



Submission to the Department of Finance in advance of Budget 2024

Recommendations

1. When considering a response to the Report of the Advisory Panel on the Federal Research Support System, ensure new measures fully utilize capacity across the entire post-secondary research ecosystem, especially as it relates to mission-driven and industry-led research at polytechnic institutions.
2. As Indigenous businesses and communities seek economic empowerment and solutions to local challenges, ensure there are funding mechanisms that activate existing academic capacity and enable institutions to build effective, long-term relationships with their Indigenous partners.
3. Ensure post-secondary institutions have adequate access to strategic infrastructure funding to support campus renewal, invest in affordable student housing and undertake sustainability projects.
4. Implement a \$25 million cost-shared training equipment fund for Canada's hands-on learning institutions to ensure they can better unlock industry investment and adapt programming to respond to a rapidly evolving labour market.
5. To boost apprenticeship starts, introduce support for high-intervention apprenticeship intermediaries that support the hiring, training and deployment of apprentices and reduce friction to employer participation.
6. Launch a national consultation to inform policies related to Canada's international student population with a view to developing a long-term strategy to ensure ethical recruitment, efficient visa processing, adequate supports and resources during training and transparent pathways to immigration.

Introduction

Like its global counterparts, Canada faces change and uncertainty. Conflicts are creating geopolitical instability, in turn fracturing supply chains and raising the cost of living. Climate change is an increasingly visible threat, with severe weather events wreaking havoc nationwide. Risks to national security and data sovereignty are increasingly prevalent, with bad actors employing new tactics and technologies. The economy is grappling with persistently high inflation, lagging business productivity measures and skills shortages in critical occupations.

As the federal government seeks to address these challenges, Canada's polytechnics are ready partners, contributing solutions to some of the country's most intractable problems.

As leaders in the delivery of applied, industry-aligned education, institutions offer both a breadth of credentials to new entrants and programs designed to upskill workers in a rapidly evolving labour market. Moreover, institutions support business innovation by working collaboratively to address the challenges faced by companies of all sizes in all sectors of the economy.

Canada's polytechnics offer solutions by:

- Developing highly skilled graduates in priority and high-growth sectors, serving middle-class Canadians and those seeking to join their ranks
- Providing lifelong learning opportunities to a diverse population looking to address skills mismatches and advance their careers
- Supporting companies, not-for-profit organizations and entrepreneurs as they pursue innovative solutions to real-world challenges
- Serving as exemplars for sustainability, leading the way for companies and individuals looking to adopt new technology, new systems and new techniques to achieve net-zero

In this submission, we are pleased to offer a series of focused recommendations designed to harness polytechnic capacity to address concerns on the minds of Canadians from coast to coast to coast. We are ready for the challenge.

Boosting Canada's Innovation Potential

When considering a response to the Report of the Advisory Panel on the Federal Research Support System, ensure new measures fully utilize capacity across the entire post-secondary research ecosystem, especially as it relates to mission-driven and industry-led research at polytechnic institutions.

Over the last 20 years, polytechnics have become important partners for Canadian businesses and communities seeking to improve performance, streamline processes, adopt new technology and solve complex challenges. In 2022-23 alone, the 13 members of Polytechnics Canada conducted 3,389 partner-driven research projects, addressing the needs of 2,656 firms and community organizations. They leveraged \$2.24 from other sources for every \$1 invested by the federal government. They engaged more than 21,200 students in applied research activity, developing the next generation of innovation-enabled talent. Because intellectual property is retained by business partners, polytechnic applied research de-risks innovation activity among Canada's small businesses and entrepreneurs, providing a pathway to commercialization.

Yet, at present, 119 eligible polytechnics and colleges have access to roughly 3 per cent of the federal investment in academic research.

As the government seeks to respond to last year's report from the Advisory Panel on the Federal Research Support System, we believe polytechnics are under-utilized and under-resourced partners for translating academic research into economic impact. Regardless of the value of fundamental research, it is unthinkable that government would increase investments without a plan for mobilizing research findings and maximizing economic impact.

A modernized approach requires government to reevaluate the research ecosystem from the ground up. After two decades building capacity, it is time to fully realize the benefits of polytechnic and college applied research by reviewing program eligibility and the evaluation processes applied to funding programs. Simply put, polytechnics and colleges should no longer be treated as junior partners in the academic research ecosystem. Revisiting the Tri-Council structure and related systems must include an effort to build pathways to translate discovery research into pragmatic solutions to industry-identified problems. This is the sweet spot for Canada's polytechnics and colleges.

To ensure more equitable participation, the federal government must set new ambitions around investments in mission-driven, industry-led research. This would entail ensuring evaluators fully appreciate a broader range of indicators of capacity and expertise, and value industry experience at least as highly as academic publications.

We believe these changes will better address lagging business productivity indicators by activating capacity in an under-utilized area of Canada's innovation ecosystem.

As Indigenous businesses and communities seek economic empowerment and solutions to local challenges, ensure there are funding mechanisms that activate existing academic capacity and enable institutions to build effective, long-term relationships with their Indigenous partners.

In our pre-budget submission to the House of Commons Standing Committee on Finance, we recommended a dedicated Tri-Council funding stream designed with and for Indigenous researchers, communities and businesses. Indigenous-led applied research stands to be an important way to address the unique challenges faced by communities, particularly if designed to be flexible, culturally sensitive and tailored to the aspirations of Indigenous communities. This is an important marker on the road to Indigenous reconciliation, a shared value across Canada's polytechnic institutions.

We further suggest that funding should be accompanied by navigation to post-secondary institutions that house facilities, equipment and expertise relevant to Indigenous-identified research, activating a community positioned to support and encourage community-led research.

Building strong relationships grounded in trust is crucial to effective working relationships with Indigenous communities. The unique historical and cultural context of Indigenous communities requires a nuanced and respectful approach, demanding time, patience and a genuine commitment to understanding diverse perspectives.

Currently, the timelines associated with federal research grants do not provide adequate time to build relationships and fully understand objectives, undermining the long-term benefits of such initiatives. To address this, we recommend academic-side funding mechanisms that are tailored and flexible, recognizing the time and effort needed for meaningful engagement.

Ensure post-secondary institutions have adequate access to strategic infrastructure funding to support campus renewal, invest in affordable student housing and undertake sustainability projects.

Polytechnic campuses across the country are community hubs. They work closely with municipal governments and other community partners to assess and respond to local challenges, whether related to retrofits and net-zero infrastructure in welcoming and inclusive spaces that draw members of the community in for events, cultural celebrations and to learn.

However, the physical spaces at these institutions are aging, with limited funds to deal with deferred maintenance and the emerging need to provide affordable housing options for students. To ensure that our public post-secondary institutions remain at the forefront of sustainability, accessibility and affordability initiatives, intentional and targeted federal support is required.

The *Post-Secondary Institutions Strategic Investment Fund* was last launched in 2016 to accelerate the strategic construction, repair and maintenance of infrastructure at post-secondary institutions across Canada. This was the last round of federal funding dedicated to addressing the infrastructure needs of Canadian higher education. In the intervening years, the infrastructure needs at institutions have continued to evolve but access to federal infrastructure investments has been limited.

Given the current fiscal reality, we acknowledge the need for creativity when allocating scarce public funds. We recommend the government strategically deploy or redeploy infrastructure funds to address critical gaps pertaining to sustainability and greening, campus accessibility and affordable student housing. There is significant potential for the government to redeploy funding from programs under the *Investing in Canada Plan* where funds have not been fully disbursed. It is essential, however, that federal infrastructure investments in public post-secondary institutions be de-linked from the necessity for provincial government buy-in.

In the polytechnic sector, federal dollars stand to unlock significant investment from other sources. Deep connections with industry position polytechnics to leverage substantial private-sector contributions from public investments. This means relatively modest federal funding could play a pivotal role in catalyzing additional business support, even in regions where provincial priorities lie elsewhere.

Saskatchewan Polytechnic provides a clear demonstration of this capacity having used an investment from PrairiesCan to leverage a matching contribution from the provincial utility provider, SaskPower. With a cumulative investment of \$1.35 million, Saskatchewan Polytechnic was able to build a new energy and resources lab focused on sustainable energy technologies, smart grids and energy-efficient home construction.

In Ontario, Seneca Polytechnic unlocked \$5.4 million in contributions from industry partners to open a new state-of-the-art facility for industry-focused life sciences research, relying on \$4 million in funding from federal and provincial sources to kickstart the project.

It is unreasonable to expect that institutions have the capacity to make major investments to address concerns that students – both international and domestic – are struggling to find affordable housing. This is not their primary mandate. While we applaud efforts to make post-secondary institutions eligible for low-interest loans under the Apartment Construction Loan Program, broader support is required. Further public investment could play a crucial role in encouraging the participation of private sector partners, fostering a collaborative approach to addressing the immediate housing challenges faced by students.

In the meantime, polytechnics have been responding to the need for housing among their students in creative ways. For example, in the Greater Toronto Area, Humber recently partnered with the online home share technology platform, SpacesShared. The goal is to pair students looking for accommodation with seniors who have extra space. Humber reports this initiative has helped 500 students identify accommodations so far.

Preparing a Future-Ready Workforce

Implement a \$25 million cost-shared training equipment fund for Canada's hands-on learning institutions to ensure they can better unlock industry investment and adapt programming to respond to a rapidly evolving labour market.

From artificial intelligence and automation to renewable energy and biotechnology, fast-paced technological advancements demand a workforce capable of harnessing their potential. In the skilled trades, polytechnics delivered technical training to more than 33,000 apprentices in 2022 (for comparison, 42,000 apprentices claimed training benefits that year). Quite simply, offering training in hands-on, technology-intensive programs requires continuous investment in the latest equipment and tools.

Operating in close proximity to local industry, polytechnics engage employers on program advisory committees and as part-time instructors. The feedback loop both ensures their programs are adapted to meet emerging needs and that graduates have the skills needed to hit the ground running. These relationships also facilitate industry donations and investments.

For example, Mississauga-based cybersecurity leader Stratejm donated \$500,000 to Sheridan to support upgrades related to cybersecurity programming. This investment has helped expand Sheridan's CyberRange by purchasing new hardware, software and virtual resources for ethical hacking, penetration tests and malware analysis. This kind of support is critical to ensuring training for highly technical, evolving occupations remains relevant.

A modest annual investment will unlock more activity like this, helping to address the ongoing challenge of training a workforce ready for explosive technological innovation.

An investment in a shared-cost training equipment fund would:

- 1. Enhance the learning experience:** The availability of modern equipment and materials ensures that students receive hands-on training with the latest technologies, providing them with a competitive edge in the job market.
- 2. Deliver industry-relevant skills:** By closely aligning equipment and materials with industry needs, polytechnics produce highly employable graduates capable of addressing real-world challenges.
- 3. Boost industry collaboration and engagement:** Industry collaborations and co-investments ensure educational programs are aligned with employer requirements, creating a sustainable training ecosystem.
- 4. Enable continuous adaptation:** Consistent ability to invest in new equipment and tools ensures programs can meet evolving skills needs.
- 5. Attract and retain talent in technology-intensive occupations:** A state-of-the-art equipment inventory attracts students, faculty and employer partnerships, helping ensure Canada has the top talent it needs.

To boost apprenticeship starts, introduce support for high-intervention apprenticeship intermediaries that support the hiring, training and deployment of apprentices and reduce friction to employer participation.

Apprenticeship remains an essential component in the training of Canada's skilled trades workforce – the professionals who build, repair and maintain the infrastructure on which our economy relies. Despite its important workforce development role, training apprentices can be a time-consuming and costly endeavour for employers, especially small- and mid-sized enterprises.

The federal approach under the Canadian Apprenticeship Strategy has largely been to provide wage subsidies to offset a first-year apprentice's wages, failing to recognize the barriers to employer engagement go well beyond the cost of a new hire.

Under the current system, employers must:

- Interview, vet and hire apprentices, most of whom have limited experience in the field
- Handle paperwork associated with registering apprentices and applying for federal and/or provincial supports
- Assign a journeyperson mentor to monitor and oversee apprentice on-the-job training, often with an expectation that productivity will not be affected
- Offer a variety of work within scope of trade
- Monitor skill acquisition in line with provincial training guidelines and encourage progression by releasing the apprentice for technical training

For many employers, the burden associated with hiring and training apprentices is difficult to reconcile, even with the assistance of wage subsidies. It is unclear whether wage subsidies in Year 1 of an apprenticeship incent continued employment or apprenticeship completion, both of which are critical to a robust skilled trades workforce.

We recommend the federal government reorient its Canadian Apprenticeship Strategy to address these issues by funding high-intervention apprenticeship intermediaries to hire, support training and deploy apprentices. Intermediaries can support individual apprentices by identifying employment opportunities, offering placement (and re-placement) support, ensuring skills development goals are being met and guiding apprentices back to technical training. Employers benefit by partnering with intermediaries that assume the administrative burden of apprenticeship and provide greater certainty that apprentices will be a good fit with their business needs.

A similar model has been successful in both the UK and Australia, offering a roadmap that stands to stabilize Canada's apprenticeship system. With completion rates of roughly 50 per cent, thousands of Canadian apprenticeships are abandoned each year, leaving the skilled trades workforce in a state of constant under-supply. It is time to try an approach that addresses both apprentice starts and supports completion, rather than one more than the other.

Integrating International Talent

Launch a national consultation to inform policies related to Canada's international student population with a view to developing a long-term strategy to ensure ethical recruitment, efficient visa processing, adequate supports and resources during training, and transparent pathways to immigration.

According to a [2023 survey](#) conducted by The Harris Poll, 37 per cent of Canadian businesses report open positions they cannot fill. While immigration remains a critical component of Canada's labour market strategy, newcomer integration has been a consistent challenge as new Canadians navigate accessibility hurdles including regulatory certifications, language, education and cultural adaptation. International students are well-positioned for smooth labour market integration after gaining Canadian post-secondary credentials and experience.

A majority of international students in the polytechnic and college sector express a desire to build a career in Canada. As students, they have opportunities to connect with Canadian employers in the classroom and through work-integrated learning. With Canadian credentials in hand, employers have confidence in their skills and abilities. As entry-level workers, graduates stand to have significant longevity in the labour market. These attributes represent strong reasons to invest in international education.

As the federal government seeks to bring international student growth under control, it is essential to understand the unintended implications of a broad national cap. For example, international student tuition not only subsidizes domestic student fees but enables public institutions to offer expensive and technology-intensive programs where graduates are in high demand. The moratorium on visa processing until new federal-provincial systems are in place penalizes all institutions for pressures in a few urban centres.

Meanwhile, Canada's international student visa processing times are among the worst in the world for a top-ranked student destination. The extra step to introduce provincial attestations stands to make a bad situation worse. The sector is well positioned to provide advice to address processing inefficiencies as new systems are implemented.

We also see opportunities to consider and recalibrate the Post-Graduate Work Permit regime to better serve labour market shortages. The suggestion that exemptions are required for Master's and PhD graduates does not align with the government's own labour market projections, suggesting input is required from both business and education stakeholders with a better grasp of demand. It will be equally important to recognize the credentials that international students bring with them into the country, many of whom come to Canada for post-graduate instruction designed to support labour market integration. The pathways to permanent residency and citizenship should be clear and unobstructed, particularly where graduates fill a critical workforce need.

Polytechnics Canada recommends a fulsome consultation to examine opportunities to improve and streamline systems and processes related to international student recruitment, visa approvals, supports while in education and post-graduate work permits in a way that protects Canada's reputation as a destination for both education and immigration. This is the most effective way to ensure a steady flow of highly trained graduates into Canada's workforce, both addressing labour shortages and contributing to the country's prosperity.

Our Members



About Us

Polytechnics Canada is a non-profit association representing 13 leading research-intensive, public polytechnics and institutes of technology. We advocate for federal action in areas where polytechnics provide solutions for a more innovative, productive and globally competitive country.