

Untapped Potential

Opening doors to opportunity
through scholarships

Technical Appendix &
Research Methodology

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Technical Appendix

The following appendix unpacks some of the underlying context and issues that inform the ecosystem of scholarships, bursaries, and awards in greater detail.

Canada is a global leader in postsecondary education

Canada has the most educated workforce of any G7 country.¹ Young Canadians have especially high rates of postsecondary education: almost two-thirds of all 25- to 34-year-olds have a college or university credential.²

In the past, different postsecondary institutions served different purposes, but these roles have evolved and increasingly overlap. Universities are autonomous institutions with a three-part core mission of teaching, research, and service to community whereas colleges offer a variety of credentials and programming that reflect short and long-term labour market needs.

The programs that postsecondary institutions offer are also shifting, for example, through the evolving landscape of micro-credentials designed to deliver “flexible, short and timely training” that will support learners to connect to or advance in their jobs. Such programs may be accessed by youth and others who do or do not have a traditional postsecondary credential.³

In all, Canada has become a global leader in postsecondary education. There are three key reasons driving this high level of education. First, Canada admits many immigrants who are highly educated, which boosts the overall numbers for postsecondary attainment.⁴ Second, Canada has a larger college sector than many countries do, which enables many Canadians to attend college.⁵

Third, there has been a significant increase in young Canadians entering postsecondary in the past two decades. In 2020-2021, there were about 2.2 million students enrolled in postsecondary education in Canada.⁶ In the past 20 years, this number grew by over 50% from 1.4 million in 2000-2001.⁷ While the vast majority of students in Canada are domestic students and/or those with an immigration status that sees them treated as domestic students, the rate of international students attending Canadian institutions has grown rapidly along with fees charged to international students.¹ The international student population has grown by 500% in the past two decades, while the domestic student population has only grown by 34% during that same time.⁸

¹ For a more extensive discussion of international students and the challenges and opportunities facing them in Canada, see: Richardson & Hussain, 2022.

Key Facts About Enrolment

- About two-thirds of students are enrolled in universities and one-third in colleges.⁹
- Almost half of students are enrolled in Ontario (42%), a quarter in Quebec (25%), 13% in British Columbia and 9% in Alberta, which roughly reflects the populations of each province.¹⁰
- More women are enrolled than men, with 56% of students being women and 43% being men.¹¹
- About 4 out of 5 students are domestic students and about 1 out of 5 are international students.¹²
- About 4 out of 5 students are enrolled full-time and about 1 out of 5 are part-time.¹³

Unpacking Barriers

There are a range of barriers that can create challenges for students to access, stay in and graduate from postsecondary. The following barriers are listed in summary form in the full report and unpacked further below.

The cost of living and attending postsecondary is high

Funding for postsecondary is increasingly reliant on student contributions. Over time, as Canadian systems of postsecondary education have expanded, costs have been increasingly born privately by students and families, with a proportionate decline in public funding.¹⁴ Over a 10-year period in Canada, tuition and other fees grew from 20.3% of institutional revenues in 2009-10 to 31.6% in 2019-20.¹⁵ Although this has been accompanied by increases in government student financial aid, and is also a result of the growing international student population and international student fees, the simple idea of going into debt to finance education can influence student choices in attending postsecondary.¹⁶ Stakeholders interviewed noted that the prospect of debt should not be ignored, as this can have a long-term and serious impact on a student's work life after graduating.

The cost of postsecondary education is also more significant for some groups than others: tuition fees represent higher household income for racialized groups than others given that in 2016, average income levels were \$36,955 for racialized individuals compared to \$50,225 for non-racialized individuals.¹⁷ Therefore, racialized youth pay tuition fees that typically represent a higher percentage of their average household incomes compared to those of non-racialized individuals.¹⁸ This is one of the many ways that barriers can intersect. Though financial aid plays a role in offsetting costs for students with higher need, the affect alone of the “sticker price” on student decision making regarding postsecondary attendance can be significant.

In addition to tuition fees, there are other major expenses that postsecondary students must pay for including housing, transportation, course materials, computers, internet service, as well as childcare for students who are parents. These costs can make it challenging for some students to continue with postsecondary education.¹⁹

The area where a student resides can also factor into whether a student is likely to participate in postsecondary education, with those living in more remote locations less likely to attend, as costs increase significantly when one cannot commute to school.²⁰ For example, students living in areas beyond commuting distance from a college are

37% less likely to attend college compared to those that can commute more easily, a trend that is more true for students from lower-income families.

Experiences in k-12 that may not be within student control can impact student performance

Student experiences in K-12 education very much shape their direction after graduating high school. Performance while in secondary school is an important factor in pursuing postsecondary education, as high school serves as the gateway to postsecondary education for most students. However, factors outside of student's innate abilities and talents can influence performance. For example, family income has been found to impact achievement as early as in grade three.²¹ Performance can include participation in extra-curriculars, but this programming is not available to all students. Indigenous and rural students may not have access to traditionally valued extracurricular activities by virtue of attending under-resourced schools, which can also create roadblocks when it comes to applying for scholarships, bursaries, and awards.²²

Experiences in K-12 can include disciplinary actions and streaming practices that place students in academic or applied courses based on perceived skills. Racialized and Indigenous students are disproportionately impacted by disciplinary action and streaming, which creates roadblocks for them to move forward into postsecondary.²³

However, the non-financial barriers to attending, staying in and graduating from postsecondary can play a more influential role in student outcomes and are often less acknowledged. These non-financial barriers are influenced by the degree to which students have access to social capital such as social connections and relationships, and to cultural capital such as knowledge and skills on how to navigate the system, as well as systemic barriers such as discrimination and lack of access to supports.²⁴ Understanding these barriers is key to understanding what kinds of support students need to connect better to the arc of opportunity: financial or non-financial.

Student responsibilities at home can impact student high school grades and their ability to attend postsecondary

Postsecondary systems are largely designed around younger students who most often transition directly from high school and who have no dependents.²⁵ Students who have additional responsibilities at home to care for others or contribute to the family income base, can experience additional obstacles. Mature students and students who are parents are more likely to face challenges in accessing and completing postsecondary education due to other responsibilities.²⁶ Student parents have reported increased stress, perceptions of exclusion, needs for flexible scheduling, and increased time and financial pressures of needing to provide for other family members.²⁷ These factors can lead to challenges that make it difficult to access and persist in postsecondary. For example, the time constraints of parenthood that make part-time postsecondary a more realistic option means exclusion from a range of financial supports that require full-time status.²⁸ This is also true of students who need to attend part-time in order to be able to work part-time. Students who need to take part in care responsibilities or work during high school will

have less time to devote to studying or participating in extra-curriculars, and to exploring opportunities to finance their education, such as scholarships and awards.

Navigating postsecondary is a complex task for young people

Learning about and applying to postsecondary institutions and supports such as scholarships, bursaries and awards is a complex task. The landscape of postsecondary options is difficult for most people to understand without supports, and this is especially true of young people who are often just learning how to navigate systems independently. Information about programs, costs and future prospects can help students make decisions to access postsecondary education.²⁹ However, this information is not often easily available. This was illustrated in part through our automated scholarships review– many records were out of date or incomplete, with inconsistent requirements and varying terms, and at times little to no information on the value or length of an award.

Given the complexity of navigating postsecondary systems and the added systemic barriers that some students already face, having parental support on how to navigate the system can be influential.³⁰ Thus, those whose parents did not attend postsecondary are at a disadvantage as they will have less access to this advice at home. They require support with navigation from outside of the home, and the same factors exist in navigating the scholarship ecosystem as well. The majority of young people we spoke to cited a caring adult (parent, social worker, guidance counselor, neighbour) as playing a key role in helping them find and apply for the scholarship they received.

K-12 guidance counsellors play a critical role in helping to provide youth with information and services to plan for postsecondary education. However, guidance counsellors are not always available for such services and often stretched thin. For example, about 16% of secondary schools in Ontario lack a full-time guidance counsellor.³¹ While similar data is not available for all provinces, experts indicate there are not enough counsellors across Canada.³²

Diverse students and their cultural traditions and expectations are not always included in postsecondary institutions

Historically, postsecondary institutions were designed around the needs of white male students, who were the primary attendees for decades,³³ and this can still make access and persistence more difficult for students who do not fall into these categories such as Indigenous, Black, and racialized students. Much work has been done to ensure that postsecondary institutions are welcoming and inclusive spaces for diverse students, but much work is also left to be done in this area. For example, “systemic barriers (e.g. policies, programming and curricula that do not authentically and respectfully include Indigenous peoples – their histories, knowledge, teachings) are presented early and sustained in learning institutions causing long-term challenges.” Although this refers to the specific experiences of Indigenous students, similar sentiments can be extended to other groups of non-white and non-male students.³⁴

In addition, students may have cultural traditions and expectations that differ from the dominant culture that are not always given space to flourish, are not accommodated, or even understood by postsecondary institutions. Grieving processes for the passing of immediate and extended family members may require significant absences from postsecondary education in specific cultures, such as among Indigenous peoples. If institutions lack policies to

accommodate such absences, it can lead to students dropping out. Indigenous and racialized students are also more likely to face bereavement due to health inequities.³⁵

Indigenous students and Truth and Reconciliation

Students may have current traumatic experiences or have a familial or cultural connection to traumatic experiences in Canadian formal education systems. Indigenous communities are particularly impacted through the history of residential schools in Canada, where schooling was connected to abuse, illness, death and what the Truth and Reconciliation Commission of Canada found to be cultural genocide, amongst other traumas. According to the Truth and Reconciliation Commission, “It is significant that the lowest levels of educational success are in those communities with the highest percentages of descendants of residential school survivors: First Nations People living on reserves, and Inuit... Lower educational attainment for the children of Survivors has severely limited their employment and earning potential, just as it did for their parents.”³⁶

Up until 1961, attaining a university education could lead to a forceable loss of status for Indigenous people, a mechanism of assimilation known as “enfranchisement”.³⁷ In Canada, this history and the findings of the Truth and Reconciliation Commission of Canada speak to the systemic nature of challenges which can present barriers on students’ path, long before they reach an age to attend postsecondary, and the degree to which education systems must still adjust and catch up to meet the needs of students and communities.

While working for change within mainstream postsecondary institutions, Indigenous communities over the last several decades have founded Indigenous governed and controlled postsecondary institutions which are “grounded in Indigenous languages, pedagogies, cultures, and worldviews.”³⁸ Such institutions serve approximately 10,000 students per year in Canada.

Challenges Remain for the School to Work Transition

Youth in Canada also face increasingly complex transitions from postsecondary education to the workforce. The increased complexities of the labour market are making the transition from postsecondary education to employment longer and more difficult to navigate.³⁹ Canadian youth are more likely to experience multiple transitions, be in the process of seeking work, be laid off first during recessions, and be hired last when growth occurs.⁴⁰ An estimated four out of 10 youth take more than three months to land a first job, and one out of 10 take longer than a year.⁴¹

Skills that students acquire in school are not always aligning to skills that are needed in the labour market. Many students have expressed they feel they are behind or unprepared for the job market when they graduate amid a constantly changing labour market.⁴² New postsecondary graduates, specifically university graduates, experience barriers in finding employment that aligns with their educational qualifications.⁴³ This can result in graduates being

“overqualified” and contribute to a skills mismatch problem. Overqualification generally leads to lower wages and lower productivity and prevents youth from getting valuable work experience to advance in their careers.

Youth may not always be prepared for work: There are mixed views on the preparedness of young people with postsecondary for the future of work. A 2017 survey reported that 66% of employers believed youth are not adequately prepared for the workforce.⁴⁴ In contrast, a 2016 survey of large private-sector employers found that two-thirds of employers believe new university, college, and polytechnic graduates are generally prepared to join the labour force.⁴⁵ However, observing rapidly changing labour markets and challenges in connecting postsecondary graduates to employers with skills demands, a movement has emerged focused on providing access to work integrated learning (WIL) for students. This has seen numerous governments and postsecondary institutions commit to making meaningful WIL experiences available to students.

Work-integrated learning

Work-integrated learning (WIL) is a “form of curricular experiential education” that integrates school with workplace or practice setting experience.⁴⁶ The models of WIL that are in use are not consistently implemented at all postsecondary institutions.⁴⁷ There are a range of ways that students may participate in experiential or applied learning, such as through teaching labs or part-time jobs. However, a consistent feature of WIL is that it is both embedded in the curriculum and involves a third party which provides an experiential learning environment such as an employer working in partnership with the institution and student. It can include a range of activities such as co-ops, entrepreneurship support to start a business, applied research and service learning. Organizations such as the Business Higher Education Roundtable (BHER) and Co-operative Education and Work Integrated Learning Canada (CEWIL) play roles in supporting WIL delivery and connecting postsecondary institutions with businesses and employers to enable students to attain work experience before graduating. RBC will also be funding WIL through co-op tuition and books at Nicola Valley Institute of Technology (an Indigenous postsecondary institution that is part of the public postsecondary system in BC), which will help support Indigenous students gain work experience.

While WIL has been found to be correlated with positive employment outcomes, there are some indications that students who face barriers in postsecondary education including women, racialized students, newcomers, LGBTQ students, those with disabilities and Indigenous students are less likely to participate.⁴⁸

Research Methodology

This report is the culmination of several streams of research. An extensive literature review was undertaken of topics surrounding access to postsecondary, the transition from postsecondary to the labour market and the current context of postsecondary education, including student financial aid. This included policy analysis and a scan of relevant policy solutions proposed in the literature. The aim was to understand the knowledge we do and do not have on scholarships, bursaries and awards in Canada and the context around these financial supports. In addition, an extensive stakeholder engagement process took place which involved more than 40 interviews with: young people who recently received scholarships and were either currently studying or recently graduated, scholarship providers, representative bodies of students and postsecondary institutions, and postsecondary systems experts. In addition, there were two roundtables held: one with scholarship providers from across Canada and one with K-12 counsellors. The authors also benefitted from attending the National Scholarship Providers Association conference (a U.S.-based organization in which Canadian scholarship providers lead and participate) and learning in-depth of challenges and opportunities facing scholarship providers today.

Quantitative data on scholarships was gathered in two ways. First, an automated data mining process (referred to in the report as the automated scholarships review) took place which collected information on scholarships from various websites. Second, a manual data collection process took place which collected information on scholarships from postsecondary institutions (referred to as the manual scholarships review in this report). In both cases, the scholarships focused on were scholarships, bursaries and awards offered for domestic students pursuing undergraduate studies within the past two years. Initially, the authors sought to provide a landscape view of the range and value of scholarships, bursaries, and awards. However, due to limitations of the data (itself an important point for further discussion amongst providers), the quantitative analysis instead illustrates what the menu of scholarships looks like to a student, as opposed to the full landscape and cumulative value of scholarships available or distributed. One can think of this as a specific student-based perspective of the landscape. For example, while we know that a postsecondary institution distributes an entrance award of \$1,000, we cannot know how many thousands of students have received this award.

Our approach for collecting available information about postsecondary scholarships began by finding websites that act as large-scale clearinghouses and contain indexes of available scholarships in Canada. Our objective was to collect as much information as possible from these sites using automated web scrapers to take a large-scale snapshot of publicly available scholarship information. As the content of each website differs, we developed custom scrapers tailored to each. Our scrapers retrieved a total of 47,130 unique postsecondary scholarship records that are available for domestic students. This snapshot was obtained in July 2022. Each extracted record contained a set of parameters (as structured information) used by websites to represent the main characteristics of a scholarship, as well as their in-depth descriptions in the form of free text (unstructured human input).

We cleaned and normalized the extracted information and proceeded to complete data gaps and augment the dataset. This was achieved by using the structured information in each record to infer other relevant information, and by data-mining the text of scholarship descriptions to extract new data points. The resulting data set was then analyzed by our team to answer questions and find key insights for the project.

To complement our initial data collection, we performed a second data pull, where instead of looking at scholarship clearinghouse-style websites, we looked at Canadian universities directly. Due to the vast amount of scholarship information found in institutional websites, we scoped down to the 35 largest fund providers, that encompass more than 90% of available scholarship funds. All of these happened to be universities. To make the extraction feasible, we focused on scholarships available to undergraduate domestic students that were open to all students (not faculty specific). A group of 10 team members investigated these sites in the span of 2 weeks during December 2022 and manually collected a snapshot of 3,044 unique records that contain the key parameters for the interest of this project.

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