

Investing in a better future: higher education and post-COVID Canada

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Abstract

Post-secondary education (PSE) is a vital part of civil society and any modern economy. When broadly accessible, it can enable socioeconomic mobility, improve health outcomes, advance social cohesion, and support a highly skilled workforce. It yields public benefits not only in improved well-being and economic prosperity, but also in reduced costs in health care and social services. Canada also relies heavily on the PSE sector for research. During the COVID-19 pandemic, PSE has supported research related to the pandemic response and other critical areas, including providing expert advice to support public health and government decision-making, while maintaining educational programs and continuing to contribute to local and regional economies. But the pandemic effort has stretched already strained PSE resources and people even further: for decades, declining public investment has driven increases in tuition and decreases in faculty complement, undermining Canada's research capacity and increasing student debt as well as destabilizing the sector through a growing reliance on volatile international education markets. Given the challenges before us, including climate change, reconciliation, and the pandemic, it is imperative that we better draw on the full range of experience, knowledge, and creativity in Canada and beyond through an inclusive, stable, and globally engaged PSE. Supporting PSE's recovery will be key to Canada's ongoing pandemic response and recovery. The recommendations in this report are guided by a single goal—to make the post-secondary sector a more effective partner and support in building a more equitable, sustainable, and evidence-driven future for Canada, through and beyond the COVID-19 pandemic.

Key words: higher education, research, equity, diversity, inclusion, internationalization, public policy

Executive Summary

Post-secondary education (PSE) is a vital part of civil society and any modern economy. When broadly accessible, it can enable socioeconomic mobility, improve health outcomes, advance social cohesion, and support a highly skilled workforce. It yields public benefits not only in improved well-being and economic prosperity, but also in reduced costs in health care and social services. Canada also relies heavily on the PSE sector for research.

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During the COVID-19 pandemic, despite all of the disruptions the pandemic has caused, PSE has maintained educational programs, contributed research to the pandemic response and other critical areas, and provided experts for myriad science tables, task forces, and committees key to public health and government decision-making. While we applaud the hard work and commitment of faculty, staff, and students, we must also recognize that the pandemic effort has stretched already strained PSE resources and people even further. The cost of this cannot be ignored. It is critical to support PSE's recovery so that it can continue to support Canada's pandemic recovery, maintain Canada's global position in research and international education, and continue to advance national interests in vital areas such as climate change, reconciliation, and information literacy.

Positive measures in colleges and universities have, in recent years, been the result of the federal government's renewed commitment to research: from *Canada's Fundamental Science Review* (FSR), to increased grant funding, to the new Dimensions program (Tri-Agency Dimensions Program in support of EDI), the research ecosystem has benefitted from evidence-based steps towards advancing inclusive excellence in Canadian scholarship. But, for about two decades, the urgent concern in the sector has been declining public funding for colleges and universities: a shrinking proportion of faculty are in full-time continuing positions with adequate support for teaching and research; institutional autonomy, and the academic integrity it is supposed to reinforce, has become more vulnerable to the vagaries of political and donor interests; many universities and colleges have become reliant on a volatile international education market to partially fill funding gaps; and too many students are burdened, even excluded, by the high cost of tuition, and lack the academic, technological, and mental-health supports they need to excel. The pandemic has not created cracks in the PSE sector—it has highlighted and even worsened cracks that were already there.

This document is organized into sections that reflect on these pressures in the PSE sector. Of general concern throughout this report is the ways in which sector-wide and government commitments to equity, inclusion, and reconciliation are persistently undermined by declining public funding and its effects. Inadequate public investment is hampering the ability of the post-secondary sector to support Canada's economic, policy, and social aspirations.

The COVID-19 pandemic threatens to further erode sector-wide capacity for research excellence and accessible education, and therefore the many public benefits that flow from the PSE sector and at a time when they are urgently needed to support our collective recovery. The recommendations in this report are guided by a single goal—to make the post-secondary sector a more effective partner and support in building a more equitable, sustainable, and evidence-driven future for Canada, through and beyond the COVID-19 pandemic.

Our recommendations rest on the following fundamental principles:

1. **Purpose.** Higher education provides the means by which we can collectively flourish: it protects and advances knowledge through research, creation, and policy support; it nurtures students' development of their interests, their skills and expertise, and their capacity to contribute to, and reflect on, civil society; it improves social inclusion and health outcomes, among other benefits; and it enhances connections between Canada and the world.
2. **Expert Review.** The PSE sector relies on regular expert oversight through arm's length peer review and assessment, especially of research and academic programs, as well as academic oversight within institutions to ensure the integrity and quality of academic programs, meaningful inclusion, and the ethical conduct of research.
3. **Freedom of Enquiry.** Academic freedom is crucial to the full exercise of every scholar's capacity to inquire, explore, and assess, including in contributions to peer review and oversight of academic activities, from scholarly societies to post-secondary institutions to governments. It is

coupled with a responsibility to be rigorous and participate in collegial debate. Vigorous debate is as vital to higher education and research as it is to democratic institutions.

4. **Institutional Independence.** Institutional autonomy is key to upholding the institutional diversity of the sector and enabling the breadth of education and research possible in Canada and to protecting institutions from narrow and short-term interests. Institutional autonomy must be founded upon and animated by academic freedom and collegial governance which together ensure robust academic performance and expert oversight within institutions.
5. **Shared Responsibilities.** Every institution relies on the larger system in myriad ways, including drawing peer reviewers from other institutions, collaborating in cross-institutional research partnerships, and in shepherding students from undergraduate to graduate degrees. Scarce resources can drive competition, but every institution shares a responsibility to contribute to, and benefit from, the success and quality of the sector as a whole.
6. **Transformation.** Academic programs are continually revised to be consistent with the current state of knowledge and reviewed to support that renewal. Currency in this century requires frank acknowledgment of a history of structural and cultural biases and inequities in our society and in the PSE sector. Reconciliation, intergenerational equity, diversity, social justice, and collaborative internationalization are key to the currency of PSE programs and the sector's responsibility to maintain, and model, high standards of respect, fairness, and awareness.

Recommendations

1. We recommend that, as an immediate first step, the provincial and federal governments work together in the coming months to increase core funding for universities and colleges, starting in the 2021–2022 academic year, to support (i) significant improvements in the ratio of continuing, full-time faculty to students and (ii) a tuition freeze or reduction. This increased core funding should be the foundation for long-term planning to stabilize core funding for the sector at a higher level to support adequate academic staffing and improve the accessibility of PSE.
2. We recommend that governments work together with PSE institutions and Indigenous communities to (i) establish and maintain pathways to post-secondary education for Indigenous Peoples; (ii) facilitate the establishment of programs of research that focus upon Indigenous Peoples, topics, and experiences in appropriate and ethical ways; and (iii) support the development of Indigenous-led research and scholarship through the recruitment of Indigenous students and scholars as well as through appropriate financial and institutional support.
3. We recommend that the federal government establish regular five-year reviews to evaluate progress on addressing the concerns of the FSR, the Dimensions initiative, and reconciliation in PSE. Reviews should be conducted by committees that include relevant faculty researchers from a variety of colleges and universities, and should have the authority to make recommendations. Their findings and recommendations should be made public.
4. We recommend that relevant federal departments (including Global Affairs Canada; Immigration, Refugees, and Citizenship Canada; and Innovation, Science, and Economic Development Canada), in collaboration with other levels of government, strike an expert panel to formulate a unified plan for supporting research programs and scholarships to advance a more sustainable, equitable, and collaborative environment for internationalizing PSE, including appropriate immigration policies to support connections between Canadian and international students and scholars.
5. We recommend that all PSE institutions commit, or recommit, to protecting and promoting the right to academic freedom of every member of their academic staff, regardless of category of employment, in the carrying out of their academic duties (teaching, research, collegial governance, community service) and in expressing their views on institutional policies and actions, and on matters of public interest or debate.

Recommendations specific to the COVID-19 pandemic

6. We recommend that the federal government ensure continuing emergency PSE funding for 2021–2023 to address the disruptions caused by the pandemic. This should include (i) core funding to offset any declines in tuition revenues and increased instructional costs, including ongoing additional support to help students overcome any disruption to their educations because of the pandemic; (ii) an emergency research fund to address the pandemic's disruption of research for early career researchers, including additional funding for graduate students and postdoctoral fellows as well as course-release stipends for non-tenured faculty; and (iii) additional mental health resources to support the well-being of faculty, staff, and students.
7. We recommend that the provincial governments collaborate on a framework for recognizing and accommodating the COVID-19 disruption to secondary education, and especially its intensification of pre-existing inequities, to ensure that current high-school students not only maintain access to PSE but also have the resources necessary to support their success through, and in the wake of, the pandemic. This should include additional educational resources to identify and address any gaps in students' education as well as evidence-based, equity-informed policies to accommodate pandemic effects on grades used for admission and scholarships.
8. We recommend that the federal government maintain the moratorium on Canada Student Loan repayments through to 31 December 2022 and consider significant loan forgiveness, and that any federal basic income guarantee initiative take into account the cost of tuition to current PSE students and tuition debt to past students.

Introduction

We believe Canada should aim to become the best-educated nation in the world with a reputation for generating startling discoveries across a range of scientific disciplines, breakthroughs in applied natural, health, and social sciences, and transformative insights from the humanities.—*Canada's Fundamental Science Review* (2017)

The COVID-19 pandemic has shone a light on the high cost of short-term thinking—of cutting budgets today rather than investing for a better tomorrow. This document is fundamentally a call for long-term planning through and for post-secondary education (PSE): to invest in the generation that will, over the next half century, be a pillar of Canada's civil society and workforce; to invest in the research that will advance knowledge as well as maintain cutting-edge education in PSE classrooms; to invest in the institutions that not only enable these public goods, but also make possible a wide range of secondary benefits, from contributions to regional economies and population well-being, to enhancing Canada's global connections.

Canada has a diverse PSE sector that reaches back centuries but was largely expanded and developed in the 1950s and 1960s when the federal government reflected on the choices before it, debated, and decided to invest in publicly funded PSE as perhaps the best avenue towards a “just society” and so social stability.¹ PSE has since trained generations of Canada's health care professionals, teachers, engineers, architects, civil servants, electricians, artists, politicians, business leaders, journalists, and so many more. There is evidence that, at least in the latter decades of the 20th century, PSE helped to reduce inequality in Canada, particularly for women (Lu et al. 2011), and there has been global interest in “widening participation” in PSE as a vehicle of social inclusion in the present century (see, e.g., Shah et al. 2015).

¹Pierre Trudeau was the face of this effort but see also Harold Cardinal (1969) on the “unjust” one.

In recent decades, the federal government has directly supported research through various programs, primarily the Tri-Agency (Social Sciences and Humanities Research Council of Canada, Natural Sciences and Engineering Research Council of Canada, and the Canadian Institutes of Health Research (under ISED)), and provided funding to provinces through the Canada Social Transfer to support PSE. Each province in turn directs public funding to individual institutions as well as oversees all levels of education as a provincial responsibility.² Some provinces have separate oversight bodies that gather data, evaluate new academic programs, and so on, such as the Higher Education Quality Council of Ontario and the Maritime Provinces Higher Education Commission. There are also various umbrella organizations that connect institutions and share best practices, including Universities Canada, Colleges and Institutes Canada, the Canadian Association of University Teachers (CAUT), and the Canadian Union of Public Employees, which represents part-time faculty and teaching assistants at a number of institutions. Scholarly associations and accreditation bodies also contribute to the work of sharing information between institutions within disciplinary categories.

Individually, universities are established and governed by legislation that sets out their purpose and key structures, such as the role of senates. Colleges are also defined in legislation, and are usually more directly under the purview of the provincial ministry responsible for PSE. Most institutions in Canada have unionized faculty, with collective agreements that aim to protect not only general working conditions but also principles and processes peculiar to academic work. CAUT, as a national association of faculty unions, is also a strong voice for high standards in the sector, along with provincial organizations, such as Ontario Confederation of University Faculty Associations, that respond more directly to the provincial responsibility for managing PSE.

While provincial governments play a major role in funding and overseeing PSE institutions, colleges and universities in Canada necessarily and regularly work across provincial borders. Institutions recruit faculty, staff, and graduate students from other institutions; undergraduate students flow across provincial borders to find the programs that best suit their interests and aspirations. Research collaborations, from co-authored papers to large grant-funded teams of researchers, also typically reach across institutions and so across provincial and national borders.

The PSE sector also relies on regular expert oversight through peer review and assessment that is “arm’s length,” that is, free from any conflict of interest or bias to the degree that it must be conducted by someone from another institution: from dissertation defenses to grant adjudication and research publications onto tenure and promotion processes, assessors from other institutions are given the responsibility of evaluating scholarly work. External peer assessment is also essential to the regular evaluation of academic programs through processes such as senate reviews and accreditation, as well as to Canada’s place in an international education and research sector where these are foundational norms.

Through peer review in its various forms, PSE institutions are thus intricately connected in ways that are generally uncharted by governments and even by senior academic administrators. To put it in numbers, a faculty member who publishes three articles in a year will have had their scholarship evaluated by at least six highly qualified scholars in their area at other institutions, as well as reviewed by the editorial teams at the academic journals, typically also faculty at other institutions. New academic programs are also rigorously assessed, and established ones are regularly reviewed (for instance, every seven years); in the case of accredited programs, national or international accreditors ensure not only currency and quality but also consistency with best practices (such as, for instance, class size).

²A few institutions have non-provincial arrangements, such as the Royal Military College and the new Yukon University.

This is all in addition to various regular internal assessment mechanisms, from peer-evaluation of teaching to annual reports and curriculum vitae which document each faculty member's teaching, research, administrative service (internal and external), and other work, such as relevant community service and outreach. Particularly important among internal assessment mechanisms is ethical oversight by faculty experts, from scholarly misconduct policies that aim to address rare violations (such as plagiarism or the misrepresentation of data) to the regular work of Research Ethics Boards to ensure that research is conducted safely and with due regard for privacy and other ethical concerns. All of these forms of peer review are crucial to maintaining the high quality and credibility of academic programs and research, and therefore to public confidence in PSE institutions and expert advice. This is a collective, sector-wide enterprise and, as a recent report has highlighted, it is crucial to ensure that peer review and the accuracy of information remain paramount (see [Caulfield et al. 2020](#)).

The PSE sector is also embedded in communities. Most of the adult public are PSE alumni: "In 2016, more than half (54.0%) of Canadians aged 25 to 64 had either college or university qualifications" ([StatCan 2017b](#)), the highest percentage of population with a tertiary education qualification in the Organisation for Economic Co-operation and Development (OECD) ([OECD 2020](#)). Institutions are not only educational, but also drive local, regional, and provincial economies, not least through the economic activity that they generate directly through stable employment for faculty and staff as well as student housing and other local spending. After the 2007–2008 financial crisis, "Many occupations with double-digit employment growth were high-skilled, high-wage occupations, which usually require university or college education or apprenticeship training. Specifically, about three-quarters of all jobs created over the recovery required at least some college education or apprenticeship training" ([Department of Finance 2014](#), p. 10).

PSE institutions are also important to the functioning of civil society and democracy, as advisors to government, civil society organizations, and the media as experts able to comment on local, national, and global news. Increasing numbers of faculty engage in research for and with community partners, drawing on their expertise and scholarship to work in partnerships with organizations and communities to solve problems. This work for the public good has been particularly visible during the COVID-19 pandemic. Researchers have helped the media to explain what is happening and to provide evidence-based advice to Canadians. They have also directed their expertise and their research resources in myriad ways to support Canada's pandemic response, from rapidly adapting research projects to address pandemic-related issues to providing advice to government.

Every PSE institution is made better by its participation in the flows of knowledge and expert assessment within a larger academic system, and adds to the vitality and diversity of the sector with its particular cohort of faculty, staff, and students as well as their ties to their communities, locally, regionally, nationally, and internationally. This larger academic system lies behind Canadian PSE's strong reputation and its ability to attract students and scholars from across Canada and around the globe. This broad context has informed our discussion of the PSE sector in this document.

The longstanding division of PSE responsibilities in Canada—where the federal government is focused on research while education is almost exclusively under provincial jurisdiction—was always complicated, not least because faculty work typically involves both. But this division no longer adequately describes a sector where there has been increasing policy interdependence between the two levels of government ([Bakvis and Skogstad 2008](#)). PSE now significantly overlaps with other policy sectors such as trade and commerce, research and development (R&D), immigration, and the labour market, to name a few. Canadian PSE also faces stiff competition from other western countries and newly developing economies. In this context, the PSE sector needs partnership and complementarity to support greatly intensifying cooperation between the two levels of government.

There have been successful cooperation models. The federal government and the provinces have successfully aligned their economic and immigration policies through programs such as the Provincial Nominee Program and the immigration of international students. There was an inherent design element in the international student immigration programs that fostered collaboration and cooperation between the two levels of government (Guhr et al. 2011; Tamtik et al. 2020). Investing in new models of partnership and multilevel governance frameworks, involving local, territorial, and Indigenous governments in addition to provincial, national, and international institutions, municipalities, and cities is imperative (Stein 2006).

We have organized this report into sections that deal with conventional fundamentals, such as research and governance, but also equity- and reconciliation-driven concerns that are shared across the sector, visible in statements from CAUT, Colleges and Institutes Canada, Universities Canada, relevant government bodies such as the Tri-Agency, student groups such as the Canadian Federation of Students, and individual institutions and faculty associations. These concerns are made more urgent by the well-documented unequal effects of the COVID-19 pandemic. COVID-19 has revealed cracks in our social infrastructure, and Canada's future resilience will require the renewal of the social contract, "includ[ing] a) a commitment to equality of opportunity that empowers individuals to realize their potential and contribute to society, and b) a responsibility to accord all members of society equal worth, voice, and status, irrespective of their personal characteristics or socioeconomic status" (McCabe et al. 2020, p. 12).

While financial constraints in particular have impeded the success of sector initiatives over the last 20 years, there is clearly a shared commitment to a more inclusive, vigorous post-secondary system that will advance Canada's civic and economic interests while supporting Canada's obligations to Indigenous Peoples and to our collective well-being in our federation. This is the moment to put this commitment to work, with the funding to make it happen, so that the sector can be a more effective partner and support in building a more equitable, sustainable, and evidence-driven future for Canada, through and beyond the COVID-19 pandemic.

I. Canada's colleges and universities during the pandemic (2020–2021)

Shortly after the COVID-19 pandemic was announced in March 2020, PSE institutions across Canada moved to online instruction to complete the final weeks of term. This rapid shift was accomplished in a matter of days, with no advance support and in the midst of all of the other implications of the pandemic for faculty, staff, and students. Many students had to travel to return home on short notice, while students, faculty, and staff had to quickly find the technology and space to work from home. In the 2020–2021 academic year, most institutions remain primarily online, but with significant variability. The move online has cost the sector in significant ways we have yet to fully evaluate, including on mental health for students and faculty alike.

Some programs, such as those with clinical components, had to proceed with in-person instruction. Some institutions have been under pressure to maintain at least some in-person instruction because of reliance on revenues from residences. Residences are primarily used by international and first-year students, and so are part of the larger picture of PSE's over-reliance on international enrolments to offset declining public funding (see section IV). Proceeding with some residence use has required significant and not entirely successful measures to support COVID safety, from government quarantine and testing measures for out-of-province students to public health measures in the residences. The revenue benefit of international students is so significant that some institutions have gone as

far as investing in airport pick-ups, subsidized hotel bookings, and food delivery, but this has still, for many international students, fallen short of their additional expenses.³

If 2020 PSE had been funded at 1990s levels, would institutions have been so vulnerable to changes in international enrolments or residence revenues? It is an unanswerable question, but is posed here to call attention to the unintended consequences that can arise from low public investment and the subsequent shifting of institutional decision-making and resources to ancillary revenue streams, such as residences, fitness centres, and on-campus food services. The pandemic in general has highlighted the public-health vulnerabilities created by high-density housing and public settings with high-volume traffic, also an effect of steep increases in PSE enrolments over the last 25 years. A 100-seat classroom on a PSE campus, pre-pandemic, could have 800 or more different occupants in a single day, and faculty and students regularly work in multiple buildings during the course of a weekday.

The effectiveness, and the effects, of the so-called “pivot to online” will take years of research to properly assess. There have been many studies of online instruction over the last decades, but they have necessarily focussed on students who have chosen (rather than been forced) to study online, and faculty who have had significant lead time and support to prepare online courses. This was largely not the case in 2020–2021, and student reluctance to pay full tuition for what they anticipated would be a lesser experience was widely reported in the media and evident in surveys in the summer of 2020 (Academica 2020). A further concern is the loss of income for students because of the pandemic, given the high cost of tuition, including the loss of on-campus jobs often crucial for international students (Coulton 2020).

Early surveys of students on their online experiences during the pandemic reinforce concerns about student learning (Liu et al. 2020; OCUFA 2020), but researchers will need to design studies that separate the effectiveness of online instruction from the challenges of teaching and learning in a pandemic. Students have been dealing with technological problems (including poor internet connectivity), reduced access to library and other resources, the stress of social isolation, the financial effects of the pandemic, increased inequities, and so on, all of which make learning more difficult. There is great need for comparative research that examines the impacts of different institutions’ approaches to, and policies structuring, the shift online. Some of this important research is being conducted now, and we can learn from the results that will trickle out over the coming months.

It will also be crucial to recognize disciplinary and other program differences, particularly between lab, fieldwork, or clinical courses and courses without such components. Another significant loss to students in the pandemic has been the reduced ability to socialize with and learn from other students. This isolation has clearly raised significant mental health concerns (OCUFA 2020), as we recognize in **recommendation 6(iii)**, but it has also affected extracurricular educational benefits. In particular, PSE campus environments offer students new opportunities to meet Canadians from other regions as well as students from around the world, contributing to their civic education and to internationalization (see section IV). Tebbett et al. (2020, p. 17) “suggest that both international and intercultural experience should be regarded as sub-forms of cultural capital that help students to accumulate progressively more international and intercultural capital through encounters with international academics in their home university”; international education “encourages a greater number of ‘globalising’ subjects who are to varying extents ‘globally knowledgeable, tolerant, inclusive’”, helping to counter the biases that have made equity, diversity, and inclusion (EDI) work so necessary and to support Canada’s global interests.

³For more detail on this, see Esses et al. (2021).

It seems likely that an impact of the pandemic pivot to online in PSE will be the greater availability of online options that can be refined and re-offered after the pandemic is over. Students reluctant to try online courses before the pandemic may find that online works well for them and continue online. However, it should be noted that Canadian PSE was already on the path to increasing online options and many institutions have had some form of distance education for decades (Donovan et al. 2019). A national survey before the pandemic found that 79% of responding PSE institutions “have programs that can be taken completely online” (Johnson 2019, p. 8). During the pandemic, increased part-time enrolments and early indications of greater participation by students who have been in the workforce for a decade or more nevertheless speak to unmet demand for more flexible and accessible PSE course options. As we note in section V, however, online options are only part of the solution for part-time students, students who do not live near PSE campuses, and students with care responsibilities; high tuition fees continue to be a significant barrier across student populations, and are exacerbated by the costs of technology required for online learning in the 2020s.

Nevertheless, there is cause for optimism that more PSE institutions may be able to offer more online options after the pandemic and so help to reverse the declining proportion of PSE students who are registered part-time, and low participation rates by Canadians over 27 as well as rural and other remote populations (see section V).⁴ This requires significant coordination and care, however. What are the implications for equity, access, and community well-being to expand online programs for math and electrical engineering, but not paramedicine and the creative arts, for instance? What are the implications for the fiscal health of PSE institutions if they start to rely on volatile online enrolments, or online offerings significantly outpace student interest?

If online offerings are to be expanded, they will require public investment and should not be allowed to add to students’ already high burden in financing the sector either in higher tuition fees or larger class sizes (see section II). Caution must also be exercised in partnering with for-profit corporations that do not have the same commitment to academic integrity and student privacy as PSE (see section VII). Administrations interested in pursuing increases in online offerings should also ensure that the workload implications are manageable through agreement with all relevant unions and with individual faculty members, mindful that, once the pandemic is over, it will be urgent as well for many faculty to catch up on lost research time, especially untenured faculty (see section III).

Teaching online demands, from instructors, an additional skillset; faculty and staff need collegially approved guidelines and professional development, as part of their normal workloads, on designing courses to be taken online that do not burden students with extra work or instructors with extra grading, and yet manage to replicate some of the in-person experience. This kind of training will require intentional investment as well as significant discussion within disciplines: replicating a faculty member walking a class through a math solution will require different resources and methods than replicating a classroom discussion of ethics. For this reason in particular, robust collegial oversight of online courses and programs, from the department level up to senate, is critical to maintaining program integrity and quality (see section VII). This will be especially crucial given the possibility of a global spike in online offerings: to remain globally competitive and nationally beneficial, Canadian PSE must continue to ensure high academic standards.

Online courses, however, are unlikely to expand significantly at the graduate level. The pivot to online was not a solution for many graduate students. Lab, field, and clinical work was, and for many still is, significantly disrupted, and access to library resources limited (Doreleyers and Knighton 2020).

⁴A StatCan study of age distributions found that university enrolments in almost all age groups over 26 had declined as a percentage of total enrolments between 1992 and 2007 (see Chart 1 in StatCan 2010); the sole exception was the 50–59 age group. Data were not available for a similar comparison of college students.

Graduate students who face delays in completing their programs will need extensions and additional funding, but there will also need to be ongoing attention to the specific challenges they face and have faced. Impacts on grades, research productivity, and timeline for completion could have knock-on effects on graduate students' success in scholarship and job competitions, for instance, so adjudication and appointment committees (globally) will need to carefully assess and correct for the COVID disruption, including recognizing the unequal effects of the pandemic by demographic category, region, and discipline. Institutions, already financially stretched by the loss of ancillary revenues, declining public investment, and uncertain international enrolments (see section IV), will find it challenging to support graduate students through the pandemic without dedicated supplementary government funding (see **recommendation 6**). Without adequate support, inequalities among graduate students are likely to increase, and those with less social and financial capital going into their programs, facing longer completion times, will be more likely to drop out.

There have been some faculty surveys on the effects of the pivot to online on mental health, workload, and research productivity, and they are universally worrying. A survey of continuing and non-continuing faculty at the University of British Columbia (UBC), one of the largest universities in Canada, found that online teaching in a pandemic was taking approximately 50% more time on average than their usual teaching assignments while the pandemic itself was making it harder for them to do their work (Abraham et al. 2020). Like the national survey by CAUT (2020b) in the spring, the UBC survey found significant levels of stress among faculty as well increased caregiving responsibilities, both disproportionately affecting women (for more, see section V). An Ontario survey, with responses from 2208 faculty, also found significant increases to workload and stress (OCUFA 2020). **Recommendation 6(ii)** focusses on the most vulnerable cohort (graduate students, postdoctoral fellows, and non-tenured faculty), but these impacts are not limited to that group. Stress leaves, even early departures from graduate programs or academic employment, will be a significant concern in the near term. In the long term, funders, institutions, and colleagues must be mindful of the impact of the pandemic on career progress in tenure and promotion processes (a concern evident in OCUFA 2020) as well as job and grant competitions (Malisch et al. 2020; Nature 2021).

At the same time, despite all of these enormous pressures, including the additional work required to move courses online, PSE research and clinical expertise have been vital resources to Canada during the pandemic. As we note in the Introduction, PSE researchers have been supporting community and government efforts to address the pandemic through advocacy, participation in expert panels, and reframed research programs. Students in relevant health care programs are likely to be important to vaccine rollout and other public health measures, while graduates from a number of programs will be critical to supporting the public-sector workforce, especially in health and education, as it recovers from the significant stresses of the pandemic. The pandemic has also made clear the need for more robust and detailed national data in health and education; PSE as a sector could benefit from better data on precarious employment, funding variations between the provinces, and so on, but PSE faculty experts can also help to address the questions that more national data collection will raise, from ethics to design and implementation.

The post-COVID era may see significant transformation of the post-secondary sector to support more remote-learning options that are sufficiently flexible that they can better serve part-time students and communities at a significant distance from PSE campuses. Pre-pandemic data on availability of online options and student interest in them suggest, however, that on-campus experience will continue to be important for many students and critical for a number of programs. In the years to come, PSE will need to ensure that any significant increase in online learning is accessible, equitable, and inclusive; supports student choice in selecting their academic program; and does not further destabilize institutions' finances or erode Canada's research capacity.

II. Investing in the PSE sector

The COVID-19 pandemic has hit the PSE sector much as it has hit the health care sector: the erosion of funding over recent decades has reduced its capacity to be resilient and support Canada through this crisis, even as demand for its contributions has generally increased, for example, in urgently needed expert advice, rapid-response COVID-focused research, and increased enrolments at many institutions.

Re-committing to investing in our universities and colleges is long overdue, but has become even more urgent in the pandemic. Chronic underfunding has made it more difficult in 2020–2021 for institutions to support faculty, staff, and students through the crisis. The pandemic's interruption of research is having significant effects in particular on early career researchers, the foundation of Canada's future PSE and research ecosystem.

This crisis has even larger implications. One of the well-established, public benefits of PSE is social inclusion. In addition to the “labour market premiums” attached to PSE (Frenette 2014), there is a documented correlation of higher education with better social cohesion and tolerance of diversity (Beauvais and Jenson 2002) as well as lower rates of poverty, poor health (Cutler and Lleras-Muney 2006), and criminality (Ouimet 2004). COVID-19 has been termed an “inequality virus” because it is fueled by and increases inequality (Ali et al. 2020; Elgar et al. 2020). We will better recover from this pandemic, and be better prepared for the next, with a more robust and accessible PSE sector.

Pre-COVID reports were already drawing attention to the need for a broad range of PSE skillsets and expertise: “other types of skills and knowledge are needed in combination with STEM [Science, Technology, Engineering, Math] skills for innovation and economic growth, including entrepreneurship, art, and creative design” (Dodge et al. 2015, p. 9). COVID has challenged governments to think urgently across academic fields of study—about the social determinants of health, effective communication, information literacy, health data, food systems, local economies, the sociohistorical, psychological, and practical barriers to vaccine acceptance, and so on. As we confront climate change as well as post-pandemic recovery, as well as develop better mechanisms for responding to crises, including domestic vaccine development, Canada will need a wide range of expertise as well as cutting-edge research.

There have been calls to improve PSE funding for some time, most recently by Quirion (2020). Government funding for the academic operations of universities and colleges has declined significantly since the last century (Robertson 2003; CUPE 2018; Breznitz and Munro 2020), and over the same period Canada has seen rising inequality (Breau 2015; see also Andres 2015, p. 25). The decline in funding is usually calculated as a proportion of revenues; “as a share of total funding, provincial funding” for “universities and degree-granting colleges” dropped from 38.6% to 35.4% in just five years, for instance (StatCan 2020c). Provinces vary widely in their support for PSE (creating another form of inequality in Canada), but the scale of the shortfall is clearest in relation to gross domestic product (GDP) and federal funding: “Federal government cash transfers for PSE in Canada, when measured as a proportion of GDP, have declined from 0.5% of GDP in 1983–1984 to 0.19% in 2018–2019” (CAUT 2020a).

Provincial funding across Canada, supported by the Canada Social Transfer, increased <9% between 2010–2011 and 2018–2019, while tuition revenues increased nearly 75% (see Fig. 1), due to higher tuition fees, more international enrolments with even higher tuition fees, and increased enrolments overall.

While students have been paying more and more, the sector has seen significantly increased reliance on underpaid, precarious faculty. These highly qualified academics work in short-term and part-time

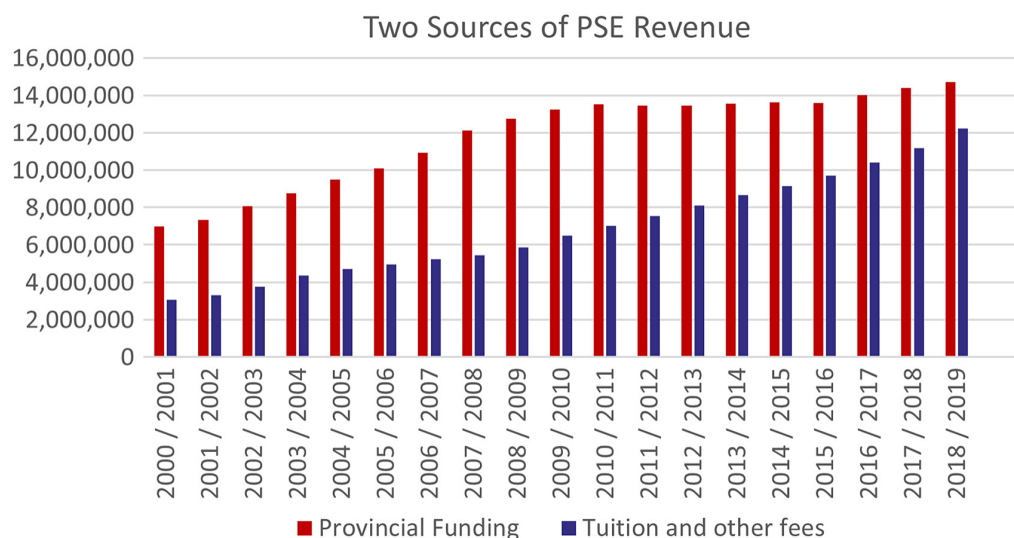


Fig. 1. Data from StatCan Table 37-10-0026-01 (“Revenues of universities and degree-granting colleges (×1000)”).

contracts, often with little-to-no support for scholarship and discovery (Birdsell Bauer and Foster 2018; Pasma and Shaker 2018). In Ontario colleges, to take one example from the data, there were fewer full-time faculty in 2014 than in 1989, a period over which enrolment nearly doubled (MacKay 2014, pp. 2, 33). Nationally, universities did better but total full-time university enrolment increased 87% from 1992–1993 to 2018–2019 (from 569 481 to 1 065 078), while full-time faculty increased just 24.6% over the same period (from 37 266 to 46 440).⁵

We lack comparable data for the full PSE sector, but university data show a clear decline relative to increasing student numbers, including a failure to recover after the economic crisis of 2007–2008 (see Fig. 2). The economic crisis was compounded for PSE by the end of the so-called double cohort, caused by the elimination of Grade 13 in Ontario; the double cohort, graduates of both Grade 12 and 13 in 2003, finished going through PSE around the same time that the economic crisis hit. An important measure of faculty complement is number of assistant professors, the typical first step in a continuing full-time career. In 2006–2007 and 2007–2008, there were over 10 900 assistant professors in universities, but that number then went into decline and has hovered around 8650 for each of 2017–2018 and 2018–2019 (see Fig. 2).

The Quirion (2020) report raised concern about student–faculty ratios. Pedagogically, optimal ratios vary widely across disciplines, but a historical comparison sheds light on the staffing losses in the sector. The data sources used in Fig. 2 show that, in 1992–1993, the national full-time student:faculty ratio was 15.3:1; in 2018–2019, it was 22.9:1. Faculty numbers stagnated after the 2007–2008 economic crisis, and by 2009–2010 the ratio was 19.98:1. If universities had maintained a 20:1 ratio in 2018–2019, then there would have been 53 254 full-time faculty that year instead of 46 440. That’s a gap of over 6800 faculty—and researchers—in universities alone, created in just nine years.

⁵This uses the earliest and latest available years at time of writing for both data sets: StatCan Tables 37-10-0011-01 and 37-10-0076-01.

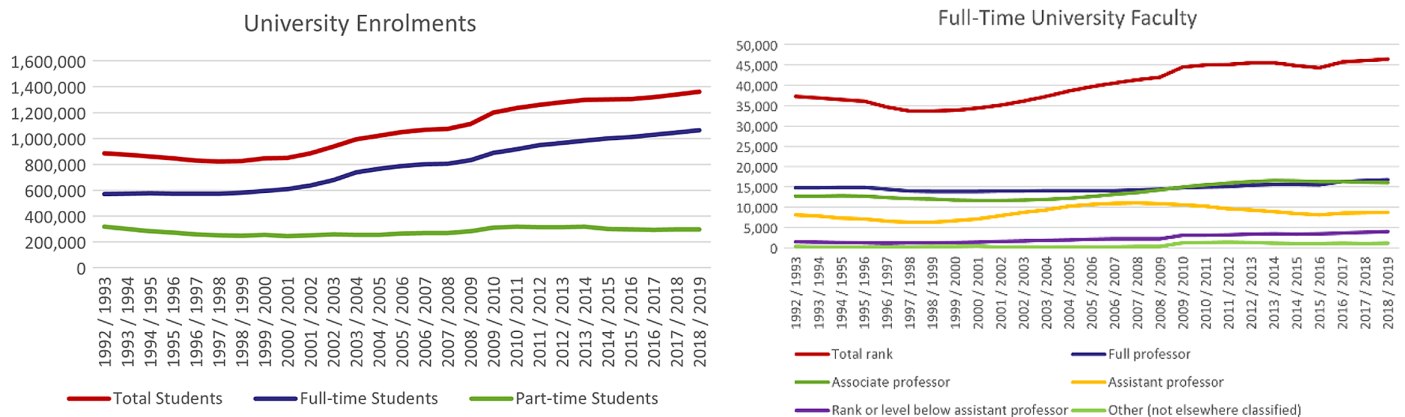


Fig. 2. Data from StatCan Table 37-10-0011-01 ("Postsecondary enrolments") and 37-10-0076-01 ("Number of full-time teaching staff at universities").

The claim that "tenured faculty members are drawn more into research activities, which often means fewer teaching hours. This has resulted in either larger class sizes per tenured faculty member or increased use of non-faculty teachers" (Grant 2014, p. 68) captures the exceptions rather than the rule. Canada Research Chairs generally teach less than their colleagues, but their salaries are largely offset by federal research funding and they represent only about 4% of full-time faculty in Canada. Ballooning student enrolments coupled with relatively stagnant full-time faculty numbers create a simple math problem that can only be solved three ways: increasing class sizes, increasing non-full-time teaching staff, and increasing teaching hours by full-time faculty. All three measures are being used, to varying degrees, across the country. Unlike other levels of education, most PSE teaching hours are needed outside of the classroom: preparation, grading, student contact-hours (including e-mail), and so on. Larger class sizes economize classroom-hours but generally increase teaching hours in all of the other categories. This is especially the case in online courses, where developing effective online components may take significantly more preparation time and student support needs often increase as well.

The shortfall in continuing, full-time faculty is evident in other data: the FSR found that "sectoral breakdowns from OECD data show that Australia and the United Kingdom have substantially higher numbers of researchers employed in the higher education sector on a per capita basis" than Canada (Naylor et al. 2017, p. 44). The FSR also notes "our lower density of employed researchers, particularly as compared to other nations with small populations that have higher innovation and productivity indices" (Naylor et al. 2017, p. 44). The recent shift towards teaching-only faculty positions may slightly stem the tide of worsening student:faculty ratios but does not address the problem of Canada's low numbers of PSE-employed researchers.

As a consequence of low levels of full-time hiring of doctorates coupled with increasing enrolments and higher tuition, tuition revenues across the sector now exceed PSE spending on academic salaries (Fig. 3).

Academic work includes research and administration, not just teaching. As the FSR notes, "One could reasonably argue that students through their increased tuition fees are being asked to subsidize federal research grants" (Naylor et al. 2017, p. 34).

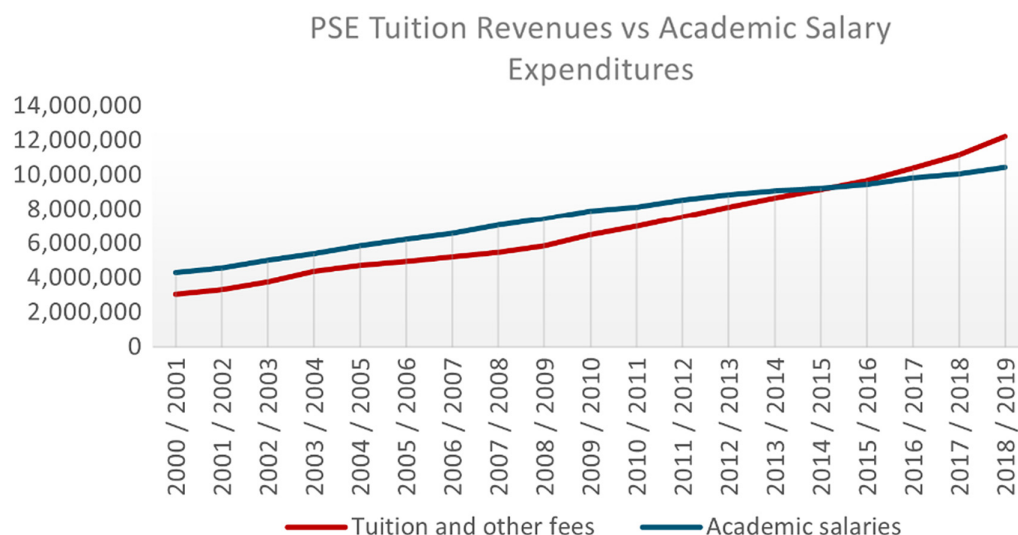


Fig. 3. Data from StatCan Tables 37-10-0026-01 (“Revenues of universities and degree-granting colleges (×1,000)”) and 37-10-0027-01 (“Expenditures of universities and degree-granting colleges (×1,000)”).

Employment trends away from continuing, full-time appointments increase class sizes while dramatically reducing research capacity. Full-time faculty have less time for research and the part-time faculty who have grown in number are typically not paid, or supported, to do any research. This trend also reduces capacity to support robust collegial governance because administrative work is divided among fewer full-time faculty members; part-time and limited-term faculty are not always permitted (nor are they typically paid) to perform such key duties. This means increased workload for full-time faculty (or less time for research and teaching), or increased difficulty in staffing mission-critical committees, such as Research Ethics Boards.

At the same time, these trends away from standard continuing appointments increase inequality within PSE institutions through wage and workload differences between faculty with full-time, secure employment and the precarious faculty who now outnumber them (Pasma and Shaker 2018, p. 5). This shift has hit Canadian PSE hard and fast: “The drop in full-time, full year positions is ... evident in the Census which shows a decline of 10% from 2005 to 2015. During the same period, university professors working part-time, part-year increased by 79%” (Birdsell Bauer and Foster 2018, p. 7).

Canada has had better rates of PSE participation than many comparator countries and Canadian research has historically been strong, but the FSR raised serious concerns about decline: “It seems clear that the drop in per capita funding for basic research is having adverse effects,” and on a number of fronts (Naylor et al. 2017, p. 47). There are, of course, significant differences across the country because of provincial variations, as well as variations between the larger, comprehensive universities and the smaller regional institutions, and between universities and colleges. But the national trends are too significant, and across various measures, for there to be any doubt that the sector has been seriously eroded over the last 30 years and particularly over the last decade.

Instead of solutions, we are seeing the creation of more problems. Performance-based funding (PBF) has recently spilled over the 49th parallel, for instance. In PBF, the robust peer-review processes that are deeply embedded in global academic culture are ignored in favour of costly data-driven analyses that focus on metrics such as post-graduation income or course completion rates. Yet evidence has

been mounting for years in the United States that PBF fails to deliver. “Numerous studies have found PBF ineffective in the key area of degree completion” as well as in employment-related metrics (Cornelius and Cavanaugh 2016, pp. 161, 171–174). One comprehensive analysis concluded that “PBF adoption is generally associated with null or modest positive effects on the intended outcomes of retention and graduation, but there is also compelling evidence that PBF policies lead to unintended outcomes related to restricting access, gaming of the PBF system, and disadvantages for underserved students groups and under-resourced institution types” (Ortagus et al. 2020, p. 520; see also, e.g., Cornelius and Cavanaugh 2016, p. 179), undermining diversity goals in particular.

Often associated with “audit culture” and surveillance (see, e.g., Cruickshank 2019; Spooner 2020), these approaches are part of a larger project to hand the reins of PSE institutions over to apps and algorithms. For instance, this past decade has seen rising concerns about the surveillance of students, from following their movements around campuses (Quinton 2015) to capturing their eye movements during online tests (Deibert 2020) to collecting user data (see, e.g., Gebhart 2017; Selingo 2017). These technologies raise significant questions about student privacy and the ways in which these systems intensify existing inequalities. New technologies are facilitating unprecedented data collection, but much of this work is in the hands of so-called “ed tech” and consultants without the necessary collegial oversight and transparency to ensure robust ethics, consistency with academic principles, and expert analysis of the data and its limitations.

PBF, and before it “prioritization,” also exacerbates funding uncertainty in PSE and so is fundamentally at odds with the timelines that effective PSE requires. Degrees require stability for students over multi-year spans; advancing research projects and developing academic programs can take decades. Uncertain funding tied to changing demands from governments incentivize short-term thinking and hiring: PSE’s increasing reliance on short-term contracts, whether part-time, underpaid faculty in the classroom or costly consultants in the administrative domain, is the consequence.⁶ For effective long-term planning, PSE requires stable, core funding (see **recommendation 1**), additional support to bridge the pandemic (see **recommendation 6**), as well as regular reviews to ensure continuing progress on major policy objectives over the long term (see **recommendation 3**).

To rebuild Canada’s research capacity, ensure the quality of its higher-education programs and institutions, and reverse PSE and larger social trends towards greater inequality and precarity, the sector requires significant new federal investment and a commitment to stabilizing PSE funding at a higher level in the long term (**recommendation 1**). This is essential to renewing and generatively transforming the sector as well as to strengthening its ability to play a key role in supporting Canada’s larger objectives of equity, inclusion, and reconciliation, as well as evidence-based decision-making, meaningful global relationships, the integrity and reputation of Canadian PSE, and the knowledges crucial to thriving in the 21st century.

⁶We lack data for robust analysis because consultants are not subject to the sort of transparency that is expected of PSE institutions: in general, their work is not assessed through peer review or a collegial process and the cost of employing them is not made public. Executive search consultants have been of particular concern as their use has been normalized for senior administrative positions across the country, with costs known to be upwards of \$50,000/search. If governments are looking for cost savings, they might consider regulating the use of consultants in publicly funded institutions, including ensuring transparency in costs and assessments of results and protecting against conflicts of interest. For instance, a senior administrator who was appointed through a consultant process perhaps should not be involved in handing out five- and six-figure contracts to the consultant that helped to put them in that position.

III. Building research capacity: conservation, innovation, understanding

Canada's universities and colleges are essential to the conservation of knowledge, the creation of new knowledge, and understanding as the necessary foundation of both. Understanding mechanisms, relationships, and processes is vital context for any set of facts, and key to the advantages of higher education to employers and, in much broader terms, to society. As the FSR noted, "the benefits of research are so pervasive that it is sometimes easy to overlook how much we have all gained from these uniquely human activities" (Naylor et al. 2017, p. 17). The FSR richly detailed the value to Canada of research as "a quest for knowledge and understanding" (Naylor et al. 2017, p. 17).

We add "conservation" because, across continents and millennia, institutions of higher learning have had at the core of their mission the preservation and transmission of knowledge, from languages to specialized skills, as essential to the functioning of their societies. Importantly, this transmission of knowledge cannot be reduced to the creation and consumption of degrees—the exchange of tuition dollars for a credential. It is the creation, exchange, renewal, and expansion of the world itself. French philosopher Michel Serres's illustration is worth quoting at length:

In effect, culture has become, quite recently, a commodity. It is possible for true culture, if it exists, to be outside of market exchanges, and I can demonstrate this. If you have bread, and if I have a euro, then, if I buy the bread from you, I will have the bread and you will have the euro and you will see in this exchange a balance, that is to say: A has a euro, B has the bread. And, in the other case, B has the bread and A has the euro. So, it's a perfect balance. But, if you have a Verlaine sonnet, or the Pythagorean theorem, and I have nothing, and if you teach them to me, then, at the end of this exchange, I will have the sonnet and the theorem, but you will have kept them. In the first case, there is a balance, it is merchandise, but in the second there is an increase, it is culture. (Serres 2009)

These knowledges are often local, regional, national: any country's scientists may give the world a vaccine, but public health, reconciliation, economic recovery, the climate crisis, and reducing inequality will require a broadly distributed and deep understanding of the specifics of Canadian federal governance, environment, history, and regional variations in all of those categories. Innovation, both technological and social, happens on a foundation of expertise and we must strengthen that foundation. Emergency responses, at the institutional level as well as in government, also require a firm foundation in relevant expertise, with expert oversight through peer review and regular pathways through which they can be heard, unfettered by political party or other narrow interests (for an example, see [Civil Contingencies Secretariat 2012](#)).

The FSR has rightly noted "the vital contributions of research-led education in shaping the talents, skills, and ambitions of the next generation" (Naylor et al. 2017, p. 26). "Research-led education" ensures up-to-date expertise at the front of the classroom and in collegial oversight of academic programs. It also contributes to the larger research ecosystem through the stable employment of scholars with resources to conduct research as well as contribute to peer review and other critical aspects of research oversight (Research Ethics Boards, for instance) as well as evidence-based government policy at all levels.

But, as mentioned above, because of declines in public investment and the concomitant pressure to grow enrolments, more than half of faculty at Canadian universities are now working on part-time and limited-term contracts (Pasma and Shaker 2018, p. 5). They typically do not have research time in their contracts, often lack research space, and they are ineligible for many internal and federal research grants, despite being highly qualified (see [StatCan 2019](#)). In Ontario colleges, only 32% of

academic staff are full-time (7624 of 23 861 in total; [Colleges Ontario 2019](#), p. 9). Simply put, Canada is under-employing tens of thousands of highly qualified experts. Programs designed to give a few researchers significant resources are not the solution to closing the innovation gap: a detailed study of social sciences and scientific research in Quebec determined that productivity falls off as grant-size increases ([Mongeon et al. 2016](#)).

The reduced hiring of highly qualified graduates into continuing faculty positions is arguably the direct cause of the FSR's concern that the "density of researchers across sectors overall is suboptimal" in Canada ([Naylor et al. 2017](#), p. 48). It is also making it difficult to address diversity gaps in PSE. The FSR found "significant gaps and challenges were . . . impeding the ability of Canada's researchers, particularly the next generation, to achieve their full potential" ([Naylor et al. 2017](#), p. 161). Since "The new generation is notably more diverse than its predecessors," any obstacles to their careers will "undermin[e] not only the long-term growth and sustainability of research in Canada, but also the diversity of the research ecosystem" ([Naylor et al. 2017](#), p. 161). This matters because diversity is critical to research as well as instruction and collegial oversight: "Not only does wider participation draw on a larger base of talent, but the inclusion of diverse perspectives has the further advantage of broadening horizons and improving interpretation of information and decision-making alike" ([Naylor et al. 2017](#), p. 92; see also, e.g., [Marsden et al. 2012](#), pp. 32–35).

While the PSE shift to precarious faculty is also visible, for instance, in the United States and the United Kingdom, Canada is especially vulnerable to any weakening of the PSE sector because "more than many OECD nations, [it] relies heavily on the higher education sector to conduct research" ([Naylor et al. 2017](#), p. 33). In addition, there are significant cultural and structural differences between Canada and other jurisdictions that urge made-in-Canada solutions that understand the Canadian context and Canadian needs. For instance, Canadian institutions do not have the sorts of endowments that subsidize PSE in the United States. Even public institutions such as the University of Washington, University of California-Berkeley, and the University of Wisconsin have multibillion-dollar, revenue-generating nest eggs; in a list of Canadian and US university endowments by value, no Canadian institution is in the top 50 and only four made the top 100 ([NACUBO 2021](#)).⁷ Eroding public funding for PSE in Canada is not just a concern if we care about the quality of individual instructors' jobs; it also means an unusually heavy loss in national research capacity as well as losses for education. Canadian PhDs working on 4-month contracts are obviously significantly less able to make multi-year commitments, whether pursuing international research collaborations, helping to train new PhDs, or contributing to the development of new academic programs.

Before COVID-19, Canada had an innovation problem ([Brown et al. 2009](#)), too few doctorates and low private-sector R&D ([Naylor et al. 2017](#)), and a growing contingent of under-employed faculty ([Pasma and Shaker 2018](#)). COVID-19 now risks turning that incremental decline into a cliff edge. Faculty in universities and colleges across the country have suspended research programs because of material disruptions (interrupted lab access and field work, for instance) and the time-intensive demands of the pivot to online teaching. Early studies and anecdotal reports suggest that, globally, this disruption has disproportionately affected researchers in underrepresented groups and "early career researchers," that is, graduate students, post-doctoral fellows, and new faculty ([Viglione 2020](#); [Vincent-Lamarre et al. 2020](#)). COVID-19 thus threatens to undo recent advances in diversity and to undermine years of public investment in the current cohort of early career researchers, and just at

⁷For instance, the Ohio State University system has about the same undergraduate enrolment as the University of Toronto, but has an endowment of \$5.29 billion to Toronto's \$1.91 billion, the largest in Canadian PSE and ranked 57th on the NACUBO list; Ohio State is ranked 25th, the University of Washington is 33rd, and the second-highest ranked Canadian institution, the University of British Columbia, is in 90th place ([NACUBO 2021](#)).

the moment when it is clearest that research, policy, and education are urgently needed to protect the public and support our shared recovery (see **recommendation 6**).

The key to a vibrant research ecosystem is researchers. While the “lack of business sector investment in R&D” is a persistent drag on Canada’s productivity (McCabe et al. 2020, p. 27; see also Naylor et al. 2017, p. 30 and App. 3), the problem is compounded by declining public investment in PSE. The PSE sector needs the funding to fully support more Canadian doctorates through secure, continuing employment so that they can pursue research collaborations and partnerships, train future generations of researchers, support “research-led education,” and protect the quality and integrity of research in Canada (see **recommendation 1**).

IV. Internationalization

It may surprise some, especially in light of Serres’ illustration (above), that in Canada’s national accounting, international education appears as an export. Because international students pay tuition with money originating outside Canada and spend money on housing, food, and other goods while they attend school in Canada in a similar manner as tourists, in terms of the trade balance, international education is an exported commodity like any other. Canada has thus been intent on growing international education as part of its generally export-led growth strategy. Indeed, the country’s second international education strategy, *Building on Success: International Education Strategy (2019–2024)* states, “international education makes a large and growing contribution to Canada’s prosperity.... Educational expenditures by international students have a greater impact on Canada’s economy than exports of auto parts, lumber or aircraft” (Global Affairs Canada 2019, p. 2).

What are the implications of such an international strategy to PSE institutions, their role and function in preparing citizens, and their broader contributions towards promoting knowledge collaborations to solve global problems, especially during this COVID-19 period? The pandemic has shone a light on what happens when international education policy and practice stress economic returns: the current international education model has exposed our public institutions to undue financial risk. International students account for 25%–50% of the student population at many Canadian institutions (Friesen 2019; Nott 2020). The University of Toronto, by far Canada’s largest university, receives a larger portion of its budget from international students (30%) than from provincial grants (25%) and domestic tuition (24%) (Paikin 2019). These figures reflect PSE’s growing dependence on international student tuition to fill the revenue gaps created by funding cuts of the last 30 years.

Statistics Canada projected disaster for PSE in 2020–2021 largely because of this reliance on international student tuition fees: “Canadian universities could possibly lose between \$377 million (or 0.8% of projected revenues) and \$3.4 billion (or 7.5% of projected revenues) in 2020/2021, depending on the size of the reduction in international student enrolments” (StatCan 2020c). The financial cost to the sector has been reduced because of some increases in enrolment, at least partly because of faculty work to support quality online options, as well as federal initiatives designed to support international students (Basken 2020), but there remains cause for concern. Indeed, Nott (2020) anticipates an “international student recession” as even a small decline in enrolments has a big impact on institutional finances, including revenues from campus and community services, as well as regional economies. COVID-19 has impacted international enrolments differently, with those hardest hit being the institutions with weaker financial positions and lacking reputational draw to attract international students (Nott 2020). There is concern that institutions might resort to increasing international student tuition to recover from their losses, a policy already reflected across several provinces and institutions (StatCan 2020b). At the same time, international students have been especially vulnerable to some aspects of the COVID-19 crisis (Firang 2020; Esses et al. 2021).

Immigration, Refugees, and Citizenship Canada has responded to this crisis with many proactive policies to continue to attract international students, including a new policy allowing institutions to welcome international students once they create a plan approved by their provincial government for quarantining the students for 14 days (Basken 2020). These actions are welcome. They also recognize the importance of PSE to Canada's immigration objectives. The question regarding processing times for study permits remains an issue given COVID-19 related challenges faced by Canadian embassies and consulates abroad. But allowing entry is just one half of the problem. Marginson (2020) predicted a reduction of 5%–15% in global GDP on students' capacity to pay for fees, travel and student living costs post-COVID and a difference in global mobility trends with student traffic shifting from the West towards East Asia. We can expect the international higher-education market to remain highly volatile (see section I as well).

Quite apart from the financial risks, we have to ask ourselves some serious questions about recent trends. Should government policy allow our public institutions to be dependent on an unpredictable market for their very survival? What risks does this dependence entail for the quality, credibility, and effectiveness of the PSE sector? Trade imbalances, and particularly export-dependence, are concerning in any industry because international markets are volatile and beyond one nation's control. It is no different in PSE.

There is an additional problem in viewing international students in the same terms as lobster and lumber. International education recruitment strategies target international markets based only on students' ability to pay, thus working against equity, diversity, and inclusion policies and increasing the income gap we discuss in the next section. At most PSE institutions, international students pay higher tuition fees in addition to their living expenses—typically two-to-three times as much as domestic students—and, depending on their country of origin, can face steep learning curves, not only in cultural and social norms, but also in currency fluctuations, housing, and language (Calder et al. 2016). When universities target international students without regard for their integration and well-being for the duration of their studies, they are, in effect, enacting academic imperialistic practices under the guise of internationalization (Yao 2021). Framing international students within a dominant trope of “cash cows” (Stein and Andreotti 2016) brought in for the benefit of the nation-state's economic indicators is dehumanizing, and negates the very principles of EDI that we espouse (Tannock 2013). It also ignores the importance of international students to immigration and the knock-on effects of high tuition debt on these new Canadians.

One positive step in a different direction is a recent call, from Universities Canada (2020), for proposals from Canadian universities for innovative outbound student mobility projects. This initiative, funded by Employment and Social Development Canada, is an important one for balancing our inbound approach to international education with an outbound strategy (see **recommendation 4**), but it was postponed by COVID-19. Also important are recent calls for increased language education across all levels (see RSC et al. 2020), particularly given the synergies between language acquisition and internationalization, and the importance of our two official languages, Indigenous languages, and the languages of new Canadians. We can also look to international models. Germany, for instance, engages with internationalization in a strategy that aims to solve global challenges, from climate change to security and migration, through funded bilateral and multilateral international science and research collaborations, with an ethos of investment rather than extraction, global responsibility rather than merely national advantage, and scientific globalism (KMK 2001).

Internationalization as a strategy for PSE should be much broader than the recruitment and retention of high-income international students; it should include forging deeper links between Canadian and foreign PSE institutions and research centres, as well as attracting researchers from abroad. Canada falls short in its approach to international partnerships and collaborations and in terms of its overall

investment in research and development (Tamtik and Sa 2020), and small programs such as the Canada 150 Research Chairs will not fill these wide gaps. The COVID-19 pandemic is already changing international education in Canada. With federal and provincial leadership, we can work together across the sector to ensure that it is transformed for the better (see recommendation 4).

V. Inclusion and intergenerational equity

There has been increasing attention over the last few years to the need to address the continuing lack of diversity in PSE generally, with some recognition of discipline-specific patterns—few men in nursing and few women in electrical engineering, for instance. PSE institutions and organizations have made statements and supported discussions, from Universities Canada’s (2017) statement of “Principles” to the Tri-Agency Dimensions program (2019) and the new *National Dialogues and Action for Inclusive Education and Communities* that first met via the University of Toronto on 1–2 October 2020. These efforts go back over a generation, however, and “employment equity policies were introduced in the mid-1980s and solidified in the 1990s” (Henry et al. 2017b, p. 63). For roughly the same period, PSE has also had provisions in collective agreements that address under-representation as well as efforts to remedy pay inequities and other systemic biases.

For years now, there has been an interrelated discussion about the implications of declining public funding, and so rising tuition fees, on students from lower- and middle-income backgrounds. The Parliamentary Budget Office “estimate[d] that roughly 60 per cent of postsecondary students belonged to higher-income families (that is, the two highest after-tax or disposable income quintiles)” (PBO 2016, p. 4). In addition, the technological divide between high- and low-income families is intensifying the trend towards higher cost barriers (Gonzales et al. 2020).

In Canada, “While college-level graduation rates are high, baccalaureate graduation rates are about average in the OECD” (Naylor et al. 2017, p. 47). But the “earnings premium” of PSE is lower for college graduates—and still significantly lower for women than men (Frenette 2014). Moreover, women have constituted the majority of PSE enrolments since the early 1990s (StatCan 2017a). This means that more of Canada’s PSE graduates (higher numbers of women and of college graduates) are making smaller income gains, reflected in median cumulative earnings as well (see Fig. 4). In

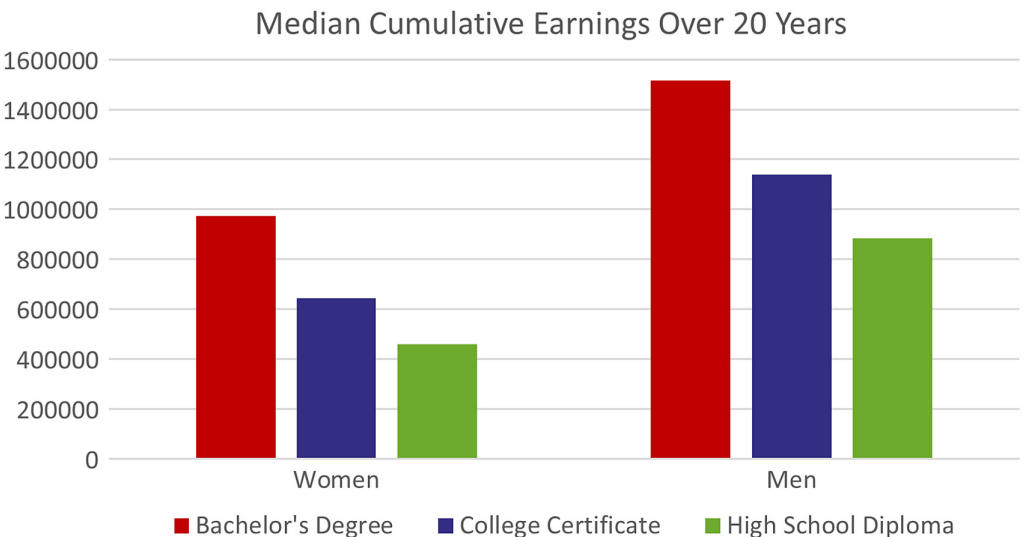


Fig. 4. Data from Table 1 in Ostrovsky and Frenette (2014), in constant 2010 dollars.

the meantime, students from wealthy families are more likely than others to make any gains at all, representing 60% of PSE enrolments (PBO 2016, p. 4).

These trends must be considered in the context of rising tuition fees. The pay-to-play view—that PSE leads to higher income and so it is reasonable for students to take on debt to access it—has been offered as justification for tuition increases, with compensatory gestures towards scholarships and bursaries for students from lower-income families. But, on the face of it, pay-to-play suggests that women, of all economic backgrounds, should have been paying only 61% as much university tuition and 73% as much college tuition as men to match differences in PSE earnings premiums over 20 years (see Frenette 2014).

We also need to consider the high social costs of continuing tuition increases. How high is too high? At what point do the personal costs of PSE start to outweigh the individual benefits? The tipping points are lower for historically under-represented groups, given continuing wage disparities for women, racialized people, and other groups (see Frenette 2014; Block et al. 2019), including in PSE institutions (Henry et al. 2017b, pp. 56–64; CAUT 2018). (These wage disparities are part of the reason that PBF measures of graduates' income are highly suspect and risk incentivizing anti-diversity measures in PSE.) Moreover, for most PSE graduates, any earnings premiums are also increasingly eroded by the cost of servicing student debt.

High tuition thus not only has significant repercussions for individuals, but also hinders the larger policy objectives of advancing diversity, equity, and inclusion both within and through PSE. There are other national costs, too. Studies in the United States show that student debt is suppressing entrepreneurship (see, e.g., Krishnan and Wang 2019), a concern in Canada as well (Cao et al. 2017). There is some evidence that student debt has negative effects on mental health (Kruisselbrink Flatt 2013) and on the Canadian economy by contributing to national household debt (CFS 2017). The financial and mental-health stressors of the pandemic are likely to worsen these trends, with implications for the future of Canada's people, economy, and health care system.

Moreover, raising tuition while increasing subsidies for those in all but the highest income brackets also increases the non-academic costs of maintaining PSE, pulling more resources from the work of teaching and research to pay for the administration of applications, as well as processing of payments. RESPs, philanthropic donations to scholarships and bursaries, and so on also reduce the tax base for funding public services such as PSE. It is well-established that public investment is more efficient and equitable than philanthropy, and calculations suggest that “Relatively small changes in the tax system could dramatically reduce university tuition rates” (Macdonald and Shaker 2011, p. 24).

Polls regularly show that Canadians value PSE. Two Abacus Data studies, one for CAUT in 2019 and one for Universities Canada in 2017, indicated around 85% agreement among Canadians on a number of key points that we address here, including “Invest more in full-time post-secondary teaching positions” (Nadeau 2019), student debt is too high (Nadeau 2019), “Research work in universities is vitally important for Canada's future” (Abacus Data 2017), and “Canada can afford to invest in higher education” (Abacus Data 2017). Clearly the COVID recovery will place a lot of demands on the public purse, but it is worth noting for context that COVID-related federal programs for PSE students and recent graduates were estimated to cost “nearly \$9B” (Government of Canada 2020): \$9B also happens to be the amount collected from university students for “tuition and other fees” in 2018–2019, representing 29.4% of total university revenues (StatCan 2020c). A fraction of that amount as an increase to core PSE funding could stabilize the sector and tuition fees (**recommendation 1**).

Any discussion of the future of PSE must also consider those who wish to benefit from PSE later in life. Further education, or life-long learning, is critical for up-skilling and re-skilling in periods of significant change, such as Canada is facing now, and yet “further education in Canada remains beset by accessibility barriers such as high costs, inconvenient times and places of courses” (Livingston and Raykov 2013, pp. 5, 7). Increased online offerings because of the pandemic may reduce some of these barriers (see section I), and certainly we are seeing increased part-time enrolments nationally in 2020–2021. But the barriers related to cost remain, and online courses can have higher costs, not least because of technological requirements. In short, the pivot to online does not erase accessibility problems, including for students with disabilities and students who come from low-income backgrounds.

While sectoral discussions have stressed the shift towards international enrolments, PSE has also moved away from part-time enrolments, conventionally used to support up-skilling and re-skilling for adults already in the workforce. A Canadian study found that those “who did not take a course but wanted to do so translates into over 4 million adults with an unmet need for further education courses” (Livingston and Raykov 2013, p. 9)—that is roughly double the recent annual enrolment in PSE (StatCan 2020a). National PSE enrolment data (see Fig. 5) shows relatively little change in the number of part-time enrolments over nearly 30 years (from 421 275 in 1992–1993 to 500 136 in 2018–2019, down from a high of 520 671 in 2013–2014). Canada’s population has increased about 40% over that period. Part-time enrolments in colleges and universities represented over 31% of registrations in 1992–1993, and <19% in 2018–2019. Given the need for up-skilling and re-skilling (see, e.g., Dodge et al. 2015), especially during economic downturns, improving PSE access for working adults should be a significant concern.

EDI initiatives must recognize those who were excluded in the past and, now that participation is increasing by under-represented groups, find that PSE has simply become unaffordable. We need a deep recognition of intersectionality and multiple identities of our students when it comes to age, race, gender, nationality or citizenship, disability, and other identity markers, as well as economic and non-economic resources that smooth the path to PSE. This requires challenging established

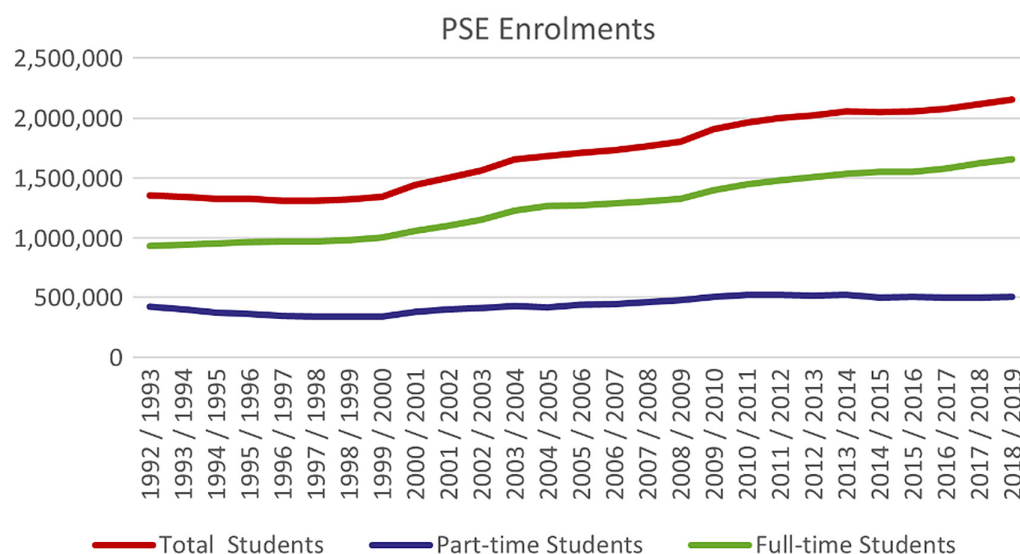


Fig. 5. Data for universities and colleges from StatCan Table 37-10-0011-01 (“Post-Secondary Enrolments”).

binary student identity categories (Strange 2016) such as “traditional/non-traditional” student and approaching diversity and intersectionality with an informed commitment to acknowledging and dismantling barriers. We must work from scholarship on PSE participation rather than policy categories (such as those of the Federal Contractors Program) that may offer only partial views as well as be inadequate to addressing the stacked barriers faced by many students.

One study found, for instance, that PSE participation in Ontario was also lower for “students with no family background of PSE attendance” and “rural Ontarians” (Finnie et al. 2011, p. 20). The first, moreover, speaks directly to the perpetuation of historic under-representation, as well as economic factors given the earnings premiums of PSE. These barriers do not spring up on entry to PSE, but often compound similar barriers in primary and secondary education as well (see James 2020). Faculty in Education and other disciplines should be supported in advancing our understanding of, and testing solutions to, these barriers, including the quality of educational facilities. For instance, good ventilation now appears to be a defense against COVID-19, but there has been evidence for a while that better ventilation in schools improves student health and educational outcomes (Haverinen-Shaughnessy et al. 2011; Toftum et al. 2015). Interdisciplinary research can improve outcomes for all students and so reduce inequities.

For faculty, recent changes to the Canada Research Chairs program are an example of directing resources to remedy historic bias, but neither a few dozen Canada Research Chairs Program positions nor new executive managerial positions will bring down barriers to inclusion for low- and middle-income households, Indigenous people, persons with disabilities, people of African descent, other racialized groups, LGBTQ+, as well as still, despite half a century of equity work, women. Among more recent efforts, the most notable is the federal Dimensions program but it, of necessity, given the division of responsibilities in Canada, focuses on research. It is, however, an important sector-wide attempt to gather information on EDI in PSE—not just numbers, but also policies and practices. It addresses the PSE sector’s history of exclusion, one that continues to skew data on who gets continuing faculty positions and grants and who does not (StatCan 2019), as well as generates “invisible labour” for faculty from underrepresented groups. The term “invisible labour” seeks to acknowledge that these faculty are often overburdened by the work of filling representation gaps on committees, supporting EDI initiatives, and mentoring faculty and students who also struggle with practices of exclusion and marginalization (for perspectives on this, see, e.g., Brown-Glaude 2009).

Engaging with the student experience must be at the center of an inclusive sector. All students need to feel a sense of belonging, of inclusion, and security. A culture of inclusion will be fostered only when faculty and staff appointments reflect diversity, supporting student belonging as well as curricula and university processes that value diverse ways of knowing. PSE must continue to push its own boundaries in considering what constitutes student success and allow for multiple interpretations of success. We cannot push towards established outcome models for the sake of expediency and efficiency (Strange and Cox 2016). Research that gathers and robustly interprets the data and qualitative information collected and so can make recommendations to effect change is urgently required.

To address the root causes of inequity, and so create enduring solutions, we must also ensure that historically marginalized views will be heard at all levels of decision-making and so can contribute meaningfully to reforming collegial processes and academic programs. Institutional governance structures, membership of the board of governors, human resource policies, committee memberships, among other systemic structures and processes, require rigorous questioning of established norms and practices and representation of voices. We must ask, and study, who is including whom and into whose reality? What is being included? (DeGagne 2020; see also sections VI and VII, below).

Inclusion is also a pipeline issue. Exclusion begins very early for most students with their K-12 experience intrinsically intertwined with their higher education pathways and success (Pouyat 2020). COVID-19 has disrupted K-12 studies across the country, and unequally so because of some of the factors discussed here (James 2020). COVID-19 not only risks undoing much of the inclusion work done to date but also exposes current gaps. It is already established that women were disproportionately affected by the lockdown, particularly through increases in childcare responsibilities, higher incidence of domestic violence, greater income loss, and greater disruption of academic work (see, e.g., Leclerc 2020; RBC 2020; Trudell and Whitmore 2020; Viglione 2020; Langin 2021). Increased domestic violence and income loss may also affect current and future PSE students of all identity categories. The technological divide, rooted not only in economic differences but also in weak internet coverage in rural areas, has also affected access to online alternatives for all levels of education during the pandemic (see section I). These impacts are faced disparately across different communities, with those from racialized and other marginalized communities facing amplified stressors. Provincial governments and PSE institutions must find ways of recognizing the disruption and evaluating its effects to better support students' success through and past it (see **recommendation 7**).

While COVID-19 as a disease is most threatening to the elderly and the immuno-compromised, how we deal with the pandemic—through policy and investment—will have long-lasting consequences for the young. It is thus critical that any response to the pandemic, and the path forward thereafter, considers age and generation. This does not just mean attending to the different needs and challenges among people of different age groups in the PSE system concurrently, although that is important. It also demands that we acknowledge, as part of a commitment to equity, diversity, inclusion, and justice, the challenge of how to look after the needs of the present without jeopardizing the resources of the future—that is, “intergenerational equity.”

Today's PSE students face unprecedented challenges in sustaining their studies and supporting themselves in the process, and graduates face unprecedented challenges in finding jobs commensurate with their level of study, and in repaying student loans. The future through the eyes of this generation of students and graduates must look bleak, and governments, PSE institutions, employers, and unions will need to work together to create a future that is fair, equitable and socially just. A PSE system committed to intergenerational equity would also recognize that younger faculty and staff in PSE institutions are more likely to be from equity-seeking groups, and to be in part-time or limited-term positions or both (Birdsell Bauer and Foster 2018). The axes of age, race, gender, sexuality, and employment status intersect to create a group of academics who face a complex knot of barriers to career development, security, and inclusion. Even younger faculty in tenure-track positions are disadvantaged relative to previous cohorts, insofar as pension changes have limited retirement earnings and the intensification of teaching, service and research, as well as higher expectations for entry-level faculty appointments, have contributed to higher rates of burnout. This group, by virtue of the intersection of their own life courses with our historical moment, constitutes a generation of PSE faculty and staff with its own unique challenges and opportunities (Pilcher 1994; Foster 2013). Recognizing the generational character of this group may help illuminate the limitations of addressing different facets of EDI separately.

An approach founded on the principle of intergenerational equity would, additionally, bring the future into play (on other implications of this, see Gold et al. 2020). Education represents, for the individual, an investment of time and money in the future, with proven returns in the form of higher future incomes. It is also a public investment in the creation of more educated population, yielding domestic citizens who ostensibly have more skills and are thus more useful to domestic labour markets (Simard-Duplain and St-Denis 2020); international students who choose to stay as educated

immigrants; and informed citizens who play a role in shaping public policy and creating a rational, critical-thinking, open-minded civil sphere. A Basic Income Guarantee may help to remedy a host of social ills (Segal et al. 2020; see also McCabe et al. 2020), including barriers to participation in PSE, but will need, in the near term, to address a significant generational inequity: the significant debt-load of many recent PSE students and the high tuition fees borne by the present cohort of PSE students (see **recommendation 8**).

An intergenerational equity lens on PSE also offers a framework for balancing the interests of the present against those of the future, a challenge relevant to many PSE institutions. For example, after the 2007–2008 global recession, universities across Canada found themselves in a pension “crisis” (Tamburri 2009). Many faculty unions are still at loggerheads with their institutions about how to ensure that commitments to those who are already retired as well as those who will retire in future are met (Krawchenko and Foster 2016, p. 103). This is a crucial problem, common not just to pensions but also to decisions about other kinds of investments—in personnel, buildings, and infrastructure—as well as curriculum offerings, tuition fees, and partnerships. If the infrastructure built today is quickly redundant or useless, it becomes the future’s costly problem. If the COVID-19 pivot to online leads to a future with more work from home and more online courses, buildings—many currently sitting empty—will matter less and faculty will matter even more.

The future always comes. As many countries worldwide have acknowledged with the incorporation of intergenerational equity into their governance, the best solution is one that is palatable and fair to people who will be impacted today, and one that consciously anticipates, makes clear, and seeks input on the impacts on people in the future (Krawchenko and Foster 2016). Building a more equitable, and therefore stronger, future will also require a culture of inclusion at all levels of PSE to ensure access to higher education as a well-established pathway for reducing inequality and an array of individual, social, and health-related harms that follow in its wake. All of the recommendations here attend to the importance of building this more equitable and resilient future, including addressing financial barriers to access (**recommendations 1 and 8**); structural inequities, many intensified by the pandemic (**recommendations 3, 4, 6, and 7**); inequities among PSE academic staff that undermine the success of the sector (**recommendations 1, 3, and 5**); and the ways in which PSE can support reconciliation (**recommendations 1, 2, 3, and 7**).

VI. Indigenous engagement and inclusion

The PSE sector has begun to develop ways through which its institutions may become more welcoming, animating, and relevant for Indigenous Peoples through increased Indigenous programs, partnerships, content, and funding (Davidson and Jamieson 2018; Moore et al. 2019). (The term “Indigenous” will herein refer only to the First Nations, Inuit, and Métis Peoples of Canada.) Despite all of the initiatives to which they have committed, universities and colleges have merely scratched the surface of (re)conciliation.⁸ The journey toward reconciliation is often referred to as a process of *indigenization*—a term of which many are critical but which may, if appropriately conceptualized, provide institutions of higher education with a firm and fitting basis for much needed action.

Gaudry and Lorenz (2018, p. 218) illuminate a continuum of three approaches that can be observed along this journey: “Indigenous inclusion, reconciliation Indigenization, and decolonial

⁸Reconciliation has been cited by commissioners of the Truth and Reconciliation Commission of Canada as the act of establishing new relationships between Indigenous and non-Indigenous whilst retaining an understanding of a shared and perhaps unsavoury history. This term is conditioned with a parenthetical reference—i.e., “(re)” —to emphasize the real possibility that conciliation has yet to have occurred in many contexts of concern for Indigenous Peoples.

Indigenization". Universities typically focus on Indigenous inclusion, which increases the presence and representation of Indigenous Peoples. However, this is not decolonization as it fails to change the underlying colonial systems. Simply adding an Indigenous space does not allow the institution to address its own history with colonization. Reconciliation Indigenization finds a balance between Indigenous and Western perspectives, for instance by mandating Indigenous courses for undergraduates. This, too, is limited because it continues to privilege Western forms of knowledge (for instance, standardized testing and hierarchy between professors and students) without any fundamental change. This approach turns "Indigenization" into a buzzword that is "more discursive than substantive" (Gaudry and Lorenz 2018, p. 222).

Rather than these easy but less impactful initiatives, universities need a deep critique and creative decolonization of their assumptions and the systems they enable. Decolonial Indigenization restructures the institution to dismantle power imbalances (Gaudry and Lorenz 2018, pp. 223–224, 226). This involves following a treaty-based framework that allows Indigenous Peoples to have self-determination over their knowledges and establishes a "resurgence" of the academy that restructures its methods of teaching (Gaudry and Lorenz 2018, p. 224). Universities and colleges can offer more community and land-based learning opportunities, recognize Indigenous knowledges from Indigenous Peoples, and follow guidelines by Indigenous communities (Samson 2019).

Palmer (2019) asserted the actions taken thus far by universities are not reconciliation, despite universities claiming so. Land acknowledgments, Indigenous artwork, cultural sensitivity training, and bringing Indigenous speakers into classrooms, she argued, are not reconciliation. These measures are not ground-breaking; in fact, they should be considered the bare minimum requirements when Indigenizing. Daigle (2019) has gone further to describe these measures as merely "performative." Even with these measures, racism against Indigenous Peoples has not disappeared on campuses (Piapot 2018).

Rather, keys to reconciliation for Palmer (2019) include, but are not limited to, hiring Indigenous faculty in all departments (not just in the general university), balancing requirements for Indigenous faculty's workloads with the understanding that they have obligations to their communities, making Indigenous presence and capacities fully known and respected across the entire campus, while acknowledging the stolen land upon which the university sits (not just reciting a scripted land acknowledgment; Daigle 2019), and hiring Indigenous Peoples, not just in an Aboriginal Advisory Committee, but in all levels of governance in the institution. Further, when courses incorporate Indigenous content, they typically do not go beyond a romanticized history, which Daigle (2019) described as "feel-good" content. Daigle (2019) suggests that courses should challenge students to think about their relationships as settlers or as Indigenous Peoples and encourage them to "dismantle colonial power relations" (p. 712). Departments should also include Indigenous content courses beyond the introductory courses. The Truth and Reconciliation Commission's Calls to Action, as Palmer (2019) and Daigle (2019) explained, are only the start; reconciliation requires much more.

The aspiration of significantly increasing Indigenous faculty appointments across PSE is unattainable, even unthinkable, during near-freezes in the hiring of continuing, full-time faculty, and continuing barriers to inclusion for undergraduate and graduate students. Even the project of developing meaningful Indigenous content courses can be slowed down by faculty shortages, not least in leading to large class sizes that inhibit the kind of difficult discussion that is required to dismantle colonial assumptions. Improved core funding to support stable faculty appointments is also critical to addressing key obligations under reconciliation. The Post-Secondary Student Support Program has increased funding for Indigenous students in response to COVID-19, but this must continue beyond the pandemic, along with support for research programs that support Indigenous communities, decolonization, and widening participation. Moreover, universities, colleges, and institutes have an important

opportunity to recognize the central role and increasing scope⁹ of Indigenous post-secondary institutions as key partners in the continuum of Indigenization. **Recommendations 1, 2, 3, and 7**, as a group, seek to address systemic barriers to Indigenous participation in PSE, and enhance non-Indigenous Canadians' contributions and access to the many benefits for everyone in Canada that such participation will bring.

VII. Institutional autonomy, academic freedom, and collegial governance

We end where we began: with the centrality of expert review and oversight to the high quality, credibility, and currency of PSE as well as the global reputation of Canada's colleges and universities.

In the decades after World War II, when much of Canada's PSE sector was built through the expansion of universities and community colleges in particular, three major reports were published. The first, for the province of British Columbia, was the [Macdonald \(1962\)](#) report, *Higher Education in Canada and a Plan for the Future*, which paved the way for a new *BC University Act* (1963) with renewed governance implications, and for the establishment of a college system in BC. The other two were supported by the Association of Universities and Colleges of Canada (AUCC), the forerunner of Universities Canada: the [Bladen \(1965\)](#) commission report for AUCC, *Financing Higher Education in Canada*, reflected in important ways on public funding for PSE; and Sir James Duff and Robert O. Berdahl's study, commissioned by AUCC and CAUT, led to a *Report on University Government* (1966), echoing in key respects the aspirations of the US "Statement on Government of Universities and Colleges", jointly issued by the [American Association of University Professors, the American Council on Education, and the Association of Governing Boards of Universities and Colleges](#) (1966).

The two 1966 documents arose from collaborations between upper administrations and faculty associations. They supported the further development of more clear, inclusive, and democratic pathways to academic, expert decision-making to address a crisis in governance rather than resources ([Wright 2013](#)). A half-century later, in the struggle to keep PSE afloat with scarce resources, governance structures have been under renewed threat and so the use of the term "government" in both the *Canadian Report* and the American "Statement" is still noteworthy. Universities are structurally similar to many democratic nations: their autonomy is grounded in their capacity to govern themselves through transparent, credible, and inclusive mechanisms. In university charters across Canada, academic decision-making is handled by senates or similar councils composed primarily of academics, that is, faculty, students, and senior academic administrators.

Collegial governance extends from senates to faculties (often framed as committees of Senate) and schools or departments, all with committees of faculty who oversee academic decision-making from curriculum to policy to appointments and promotions. Academic freedom has developed not only to ensure that each faculty member can act on informed decisions about their research and teaching (within legitimate constraints such as research ethics, senate policy, and collegially determined curricula), but also to maintain vigorous collegial governance by ensuring that faculty can express informed dissent, unfettered by fears of retaliation from their employer.

⁹This is evidenced by several legal and policy developments such as the Indigenous Advanced Education and Skills Council in Ontario, an Indigenous-controlled and governed Council, recognized under the *Indigenous Institutes Act*, 2017, and tasked with establishing quality assurance standards and benchmarks for organizations and programs delivered by Indigenous Institutes.

This is why the above discussion, unlike most of this report, is only about universities. Some colleges also have autonomy and collegial governance, especially colleges that come out of traditional liberal-arts college models (such as fine arts and religious colleges)—a number of them have smoothly converted to university status in recent decades. But the community colleges that largely emerged in the post-war era “were closely controlled by the government . . . to meet the needs of the local community, business, and industry” (Hogan and Trotter 2013, p. 69). The Nova Scotia Community College system became self-governing in 1996, for instance, but still answers to the Minister on a number of academic points: its independent Board is thus tasked with “evaluat[ing] programs of study on a regular basis in accordance with guidelines approved by the Minister” (Province of Nova Scotia 2014, p. 9). Under similar legislation in Ontario, the Lieutenant Governor-in-Council’s powers include “limiting the powers that may be exercised by a college under the *Corporations Act* under such conditions as may be prescribed” (Province of Ontario 2002, p. 4). In many such colleges, weak institutional autonomy goes hand in hand with little-to-no academic freedom or collegial governance for its faculty. The three principles of academic freedom, collegial governance, and institutional autonomy are not opposed, but mutually supporting, like the legs of a tripod: universities function on this firm foundation, but many of our colleges do not.

This has been changing. Academic freedom was a significant issue in the historic 2017 college strike in Ontario, but it has been brewing for a while “particularly among faculty unions as it relates to workload, teaching assignments, and curriculum” (Hogan and Trotter 2013, p. 69). Many colleges in Canada now offer honours degrees. Academic freedom is increasingly important for college faculty and students so that they may engage in critical inquiry intrinsic to degree-level education and also to extend the freedom to critically inquire to students in other credential programs. Recent provincial government efforts to gain more direct control over universities—for instance, through PBF metrics that stress graduates’ employment and so “the needs of . . . business, and industry”—are legible as attempts to extend their control of community colleges to the rest of the PSE sector, at the very moment that some college unions and college systems are moving closer to the university model.

There is no easy characterization of the complicated governance and academic issues at play here, especially given provincial variations. But, in broad terms, the rhetoric that works against collegial governance stresses the need for speed and efficiency in the midst first of a funding crisis and then a pandemic crisis. Managers manage. Academics discuss, pause to investigate further, debate, and try to build consensus. The more senates in particular have functioned as a “rubber-stamp” (Berdahl and Duff 1966, p. 6) for administrative initiatives, unchecked by academic concerns, the more they have encouraged migration of academic stewardship and legitimacy from collegial contexts to the bargaining table, the resultant collective agreement, or the picket line. This is an especially slippery slope when superficially non-academic decisions, such as partnerships with edtech firms, slide into academic content delivery without proper collegial oversight. Oversight is essential for robust analysis of material’s currency and relevance for the specific academic programs and needs of an institution and for transparency on other profit-generating effects, such as student-data collection or ensuring training on specific proprietary systems to promote their use in industry (Noble 1998). Of growing concern is corporations whose services appear to fall short on ethics fundamental to academic integrity and other core values (McKenzie 2019; Carey 2020; Adams 2021).

Noting the “short-circuiting of faculty involvement in decision-making . . . based on concerns about time constraints and efficiency,” Schoorman and Acker-Hocevar (2010, p. 312) suggested that “these practices threaten efforts toward differentiated instruction, culturally relevant pedagogy, broad-based involvement, and deliberative decision-making”. Consequently, unilateral decision-making too often slows everything down, or even pushes it down the wrong track, where unforeseen consequences and other pitfalls arise from a failure to broadly take into account academic expertise and experience,

in all its rich diversity. COVID-19 has led to a lot of this kind of rapid decision-making, and it will take time on many campuses to sort through the unforeseen consequences as well as restore confidence and collegial operations. But it is imperative that the sector work on rebuilding itself in this way—and build back better, as the phrase goes, by listening to the full, diverse collegium, including part-time faculty.

As we are seeing played out in COVID-19 science (Caulfield et al. 2020), getting things right means taking the time to do so, as well as maintaining an ongoing process of high-quality peer-review. Peer review, academic freedom, and collegial governance need to function, unfettered by expediency or external pressures, to protect the integrity of the information that Canadians get. Academic freedom is not only a support for expertise-driven research, teaching, and decision-making (see Karran and Mallinson 2019); it is also, in extreme cases, what in other contexts is called whistle-blower protection, vital to public confidence in public institutions. To protect its credibility and the value of its contributions to public knowledge and advice to government, the PSE sector as a whole needs to advance in incorporating what the Supreme Court of Canada recognized and commended as the “free and fearless” exercise of academic freedom (Findlay and Bidwell 2001).

Moreover, it undermines the aspirations and purpose of a more inclusive PSE as well as runs clearly counter to the principles of reconciliation to silence faculty as the doors are opened wider to those who have historically been underrepresented in the PSE sector. Meaningful inclusion, as well as credible PSE, requires robust collegial governance, defended by academic freedom, that provides a mechanism for the thorough renovation of academic processes and programs by a more inclusive faculty in institutions. From departments to governing Boards, PSE must maintain an uncompromising commitment to an “openness to all perspectives, an obligation to listen to and build consensus from this diversity, transparency in the decision-making process, and leadership accountability through listening and action” (Schoorman and Acker-Hocevar 2010, p. 314).

Universities should not loosen their grip on the high-quality oversight and credibility ensured by the three core principles of academic freedom, collegial governance, and institutional autonomy, and should instead seek to ensure that all faculty, regardless of employment status, are protected (see **recommendation 5**). The PSE sector as a whole should also support colleges’ aspiration to benefit from expert-driven decision-making so that all PSE institutions can be protected from the sorts of short-term political agendas of which anti-science populism is an extreme example.

In the second half of the 20th century, Canada built an enviable PSE system that supported Canadians’ aspirations and still draws students from around the world to our colleges and universities. We can let that successful investment wither on the vine, or we can revive it with improved and stable core funding that will make it possible to transform PSE to better support students, research, and communities. The future of the PSE sector will in significant ways shape the future of Canada—a future that can be more equitable and inclusive, more prosperous, and more resilient.

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Author contributions

JB, FD, RDT, LF, KF, GL, LW, and JMW conceived and designed the study. JB, FD, RDT, LF, KF, GL, LW, and JMW performed the experiments/collected the data. JB, FD, RDT, LF, KF, GL, LW, and JMW analyzed and interpreted the data. JB, FD, RDT, LF, KF, GL, LW, and JMW contributed resources. JB, FD, RDT, LF, KF, GL, LW, and JMW drafted or revised the manuscript.

Competing interests

The authors have declared that no competing interests exist.

Data availability statement

All relevant data are within the paper.

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