

The Digital Skills Imperative in Canada

In partnership with:



Making meaningful progress in changing times

TCS' Digital Empowers, with The Dais at Toronto Metropolitan University, brought Canadian employment and education stakeholders together for a day focused on "The Digital Skills Imperative." The conversation, held at TCS Pace Port™ Toronto, addressed the urgent need to help those who are at risk of being left behind — in both the current economy and the workforce of tomorrow — due to their lack of relevant digital skills. Event participants (all listed at the end of this report) included major private sector employers, groups offering digital upskilling programs, civil society organizations, and officials from unions representing front-line workers.

Key points of discussion included trends and challenges affecting digital skills and the success of all Canadians in an ever-changing economy.

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Trends affecting the demand for digital skills

Change

While the highest tech skills in demand in Canada are basic skills like those needed to navigate spreadsheet, database and word processing programs, the fastest-growing tech skills in demand in Canada, as in other developed countries, are all new skills — artificial intelligence, automation and cybersecurity, among them. This means the high-priority tech skills needed just a few years ago are not the same skills needed right now.

Challenge: Learners and individuals seeking new digital skills, as well as small and medium enterprises, all report feeling overwhelmed by the pace with which they need to respond to new technology. Many feel that solutions become outdated soon after their initial design and entry into the market. In addition to this frustration, small and medium enterprises face the high cost of making these changes, the burden of education and training for current employees and the constant risk of obsolescence if they fall behind.



Higher education and private sectors must offer transparency about the skills truly needed for specific roles."

Opportunity: There is an opportunity for higher education and the private and social sectors to offer more transparency about skills that are truly needed for specific positions and about which skills will best transfer across roles. For medium and small enterprises, including solopreneurs, the evolution of technology is an opportunity to enhance efficiency, productivity, communications and collaborative processes. It can also reduce costs, enhance profitability and give them the opportunity to build stronger relationships with their workforce. These small and medium enterprises need support and resources to embrace new technologies early and often, and to set themselves up for long-term success and relevance.

Deglobalization

As more and more Canadian companies seek to re-shore or near-shore their operations to reduce concerns about perceived uncertainty and risk, they find themselves needing to advance their technical capabilities and acquire new tools.

“ Large employers can reshape Canada’s tech landscape by investing in reskilling their workforce.”

Challenge: Due to factors including budget, bureaucratic practices and the need to address the needs of a large and diverse population, Canadian government and educational institutions’ ability to keep up with technological change often lags behind that of the private sector. These institutions struggle to build, certify and approve new curriculums in time to ensure students graduate fully up to date with the needs of Canadian employers. Third-party organizations have leaped to fill the gap left between traditional education and what the job market demands, creating questions and concerns about educational quality. Further, not all students can access this training, as student funding in the forms of bursaries, grants, scholarships and loans, is not available to those pursuing third-party educational credentials.

Opportunity: Large employers, including national and multi-national companies, have the opportunity to generate significant change in Canada as they drive skills demand and benefit from having the means to reskill their current workforce. Their investment in providing employees with a path to growth and opportunity would pay off when employees experience more job satisfaction and loyalty as a result of the company’s investments in their career development. Such investments would also pay off for the entire nation, as it would completely reshape Canada’s tech landscape.

Immigration

As one of the primary drivers of Canada's labour force growth for many years, immigration is not necessarily contributing to increased digital capabilities in the workforce or to Canadian companies' ability to compete globally. This is because the digital skills immigrants bring with them do not necessarily align with the Canadian economy's ever-changing needs.

Challenge

Considering rapidly changing digital skills demands, it's often difficult for the Canadian government to understand which skills and credentials are needed, and how to strategically match immigrants' existing digital skills with the market needs. At the same time, language barriers and underdeveloped domestic networks can also slow the development of employees or entrepreneurs who have recently immigrated. As a result of that, and immigrants' relative lack of experience with Canadian culture and laws, the risk that digitally skilled immigrants will end up in low-skill job roles can be very high. Similarly, other immigrants may remain in low-level employment situations due to the digital exclusion they experienced in their home country.



AI-powered tools can help match digitally skilled immigrants with appropriate jobs, boosting innovation."

Opportunity

Immigration gives Canadian businesses a chance to enhance their workforce's diversity and lived/worked experiences, helping them foster new ideas, innovation and entrepreneurship. AI-powered tools and systems can help accelerate the outcomes of these benefits when used to predict digital skills needs. The Canadian government could use this information to match qualified digitally skilled immigrants with appropriate job or education opportunities.

Micro credentials

Micro credentials are short-course qualifications, often accessible through the completion of a 10-15-hour course that can take someone anywhere from about three weeks to six months to complete, depending on the time they have available outside of work, school, or familial responsibilities. Often, they are completed by working adults, rather than students, and are offered by third-party — private or public companies — rather than by traditional colleges and universities. Their focus is on course work over applied learning. Rapid technological change and the frequent need for new skills is driving individuals to feel pressure to seek and gain new credentials about every two years.

“ Institutions offering micro credentials can enhance their impact by partnering with employers to design relevant coursework.”

Challenge

While enhancing a culture of continuous learning, this trend is also leading to burnout for those pursuing these credentials and to confusion for both workers and employers about when and which skills are enough or right for jobs. Individuals are on their own in trying to vet and understand which courses to take. It’s an impossible task for someone seeking to upskill, knowing they don’t yet have the skills, and now need to vet various programs for quality and applicability to the job market. Additionally, while micro credentials can be a powerful tool for advancing one’s capabilities, when employees or prospects focus on micro credentials alone, the ongoing development of their interpersonal skills, strategic-and-critical-thinking abilities, and more, can be negatively impacted.

Opportunity

Institutions offering micro credentials can increase their credibility and impact by designing the coursework to match known digital skills needs. They should seek opportunities to partner with employers when designing their course work. Then, with employer buy-in, they could truly build out pathways for individuals to gain fruitful employment or apprenticeships once the coursework is complete. Micro credential institutions also have an opportunity to partner with colleges, universities or the government as they design courses and employment pathways.

Pace

While Canadian government and educational institutions have certainly tried to keep up with technological advancements, keeping pace with the rapid rate of change has been difficult and has frequently resulted in slower adoption of new technologies and inadequate training in their effective utilization.

“ Shifting regulation to oversee digital skilling organizations could hasten approvals and improve training outcomes.”

Challenge

Due to factors including budget, bureaucratic practices and the need to address the needs of a large and diverse population, Canadian government and educational institutions’ ability to keep up with technological change frequently lags behind that of the private sector. These institutions struggle to build, certify and approve new curriculums in time to ensure students graduate fully up to date with the needs of Canadian employers. Third-party organizations have leaped to fill the educational gap left between traditional education and what the job market demands, creating questions and concerns about the actual quality of the learning. Further, not all students can access this training, as student funding in the forms of bursaries, grants, scholarships and loans, is not available to those pursuing third-party educational credentials.

Opportunity

As new technologies and the need for upskilling continue to affect job seekers and employers, two critical changes have the potential to increase the pace of program benefits and improve outcomes. First, shifting government regulation and assessment from its oversight of individual courses to government regulation of the digital skilling organizations themselves would hasten approvals and support the autonomy of trusted organizations in their delivery of key hard-skills training. Second, providing ways for individuals to develop broad knowledge in parallel with specific skills is key. Workers with computational and design thinking abilities will have the foundation for not just using technology, but for seamlessly navigating across platforms and specific apps, while their skills constantly evolve with technology.

Size of “lost learner” population

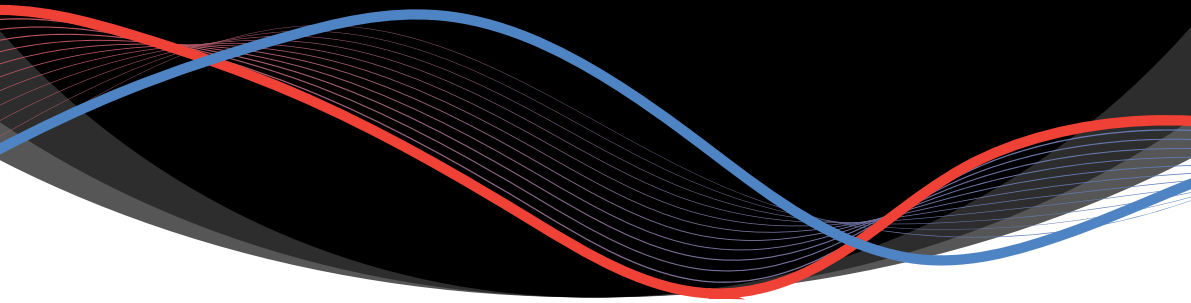
Lost learners — at any age or place in their lifecycles or educational journeys — stop learning and advancing in school or life for various reasons. Due to socio-cultural factors, a lack of confidence or learning losses that may have happened as a result of family struggles, illness or the COVID-19 pandemic’s unfortunate impact on formal education, they are unable to see themselves — or, often, people who look like them — in a learning pathway that results in fulfilling employment. We know that traditionally, individuals from underserved or marginalized communities end up in frontline or service roles, and hourly positions where they struggle to earn a living wage or support a higher quality of life for themselves or their families.

Challenge: Due to a variety of socio-economic factors, lost learners can be stuck and feel held back from success, sometimes for many generations. It also results in challenges to individuals’ and families’ ability to thrive and to holes in the available labour pool, a situation that is especially true in the new, digital economy.



Wrap-around support programs can open pathways for lost learners, helping them achieve their employment goals."

Opportunity: To open pathways for lost learners, and especially those in deeply affected communities, we need to take steps to create an environment in which they can see themselves represented and in which they can succeed. Implementing wrap-around support programs that offer, a person-centered, needs-based approach may be the best way to start. Wrap-around support helps individuals and families achieve their employment goals by first engaging them in identifying their own unique needs. Next, a team is put in place to support them with individualized service plans that offer strategies reflective of their specific needs and culture. This will require cultural competence, a situation which can, in turn create pathways by requiring the meaningful inclusion of wrap-around support professionals from typically excluded groups.



Recommendations



Roundtable participant recommendations

For these initiatives to succeed, work is needed to identify the final decision makers and to create paths of action rather than feedback. Participants in this Digital Empowers roundtable recommend areas for immediate consideration by various stakeholders.

For partners across sectors

Helping students and prospective employees develop skills that will weather instability is important.

Soft and uniquely human skills like communication, leadership, critical thinking, collaboration and teamwork can ensure success at work. Individuals need support in articulating how those skills and others translate to the roles that interest them.

For higher education

Partnering with the private sector on “matchmaking” technology.

Leveraging technology that can link formal educational programs to third-party credential programs, or credentialed workers to hiring employers and available jobs. Clarity will help ensure visible pathways from learning to actual employment and can help people avoid the uncertainty that often leads to under-employment or to the development of lost learners.



For the business sector

Creating development opportunities

The business sector can employ formal mechanisms, like rotational programs or apprenticeships, which allow new and recently upskilled professionals to advance.

Rotational programs give the employee a chance to train and experience in different roles or departments for learning and development purposes. Apprentices, on the other hand, have opportunities to deepen their skills and knowledge in a specific area. Both approaches support the private sector’s need to build and verify the skills developed. They also help employers better match a worker’s skills to positions in which they will succeed. Both approaches are intentional pathways of growth for employees expected to make strong contributions in the future.

Ensuring board diversity

Company executive boards are typically and historically represented by white male leadership.

Top-down leadership and inclusion of diverse board representatives can open pathways for people from underserved and minority communities to enter industries and roles where they have traditionally been absent. Representation will help their communities see themselves in roles they may have never imagined and enable more full inclusion in the Canadian economy.

For government

Improving regulations

Government’s adoption of a new and faster approach to regulation and collaboration with other sector is critical.

Updated and expedited approach to regulation, as well as increased collaboration with higher education and the private sector, will help Canada ensure its labour pool is appropriately diverse, skilled and evolving along with market demands. The new approach must allow for constant reinvention and evolution and for quality control as more third-parties offer programs for upskilling and earning credentials.

Supporting cross-sector partnerships

Canada’s small business owners need risk-management assistance and help building stronger technology infrastructures.

Collaborators from government, education and business can collaborate to help small business owners, many of whom are new immigrants to Canada, increase productivity and protect their businesses and customers from risk. A government program encouraging helpful collaborations and providing technology grants, along with training and other benefits, could lead to a stronger small-business economy.

Creating beneficial apprenticeship opportunities

Paid apprenticeship programs can help bridge the gap of human knowledge and hands-on experience that micro credentialing sometimes leaves.

Private sector apprenticeships could be very valuable but there may need to be more incentive, possibly from the government, for companies to offer these. Companies have a key role to play in offering apprenticeships and incentives from government would help them engage.

Thank you to everyone who joined us, shared their insights and expertise at this round table, including:

Angela Mondou	CEO and President	TECHNATION
Connor Taras	Vice President, Business Development	Talent
Georgette Morris	National Representative	United Food and Commercial Workers
Ivana Popadic	Senior Director, Education Strategy and Operations	NPower Canada
Jeremy Shaki	Co-Founder and CEO	Lighthouse Labs
Jon Joel	Senior Manager, Trade and Growth Programs, WTC-T	Toronto Region Board of Trade
Leena Yahia	Lead and Researcher, Nonprofit Digital Resilience	Imagine Canada
Morgan Singer	Lead, Digital Empowers, North America	TCS US
Nicole Jacobs	Corporate Social Responsibility Manager	TCS Canada
Pallab Datta	Head, TCS Pace Port	TCS Canada
Ryan Chong	Senior Director, Digital Service and Support	Rogers
Sara Miller	Program Manager, Work-Integrated Learning	Business + Higher Education Roundtable (BHER)
Viet Vu	Manager of Economic Research	The Dais at Toronto Metropolitan University
Vivian Li	Senior Economist	The Dais at Toronto Metropolitan University

To make progress, all stakeholders and advocates of change must be willing to share open, honest and respectful dialogue about the problems at hand with the intention of following through by finding and implementing solutions. It is broadly believed that the Canadian workforce has become jaded about their experience being skilled, reskilled and hired and, in general, that stakeholders have shied away from addressing all of these problems. An intentional and inclusive dialogue-and-response process can stop the situation from worsening and clear the way to faster, effective and positive change.

About The Dais

The Dais is Canada's platform for bold policies and better leaders. The Dais is a public policy and leadership think tank at Toronto Metropolitan University, working at the intersection of technology, education and democracy to build shared prosperity and citizenship for Canada. Visit us at dais.ca.

About TCS Empowers

We are building greater futures by connecting people to opportunities in the digital economy. Through innovation and collective knowledge, we will create equitable, inclusive pathways for all, especially women, youth and marginalized groups.

About Tata Consultancy Services Ltd (TCS)

Tata Consultancy Services is an IT services, consulting and business solutions organization that has been partnering with many of the world's largest businesses in their transformation journeys for over 56 years. Its consulting-led, cognitive powered, portfolio of business, technology and engineering services and solutions is delivered through its unique Location Independent Agile™ delivery model, recognized as a benchmark of excellence in software development.

A part of the Tata group, India's largest multinational business group, TCS has over 601,000 of the world's best-trained consultants in 55 countries. The company generated consolidated revenues of US \$29 billion in the fiscal year ended March 31, 2024, and is listed on the BSE and the NSE in India. TCS' proactive stance on climate change and award-winning work with communities across the world have earned it a place in leading sustainability indices such as the MSCI Global Sustainability Index and the FTSE4Good Emerging Index.

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