ICTC CTIC

Information and Communications Technology Council

Conseil des technologies de l'information et des communications

Written Submission for the Pre-Budget Consultations in Advance of the Upcoming Federal Budget

By the Information and Communications Technology Council (ICTC)

List of Recommendations

- **Recommendation 1:** That the government provide $207.6 million per year on an ongoing basis, starting in 2025-26, to Employment and Social Development Canada to establish permanent funding for the Student Work Placement Program and continue supporting work-integrated learning opportunities for Canadian students.
- **Recommendation 2**: That the government invest in digital innovation for labour market information and novel primary research methods to achieve dynamic forecasting, real-time analysis, and solutions that can respond to rapid economic and technological changes in Canada.

Background

Students and youth navigating today's labour market need support to successfully transition to Canada's workforce.

Canada's workforce is undergoing a profound transformation. Canadian organizations face mounting pressure to digitalize, innovate, and become more sustainable, generating new demand for a generation of digital-green skills.[1] Meanwhile, automation technologies like robotics and artificial intelligence (AI) are transforming what tasks, knowledge, and skills are needed by people—versus what digital technologies can autonomously complete.[2]

Canada's labour market is experiencing a slowdown.[3] Employment has not declined due to Canada's growing population, but the unemployment rate is rising, with students and youth bearing the greatest impact.

In June 2024, the unemployment rate for Canadian youth aged 15 to 24 reached 13.5%, its highest outside of the COVID-19 pandemic since July 2016.[4] Similarly, the employment rate for returning students aged 15 to 24 fell to 46.8%, its lowest outside of the COVID-19 pandemic since June 1998.[5] While it is not uncommon for younger workers to bear the brunt of an economic slowdown, it is crucial to recognize and mitigate the negative impact this can have on youth throughout their careers, including unemployment, reduced earnings, slower wage growth, and delayed career progression.[6]

Students graduating in today's economic climate need strengthened guidance and support as they transition into the workforce.

---

[1] Allison Clark, Erik Henningsmoen, Todd Legere, Francis Okpaleke. Mapping The Junction of Digital-Green Skills for the Twin Transition: A Competency Framework, June 2024, Information and Communications Technology Council (ICTC), https://ictc-ctic.ca/reports/mapping-junction-digital-green-skills-twin-transition.

[2] Source papers from WIL AI R&P study

[3] "Labour Force Survey, June 2024," July 2024, Statistics Canada, https://www150.statcan.gc.ca/n1/daily-quotidien/240705/dq240705a-eng.htm; Carrie Freestone and Rachel Battaglia, "Proof Point: Students and new graduates are bearing the brunt of the labour market downturn," January 2024, RBC Thought Leadership, https://thoughtleadership.rbc.com/proof-point-students-and-new-graduates-are-bearing-the-brunt-of-the-labour-market-downturn/.

[4] "Labour Force Survey, June 2024," July 2024, Statistics Canada, https://www150.statcan.gc.ca/n1/daily-quotidien/240705/dq240705a-eng.htm.

[5] Ibid.

[6] Carrie Freestone and Rachel Battaglia, "Proof Point: Students and new graduates are bearing the brunt of the labour market downturn," January 2024, RBC Thought Leadership, https://thoughtleadership.rbc.com/proof-point-students-and-new-graduates-are-bearing-the-brunt-of-the-labour-market-downturn/; Rannella Billy-Ochieng and Anusha Arif, "Entering the Labour Market During Recession Can Leave Lasting Scars," February 2024, TD Economics, https://economics.td.com/ca-labour-market-during-recession-can-leave-scars; https://economics.td.com/ca-labour-market-during-recession-can-leave-scars; Andrew Agopsowicz, "The Recession Roadblock: The Long-term Career Consequences of Graduating into a Downturn, November 2019, RBC Thought Leadership, https://thoughtleadership.rbc.com/the-recession-roadblock-the-long-term-career-consequences-of-graduating-into-a-downturn/; Hanes Schwandt, "Recession Graduates: The Long-lasting Effects of an Unlucky Draw," April 2019, Sanford Institute for Economic Policy Research, https://siepr.stanford.edu/publications/policy-brief/recession-graduates-long-lasting-effects-unlucky-draw; Hannes Schwandt and Till M. von Wachter, "Life-Cycle Impacts of Graduating in a Recession," March 2023, National Bureau of Economic Research, https://www.nber.org/reporter/2023number1/life-cycle-impacts-graduating-recession.

Bridging the Gap Between School and Work

Recommendation 1: That the government provide $207.6 million per year on an ongoing basis, starting in 2025-26, to Employment and Social Development Canada to establish permanent funding for the Student Work Placement Program and continue supporting work-integrated learning opportunities for Canadian students.

Ensuring that students are workforce-ready is a complex task.

Traditional methods used by post-secondary institutions to engage industry, such as program advisory committees, are important cornerstones of curriculum development—but they are no longer sufficient to keep pace with changes in roles, skills, and tools.

There is a mismatch between the pace of technological change and the pace of higher education; institutional processes and resource constraints can prevent higher education from adapting quickly to labour market needs.[7]

This disconnect has clear and significant impacts on the labour market. For example, ICTC increasingly hears that tech sector employers expect students to arrive ready to use AI in the workplace. Yet, during consultations with 69 post-secondary institutions across Canada in 2023 and 2024, ICTC found that many higher education organizations are struggling even to draft an AI policy that goes beyond academic integrity to guide the adoption of AI tools in classrooms.[8]

Few solutions bridge the disjuncture between higher education and industry as efficiently as work-integrated learning (WIL).

Research into WIL outcomes in Canada and internationally finds that high-quality WIL improves students' self-reported transferable skills, enables employers to test student capacity, and often results in a job offer for students following the program.[9] Research also finds that having an internship in the same industry influences hiring decisions, with employers being more likely to hire a candidate with internship experience in the same industry than one without.[10] Graduates who have internship experience are also more likely than those without to start a full-time position within six months of graduating.[11]

[7] "Charting the Course: The Future of Higher Education in Canada," May 2024, Information and Communications Technology Council (ICTC), https://ictc-ctic.ca/reports/charting-course.
[8] "Charting the Course: The Future of Higher Education in Canada," May 2024, Information and Communications Technology Council (ICTC), https://ictc-ctic.ca/reports/charting-course.
[9] Alexandra Cutean, Letitia Henville, and Faun Rice, "The Impact of Work-Integrated Learning on Student Success and the Canadian Economy: An Evaluation of Canada's Student Work Placement Program," September 2023, Information and Communications Technology Council (ICTC), https://ictc-ctic.ca/reports/the-impact-of-workforce-integrated-learning-on-student-success-and-the-canadian-economy.
[10] Gray, Kevin, "Internship experience the most influential factor in tough hiring decisions," January 2022, The National Association of Colleges and Employers, https://www.naceweb.org/talent-acquisition/candidate-selection/internship-experience-the-most-influential-factor-in-tough-hiring-decisions/.
[11] Caroline Liongosari and Brian Xu, "Internship Outcomes: Talent Retention for Companies, Pathway to Jobs for Graduates," May 2024, LinkedIn Economic Graph, https://economicgraph.linkedin.com/content/dam/me/economicgraph/en-us/PDF/internship-outcomes.pdf.

The Government of Canada's Student Work Placement Program (SWPP) is one of Canada's largest and most impactful WIL programs.

ICTC's research finds that approximately half of participating employers have extended an employment offer to a SWPP student they have supervised.[12] Additionally, one-third of surveyed SWPP alumni report securing a job offer from the same employer who supervised their SWPP co-op.[13]

Within four years of participating in the program, SWPP alumni can also expect to earn approximately $10,000 more per year than peers with no WIL experience.[14]

The SWPP provides a clear, tangible, and robust return on investment for Canada. It generates immediate economic value for employers and enables students to earn a higher salary over their careers, increasing federal tax revenues and contributions to the Canadian Pension Plan (CPP) and Employment Insurance (EI) premiums.

ICTC research finds that each WIL placement generates an immediate economic value of $1,634 for employers. Once employed full-time, SWPP alumni can also expect to earn $10,000 more per year than their peers with no WIL experience.[15]

These individual benefits compound across the economy, increasing economic outcomes, federal tax revenues, and contributions to CPP and EI premiums.

In 2022-23, the SWPP created 51,711 WIL placements[16] and supported an estimated 34,747 post-secondary students.[17] Based on ICTC's data about the program's economic impact, the government's 2022-23 investment in SWPP generated an additional $84.523 million in immediate economic value for participating employers. Participating students, meanwhile, earned an additional $694.94 million in wages in their first two years of full-time employment alone.

[12] Ibid.
[13] ICTC WIL Alumni Survey (ongoing). To date, n = 154.
[14] Alexandra Cutean, Letitia Henville, and Faun Rice, "The Impact of Work-Integrated Learning on Student Success and the Canadian Economy: An Evaluation of Canada's Student Work Placement Program," September 2023, Information and Communications Technology Council (ICTC), https://ictc-ctic.ca/reports/the-impact-of-workforce-integrated-learning-on-student-success-and-the-canadian-economy.
[15] Based on ICTC research about the impact of the SWPP. See: Alexandra Cutean, Letitia Henville, and Faun Rice, "The Impact of Work-Integrated Learning on Student Success and the Canadian Economy: An Evaluation of Canada's Student Work Placement Program," September 2023, Information and Communications Technology Council (ICTC), https://ictc-ctic.ca/reports/the-impact-of-workforce-integrated-learning-on-student-success-and-the-canadian-economy.
[16] Budget 2024: Fairness for Every Generation," 2024, Government of Canada, https://budget.canada.ca/2024/report-rapport/budget-2024.pdf.
[17] Based on there being three academic semesters per year, it is assumed that one student could participate in up to three WIL placements per year. If participating students underwent one WIL placement, the program would have supported 51,711 students. If participating students underwent three WIL placements, the program would have supported 17,237 students. The number 34,747 represents the mid-point between these upper and lower ranges.

ESDC's evaluation of the SWPP found strong demand among employers for the program to become permanent.[18]

A permanent SWPP would enable employers to better plan future work placement opportunities, manage human resources, and feel certain about the program's long-term economic benefits.[19] At present, funding for the SWPP is announced annually, creating uncertainty around the continuation and availability of the wage subsidies associated with the program.

To ensure Canadian organizations can continue to provide work placements to students and to reduce the impact of Canada's current economic climate on students and new graduates, Budget 2025 should establish permanent funding for Employment and Social Development Canada to deliver the Student Work Placement Program.

Enhancing Labour Market Information (LMI) to Support Canadian Policymakers, Training Institutions, Job-Seekers, and Employers

Recommendation 2: That the government invest in digital innovation for labour market information and novel primary research methods to achieve dynamic forecasting, real-time analysis, and solutions that can respond to rapid economic and technological changes in Canada.

Canada needs timely, accessible, granular, and skills-based labour market information to support a strong digital economy talent supply.

Canadians use LMI to make decisions related to the world of work, including hiring, choosing what program to study, deciding where to move, determining the right wage to offer an employee, choosing what employment pathway or career to pursue, searching for a job, supporting career transition, providing education or training advice, and developing educational curricula or programming.[20]

A misalignment between skill supply and demand can lead to labour market imbalances—shortages, surpluses, and mismatches—and negatively affect the aggregate economy and individual firms and workers.[21]

[18] Employment and Social Development Canada, "Evaluation of the Student Work Placement Program," November 2021, https://www.canada.ca/en/employment-social-development/corporate/reports/evaluations/student-work-placement.html.
[19] Employment and Social Development Canada, "Evaluation of the Student Work Placement Program," November 2021, https://www.canada.ca/en/employment-social-development/corporate/reports/evaluations/student-work-placement.html.
[20] Labour Market Information Council, "Perceptions of LMI: Feedback from the Canadian ecosystem," May 2023, https://lmic-cimt.ca/perceptions-of-lmi-feedback-from-the-canadian-ecosystem/.
[21] Organization for Economic Cooperation and Development, "Skills for Jobs 2022: Key Insights," 2022, https://www.oecdskillsforjobsdatabase.org/data/S4J2022_results.pdf.

ICTC's research increasingly highlights the importance of skills-focused LMI in guiding Canadian workers through multidisciplinary career paths. Workers today will likely require a combination of competencies from traditional occupations: digital *and* green skills,[22] health *and* technology skills,[23] and many others.

Canada's LMI requires investment and innovation.

Canada lacks *talent supply LMI* that is detailed, accessible, and reliable enough to accurately describe labour market trends among subpopulations and subsectors. This includes information that is representative of small towns, rural areas, Indigenous Peoples, newcomers to Canada, racialized workers, people with disabilities, 2SLGBTQIA+ workers, and other equity-deserving groups. It also includes people with skills in emerging subsectors and novel occupations crucial to the Canadian economy, such as cybersecurity and artificial intelligence professionals at regional, local, or demographic levels.

Public consultations about Canada's *demand-side LMI* highlight persistent data gaps, particularly concerning skills-related data, data on expected or projected future job openings, data about labour mobility, data about salaries and wages, and information about reasons for unemployment.[24]

Technological advancements, globalization, and shifting consumer preferences mean the structure of the Canadian economy is rapidly changing, and the interconnectedness of global markets means that local labour markets are influenced by international events and trends. Trade policies, geopolitical developments, and global supply chain disruptions can have significant impacts on Canadian employment.

LMI is vital for tracking labour market trends, but Canada's data is not always aligned with industry realities and the rapidly changing economy, and often lacks timely and granular enough insights for decision-makers to plan for the future.[25]

New digital advancements and Canadian-led innovation can fill the country's LMI and economic forecasting gaps.

The availability of big data, artificial intelligence, and advanced analytics tools have created enormous opportunities for the future of labour market information. Canada must leverage these technological innovations—alongside novel primary research methods—to enhance the accuracy and granularity of labour market forecasts.

---

[22] Allison Clark, Erik Henningsmoen, Todd Legere, and Francis Okpaleke, "Mapping he Junction of Digital-Green Skills for the Twin Transition: A Competency Framework," Information and Communications Technology Council (ICTC), June 2024, Ottawa, Canada. Author order is alphabetized. https://ictc-ctic.ca/reports/mapping-junction-digital-green-skills-twin-transition.

[23] Todd Legere, Olena Podolna, Justin Ratcliffe, and Faun Rice, "From Concept to Care: Health Technology Talent in Alberta," Information and Communications Technology Council (ICTC), April 2024, Ottawa, Canada. Author order is alphabetized. https://ictc-ctic.ca/reports/concept-care-health-technology-talent-alberta.

[24] Labour Market Information Council, "Perceptions of LMI: Feedback from the Canadian ecosystem," May 2023, https://lmic-cimt.ca/perceptions-of-lmi-feedback-from-the-canadian-ecosystem/.

[25] Labour Market Information Council, "Socio-Demographic Differences in Labour Market Information Use, Sources and Challenges," March 2020, https://lmic-cimt.ca/publications-all/lmi-insight-report-no-28-socio-demographic-differences-in-labour-market-information-use-sources-and-challenges/.

ICTC is at the forefront of developing innovative and advanced approaches to economic forecasting using methods like web scraping and AI to collect targeted LMI on skills changes within occupations, developing robust forecasting models for skills demand and supply, novel primary research methods, and is establishing best practices in this space.

If Canada invests in leading-edge approaches to LMI and economic forecasting, the country, economy, and workforce will benefit from data-led policy decisions on immigration, interprovincial mobility, reskilling, upskilling, and youth training, as well as increased global competitiveness.

About ICTC

The Information and Communications Technology Council (ICTC) is a not-for-profit, national centre of expertise for strengthening Canada's digital advantage in a global economy. Through trusted research, practical policy advice, and creative capacity-building programs, ICTC fosters globally competitive Canadian industries enabled by innovative and diverse digital talent. In partnership with an expansive network of industry leaders, academic partners, and policymakers from across Canada, ICTC has empowered a robust and inclusive digital economy for over 30 years.