one institution to another were able to transfer all the credits they expected, 94 per cent received at least some transfer credits.[63] Students who moved from a college or institute to a research university were more likely to be satisfied with their transfer experience—a reflection of the B.C. transfer system's historical emphasis on pathways from colleges to research universities.[64]

Inter-Provincial/Territorial Credit Transfer

It can be challenging for students to transfer credits across provincial/territorial boundaries, as there is no national transfer system in Canada. In 1995, the Council of Ministers' Protocol on Credit Transfer was signed among the provinces and territories, making first- and second-year university credits transferable between almost all Canadian universities.[65] As such, most universities in Canada will generally accept each other's credits, as long as they are applicable to a student's degree program, have been completed within a certain time frame, and the final grade meets the university's minimum requirements.[66]

In 2002, the Council of Ministers of Education, Canada (CMEC) approved a strategy to improve credit transfer across Canada through the development of provincial/territorial transfer systems. CMEC urged provincial/territorial governments to consider giving priority to strategies

62 British Columbia Council on Admissions and Transfer, *Expanding Pathway Options for BC Students,* 29.

63 B.C. Stats, *A Survey of Movers,* 15.

64 Ibid*.,* 16.

65 Junor and Usher, *Student Mobility and Credit Transfer,* 23.

66 Ibid*.,* 23–24.

to improve movement between post-secondary sectors (e.g., between colleges and universities) and facilitate student movement by providing accurate and up-to-date information. A 2009 CMEC update on credit transfer found that all provinces and territories had taken steps to improve their credit transfer systems—provinces with well-developed transfer systems had continued to expand them, while provinces with less developed transfer systems had made modest to significant progress.[67]

There are a growing number of inter-provincial/territorial transfer arrangements in Canada. For example, in 2007, B.C. and Alberta signed the BC/Alberta Transfer System Protocol, which aims to ensure students that they "*will receive transfer credit for courses or programs they have successfully completed where the content/outcomes are demonstrably equivalent to those offered at the institution to which they transfer.*"[68] However, while this agreement encourages member post-secondary institutions to recognize relevant and equivalent coursework, it is non-binding on institutions and recognizes their academic autonomy.[69] Inter-provincial/territorial credit transfer continues to be conducted on a largely ad hoc, case-by-case basis.

Assessment

The effectiveness of transfer systems in Canada varies widely by province. Not surprisingly, provinces with well-developed transfer systems that offer students established and transparent pathways between post-secondary institutions have higher rates of transfer students than provinces where transfer systems have fewer formalized pathways and are of a more ad hoc nature.[70] Well-developed transfer pathways can help students achieve post-secondary credentials, particularly pathways that allow students to complete their initial studies

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67 Council of Ministers of Education, Canada, *Report of the CMEC Working Group on Credit Transfer*, 3.

68 Alberta Council on Admissions and Transfer and B.C. Council on Admissions and Transfer, *British Columbia/Alberta Transfer System Protocol,* 1.

69 Ibid., 2.

70 Trick, *College-to-University Transfer Arrangements and Undergraduate Education*, 22.

at a college and then transfer to a university. Other types of transfers are also used and demanded, including college-to-college/institute and university-to-college/institute. Transfer systems can make PSE more accessible and help it respond to changing student circumstances and needs. Research has shown that lower-income students are more likely to start their degree studies at a college than a university.[71]

In provinces with comprehensive transfer systems (e.g., B.C. and Alberta) that include extensive transfer agreements between institutions and easily accessible online transfer guides, the transfer system works relatively well. While there are still challenges for students pursuing non-traditional pathways, student satisfaction with credit transfer in these jurisdictions is relatively high. In jurisdictions that lack a comprehensive credit transfer system, students may not have access to information about what credits are transferrable until they transfer institutions and/or may face the situation of losing significant credit for work completed.

Lessons Learned

A comprehensive transfer system helps PSE to support advanced skills development, respond to labour market needs in a flexible and effective manner, facilitate student mobility, and reduce barriers to access. B.C.'s credit transfer system is the clear leader in Canada—it has evolved to become a key component of the post-secondary system in that province. Those provinces and territories without comprehensive transfer systems should make it a priority to continue and expand their efforts to facilitate transfer pathways for students. Transfer systems should be flexible enough to accommodate a variety of pathways to meet student and labour market needs.

Provincial credit transfer organizations, such as BCCAT and ONCAT (Ontario Council on Articulation and Transfer), which operate at an arm's length from government and post-secondary institutions, can help to facilitate credit transfer arrangements between institutions. A lack of understanding and transparency between different post-secondary

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71 Trick, *College-to-University Transfer Arrangements and Undergraduate Education*, 22.

institutions is one barrier that can prevent the creation of extensive transfer arrangements. By conducting extensive research into credit transfer pathways, BCCAT has increased understanding and transparency among post-secondary institutions. Research has underscored the quality and success rates of transfer students, helping to increase support for the transfer system. To build trust, there is also a need to facilitate connections between multiple levels of staff (e.g., senior administration, admission, faculty) at different post-secondary institutions.

An effective transfer system must also provide students with easily accessible information about transfer pathways, such as the online transfer system websites available in several provinces. It is important that students are made aware of these web portals, so that they can use them when planning their post-secondary education, in the course of their studies, or if returning to PSE.

In addition to developing transfer systems within provinces and territories, inter-provincial transfer pathways are also needed. Provincial/ territorial governments and post-secondary institutions can pursue inter-provincial/territorial transfer agreements. In addition, institutions and credit transfer organizations can exchange information and best practices to increase understanding and trust. The Pan-Canadian Consortium on Admissions and Transfer (PCCAT) is one channel through which information-sharing already occurs.

Conclusion

There is considerable unevenness across Canada in how different post-secondary systems leverage PLRs to ensure a high-quality PSE experience for students. Each provincial/territorial post-secondary system has arisen in a unique historical and political context, which has impacted how institutions have developed to serve regional populations. While the PLRs across the PSE system as a whole ensure that most students will have a positive post-secondary experience, barriers remain to ensuring the accessibility of the PSE experience. In particular, PLRs could be altered to improve the accessibility of PSE

for under-represented groups such as rural and remote residents, Aboriginal people, mature students, and new Canadians. To increase the participation of these groups in PSE, financial barriers must be overcome and adequate spaces in post-secondary programs made available. RPL and credit transfer can allow Canadians to move through the PSE system and between the PSE system and labour market as their life circumstances and skills needs evolve over their lifetime.

CHAPTER 6

Critical Issues: Policies, Laws, and Regulations and PSE Quality Assurance

Chapter Summary

- While legislation has been a major driver behind the adoption of quality assurance in the post-secondary sector, many PSE institutions are also actively embracing quality assurance as a way to demonstrate their quality and continuously improve.

- A lack of national quality assurance standards presents challenges for student mobility and transferability.

- As PSE becomes increasingly globalized, quality assurance practices are an important means of confirming the value of credentials awarded through Canadian PSE institutions.

Related to the importance of positive PSE experiences is the importance of ensuring that PSE systems and institutions are providing high-quality post-secondary education. Policies, laws, and regulations are increasingly shaping how PSE quality is measured and reported. This chapter examines the issue of assuring high-quality PSE programming, management, and outcomes.

How PLRs Assure High-Quality Programming, Management, and Outcomes

As stated in Chapter 3, an optimal PLR system would assure high-quality programming, management, and outcomes of PSE for all stakeholders, including students, funders, and employers.

Background

Quality assurance refers to the "*monitoring, evaluation or review of higher education in order to establish stakeholder confidence that it fulfils expectations or meets minimum requirements*."[1] Quality assurance practices can involve accreditation, assessment, and audit:

- Accreditation evaluates whether a post-secondary institution meets a minimum standard and qualifies for a certain status (i.e., a degree granting institution).
- Assessment grades post-secondary institutions or programs based on quality, as opposed to the binary method used in accreditation.
- A quality audit gauges whether a post-secondary institution or program is achieving its objectives.[2]

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1   Skolnik, "Quality Assurance in Higher Education as a Political Process," 5. A future SPSE report will provide an in-depth examination of quality assurance and key performance indicators in post-secondary education.

2   Kis, *Quality Assurance in Tertiary Education,* 5–6.

Interest in quality measurement in PSE has developed due to increases in enrolment in PSE and a general trend in favour of greater accountability and transparency in public institutions.[3] Quality assurance allows governments to justify and validate their spending on PSE and ensure PSE institutions and programs are meeting policy priorities.[4] Quality assurance can provide students, their families, and the public with reliable information about whether PSE programs meet generally accepted educational standards. Quality assurance also confirms the value of credentials awarded through PSE institutions.[5] Individual post-secondary institutions can use feedback from quality assurance practices to improve their current academic programs, and in the development of new academic programs. Post-secondary education institutions can also use the results of quality assurance practices to illustrate the quality of their programs and market them to the public.[6]

Quality assurance can be used to gauge the quality of programs offered by different post-secondary institutions to ensure that they meet common standards and that the credentials they offer will be accepted by employers and other educational institutions.[7] The growth in private post-secondary education institutions, including new types of cross-border online educational providers, has also been a driver behind the development of quality assurance systems, to ensure that the training and credentials students receive from these programs are of value. As PSE becomes increasingly globalized, quality assurance practices confirm the value of credentials awarded through Canadian PSE

3   Finnie and Usher, *Measuring the Quality of Post-Secondary Education,* 5.

4   CCL, *Up to Par,* 15–16; Finnie and Usher, *Measuring the Quality of Post-Secondary Education,* 5*.*

5   Government of British Columbia, *Quality Assurance Framework British Columbia*, 6.

6   CCL, *Up to Par*; Usher and Marcucci, "Survey of Graduate Tracking Systems Around the World."

7   Interview findings; Charbonneau, "Quality Assurance."

institutions, thereby enhancing the international mobility of Canadian graduates and helping Canadian PSE institutions to attract international students.[8]

Attempts to assess the quality of PSE have at times been met with hostility from post-secondary institutions and other critics.[9] Quality assurance practices have been criticized for being overly burdensome for post-secondary institutions and for undermining their institutional autonomy.[10] Critics argue the performance indicators used to measure quality in PSE are often too simplistic to take into account factors, such as location, the skill levels of students when entering the institution, and an institution's mandate and types of courses offered, that impact institutional performance. These factors shape how institutions score on indicators such as graduate labour market outcomes, student debt, and learning outcomes.[11]

Approaches Used

Unlike many other OECD countries, Canada has no national body responsible for accreditation and quality assurance. In 2007, the Council of Ministers of Education, Canada released a report that recognized the value of quality assurance practices—*Ministerial Statement on Quality Assurance of Degree Education in Canada.* However, CMEC has also recognized the difficulty of implementing a pan-Canadian quality assurance process for PSE, stating that "*each province and territory has its own system of postsecondary institutions and its own approaches to quality assurance. However, a lack of national or common standards presents a challenge for student mobility and transferability within Canada and for understanding of Canadian education and institutions internationally.*"[12]

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8   CCL, *Up to Par,* 13; interview findings. Issues specifically related to the recruitment of international students will be addressed in greater depth in future SPSE reports.

9   Finnie and Usher, *Measuring the Quality of Post-Secondary Education,* 1.

10   Interview findings; Charbonneau, "Quality Assurance."

11   Finnie and Usher, *Measuring the Quality of Post-Secondary Education.*

12   Council of Ministers of Education, Canada, *Quality Assurance.*

Quality assurance practices for post-secondary education vary across Canada. Currently, seven provinces have established quality assurance practices for post-secondary institutions (B.C., Alberta, Ontario, Quebec, Nova Scotia, New Brunswick, and Prince Edward Island).[13] In some of these provinces (B.C., Alberta, Saskatchewan), quality assurance activities have been mandated by provincial legislation. In Ontario, most aspects of quality assurance for PSE are not legislated, mainly because institutions have established comprehensive and transparent quality assurance practices.[14] In this respect, Ontario's quality assurance practices are highly advanced. (See box "Ontario's System of Quality Assurance for Universities and Colleges.")

In many cases, a key aspect of provincial quality assurance practices is the review and approval of all new degree programs (e.g., B.C., Alberta, and Ontario). In some provinces, reviews are also conducted of existing programs, and even of broad aspects of post-secondary institutions such as student services.[15] However, in other jurisdictions, such as B.C., public universities (and the private institution Trinity Western University) do not need to conduct reviews of existing degree programs once they are approved. Many post-secondary institutions also have their own quality assurance practices that they use to assess the quality of their programs and whether their institutional objectives are met.[16] These institutional quality assurance practices may be required by a province-wide body, but in many cases institutions have some flexibility in determining how they implement quality assurance. Many professional programs (including law, nursing, medicine, engineering) are also subject to external accreditation.[17]

13 AUCC, *Overview of Provincial*.

14 Interview findings.

15 Interview findings.

16 See Association of Universities and Colleges of Canada, "Policies by University."

17 Charbonneau, "Quality Assurance."

Ontario's System of Quality Assurance for Universities and Colleges

Ontario has two quality assurance processes in place—one for universities and one for colleges. Universities in Ontario have been involved in quality assurance activities since the 1960s, with their quality assurance activities steadily expanding over time. The Ontario Universities Council on Quality Assurance (Quality Council) was created in 2010 and is responsible for the implementation of the Quality Assurance Framework. Unlike many other provinces, the Quality Council has been set up by the executive heads of Ontario universities, rather than the provincial government.

Under the Quality Assurance Framework, all new undergraduate and graduate program proposals are subject to an arm's-length external review prior to approval. Existing undergraduate and graduate programs at public universities are required to undergo a quality assurance audit, which involves an arm's-length external review, at least once every eight years.[18] Arm's-length program reviews are conducted by senior faculty members with experience in program design.[19] Each publicly funded university is responsible for developing and implementing a quality assurance process that is consistent with its mission statement and program expectations. This process is reviewed by the Quality Council.[20]

Quality assurance practices for Ontario universities are based on a learning outcomes approach, which requires all programs to establish learning outcomes for students.[21] Quality assurance practices for universities in Ontario examine indicators such as admission requirements, program structures, program content, the ability of the program delivery mode to meet intended learning outcomes, the assessment of teaching, and learning outcomes, and the assessment of resources available for a particular program (e.g., faculty, space,

18   CICIC, *Quality Assurance Practices for Postsecondary Institutions in Ontario*; Council of Ontario Universities, *A New Council to Oversee Program Quality Assurance.*

19   Interview findings.

20   Goff, "Quality Assurance Requirements in Ontario Universities," 99; Ontario Universities Council on Quality Assurance, *Welcome to the Quality Council.*

21   Interview findings.

lab access). For graduate programs there is also an emphasis on the research productivity of faculty and the research environment.[22]

Since 2010, the Quality Council has worked to streamline its quality assurance practices, to minimize the burden of quality assurance processes for institutions and ensure that institutions can use the feedback from quality assurance to change and innovate as quickly as possible.[23] Universities in Ontario generally view quality assurance positively. The system was designed by a task force that included university representatives, and the task force consulted widely with universities in its establishment. In some Ontario universities, quality assurance has gained a high profile, with some universities hiring senior administrators to focus on quality assurance. Some universities have also invested significant resources into state-of-the-art computer systems to manage their quality assurance activities.[24]

Public colleges in Ontario have similar quality assurance processes. In 2002, the Ontario government gave Ontario colleges the opportunity for autonomous and responsible program approval and development. In 2005, the Ontario College Quality Assurance Service (OCQAS) was established to ensure the quality and consistency of programs offered by Ontario colleges. The OCQAS is independent of both educational institutions and government.[25]

The OCQAS provides a credential validation service that reviews college programs to ensure that credentials awarded are consistent with accepted standards.[26] Programs are evaluated on a number of criteria, including learning outcomes for students. If a program fails its validation, the institution cannot advertise it, run it, or seek government funding for that program.

The OCQAS also has a quality audit process that looks at institutional-level quality—audits are conducted on a five-year cyclical basis. Similar to the process for Ontario universities, an institutional audit evaluates an institution's quality assurance process against six standards. A college produces a self-study report and a small team of academic auditors audits the self-study

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22 Interview findings.
23 Interview findings.
24 Interview findings.
25 Ontario College Quality Assurance Service, *About Us.*
26 Ontario College Quality Assurance Service, *Services.*

report and visits the institution. Unlike program reviews, institutional reviews are voluntary—however, all Ontario colleges have chosen to participate in the process. The results of institutional reviews are posted publicly.[27] Beginning in 2015, the OCQAS will also offer an accreditation process for post-secondary institutions. The accreditation process will be similar to the institutional audit process, but more rigorous. Participation in the accreditation process will be voluntary. The accreditation process is intended to help Ontario colleges market their programs internationally and develop joint programming with institutions in other jurisdictions.[28]

Assessment

Many provinces and PSE institutions across Canada have developed quality assurance processes to evaluate their programs and facilitate continuous improvement. In many provinces, legislation requires post-secondary institutions to undertake certain quality assurance activities, particularly when it comes to program approval. While post-secondary institutions and their staff may at times resist quality assurance practices due to the significant resources they require, quality assurance processes for post-secondary institutions have gained the support of a wide range of stakeholders in both government and post-secondary institutions.

The indicators used to assess the quality of post-secondary programs and institutions vary, but will often include available resources, faculty expertise, mode of program delivery, and credential recognition. Many institutions and provinces are incorporating learning outcomes into their quality assurance processes. In general, quality assurance indicators used to assess PSE in Canada do not measure labour market outcomes. This is due in part to the wide variety of programs and differences in their intended outcomes (e.g., an apprenticeship, dance degree, business degree). In many provinces, program reviews are conducted

27 Interview findings.
28 Interview findings.

by arm's-length reviewers with subject matter expertise. This ensures reviewers have an understanding of the program's subject matter and specific challenges; however, it may also blunt potential criticisms, especially if the reviewers are slated to examine each other's programs.

Post-secondary institutions have often embraced quality assurance practices as a way to continuously improve and to ensure that the quality of their programs is widely recognized. However, some institutions may not be effectively maximizing the benefits that quality assurance practices offer; others may produce lengthy documents to comply with legislation without understanding the substantive value of the practice.[29]

Lessons Learned

While legislation has been a major driver behind the adoption of quality assurance in the post-secondary sector, many PSE institutions are also actively embracing quality assurance as a way to demonstrate their quality and continuously improve. In many cases, institutions have been extensively consulted on the development of quality assurance indicators, and quality assurance agencies generally include representatives with extensive experience working in post-secondary institutions. Programs are also reviewed by subject area experts. These practices have helped to create greater buy-in for quality assurance in post-secondary institutions. A consultative approach to quality assurance between institutions and quality assurance organizations can help to ensure that institutions gain substantive insight into how to improve, rather than adopting a check-box mentality to the process. It also ensures that institutions continue to support the quality assurance.

It is important that the primary focus of quality assurance continues to be the value and quality of PSE for students. Quality assurance agencies ought to continue to develop processes to assess the student experience, including the quality and value of individual programs, as well as the operations of the broader institution (e.g., student services).

29   Interview findings.

Learning outcomes, which have been adopted as a key aspect of the quality assurance process in several provinces, should remain a key part of quality assurance.

Quality assurance can assist other institutions and students in assessing the quality of an institution and its program. As Canadian students become more mobile, and if Canadian institutions are to attract more international students, the lack of common national quality assurance standards poses a challenge, as does the lack of an accreditation body for post-secondary institutions. While the provincial/territorial nature of post-secondary education means that a centralized national quality assurance system is not a realistic goal, post-secondary institutions and quality assurance agencies should work to establish common benchmarks and guidelines. In this area, CMEC has already established a framework of standards for degree qualifications that lays out expected general learning outcomes and standards for quality assurance reviews.[30] Quality assurance agencies and post-secondary institutions should also ensure the exchange of best practices and lessons learned for quality assurance.

Conclusion

The increasing emphasis on quality assurance and learning outcomes in PSE in Canada is a net positive development, as it helps to facilitate movement among post-secondary institutions and ensure that students are receiving optimal benefits from their educational choices.

30 Council of Ministers of Education, Canada, *Ministerial Statement on Quality Assurance.*

CHAPTER 7

Reforming Policies, Laws, and Regulations: Strategies for Success

Chapter Summary

- Strategy directions are offered to provide PSE decision-makers in governments, PSE, and stakeholders with ideas for action on how to achieve PSE objectives for learning, skills development, and other valued outcomes.

- Strategies for PLR reform are based on assessments and lessons learned in the analyses of the regional models of PSE and of the critical issues related to PLRs.

- The findings and areas for action presented will be used in the creation of a Skills and Post-Secondary Education Strategy for Canada.

This report has explored the PLRs that affect and define Canada's skills and PSE systems and define their governance and guide their operations. This chapter provides suggestions for developing strategies to improve PLRs as they support skills and PSE system objectives. They will be used in preparing the Skills and Post-Secondary Education Strategy for Canada that is being developed through the Centre for Skills and Post-Secondary Education. The guidance provided is based on assessments and lessons learned in the analyses of the regional models of PSE and of the critical issues related to PLRs.

Key Findings and Areas for Action

Several potential areas for action for improving and enhancing the performance and potential of PSE systems in Canada are offered below. These ideas for action provide PSE decision-makers in governments, education institutions, associations, and other stakeholder organizations with a broad-level view of how to achieve PSE objectives as they relate to learning, skills development, and other valued outcomes. The strategies are also geared to assist PSE institutions to overcome their key challenges.

Promoting the Benefits of PSE

Provincial and territorial governments could identify and clearly articulate the specific benefits of PSE participation in their respective regions. The various orders of institutions and/or programming could make it a priority to clearly communicate the long-term financial, societal, and personal benefits of PSE, as well as the purposes and goals behind their offerings, to prospective students, parents, employers, governments, and

other education stakeholders. Those responsible for student counselling could also provide information on the benefits and potential pathways to further education and/or employment, if not already identified and shared.

Maximizing the Development of Skills and Knowledge

PLRs for all PSE systems could be designed to maximize the systems' abilities to develop both hard and soft skills (i.e., technical and employability skills) as well as building knowledge in meaningful ways. When creating or revising PLRs, government and institutional policy-makers could make a point of explicitly considering both the learning goals of the PSE activities under their mandate and the journeys that students take in order to reach their learning goals. Students' PSE experiences, as well as the knowledge and skills they gain through PSE study, influence and shape how they move forward post-graduation.

Supporting Ongoing Research to Determine Skills Outputs

New, ongoing research on the actual skills outputs of PSE systems is called for to determine the skills and knowledge of graduates. This information is key to understanding how well graduates are meeting the needs of the labour market, an important PSE role. The results could then be linked back to the PLRs of PSE in a type of 360-degree feedback loop. The effectiveness of related PLRs could be evaluated and used to influence the development of new PLRs and/or adjustments to existing PLRs, if called for.

Providing Advice for Post-Secondary Education-Business Partnerships

Information and advice on designing, developing, and maintaining post-secondary education-business partnerships could be created and widely disseminated through PSE systems. Partnerships are being widely leveraged and will continue to play an important role in providing funding,

expertise, shared services, and other resources to research and other learning initiatives. New guidelines, tools, and practical information that focus on the development of education-business partnerships at the post-secondary level would help to fill a resource gap and would greatly benefit all partnership stakeholders.

Valuing Research

To ensure that research from different disciplines is valued fairly, innovative measures could be identified and used in determining that value. Not all research results, outcomes, and impacts can be measured in tangible or applied ways. Research with longer time frames or great potential for future impacts, for example, should not be left out of funding formulas or performance measurement processes. Multiple options for valuing research could be identified and made available to institutions and researchers seeking funding and support.

Reducing Financial Barriers to PSE Access

Further efforts to reduce or remove the financial barriers to PSE access could be made. Despite considerable efforts to date, low-income households remain especially hindered from accessing PSE in Canada. PLRs that govern funding programs for students from low-income households could be expanded or amended to allow for a wider variety of needs. In addition, the long-term financial benefits of PSE, as well as information about financial aid programs, could be more widely disseminated to raise awareness of them among potential users, including secondary school students and adult learners.

Leveraging Infrastructure to Maximize PSE Access

The PSE system could leverage existing infrastructure to maximize the spaces available to learners. PLRs that control credit transfer, collaborations, and the use of learning technologies can aid in ensuring that qualified and engaged students have the opportunity to access their preferred programming areas. Improved access would be the result of increased institutional collaborations and agreements to leverage their

collective capacity (e.g., comprehensive credit transfer agreements, offering more university courses through regional colleges, and sharing technologies or services). Once again, information about access initiatives and new learning opportunities for students (e.g., distance learning options) could be widely communicated to potential users.

Recognizing Prior Learning in PSE Systems

Provincial and territorial governments and PSE institutions could adopt and integrate policies to recognize prior learning into their existing systems. Investments in human and financial resources, as well as monitoring and quality assurance practices, would also be needed to support such policies. Improved use of RPLs would increase accessibility to PSE for potential students and will ultimately help address skills gaps and labour shortages.

Building a Comprehensive Pan-Canadian Credit Transfer System

To facilitate student mobility, provincial and territorial governments, institutions, credit transfer organizations, and other PSE stakeholders could set up a fluid pan-Canadian credit transfer system. Efforts to build this should cross jurisdictions and orders of institution. A fluid system will be flexible enough to accommodate a variety of pathways to meet student and labour market needs. While some work is already under way, there is more to do, especially in terms of improving understanding and transparency between institutions. To ensure that the resulting system is used and understood, information on how the system works and how students can access it (e.g., web portals) could be widely disseminated to potential users.

Developing PSE Quality Assurance Benchmarks and Guidelines

Provincial and territorial governments, PSE institutions, and relevant agencies could continue to work toward the establishment of coordinating benchmarks and guidelines for PSE quality assurance.

CMEC's standards around degree qualifications are a positive step in this regard. The creation of a common set of benchmarks and guidelines for PSE in Canada would help students make more informed learning pathway choices and will help institutions build their reputations. Quality assurance initiatives could continue to focus on the quality and value of programming and its outcomes as well as other institutional operations that benefit students. A consultative approach to establishing benchmarks would benefit from the expertise and insights of the various stakeholder groups. Identifying and sharing best practices and lessons learned from existing quality assurance practices would aid in the development of a common set of guidelines.

APPENDIX A

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