Innovation Policy Briefing

Innovative post-secondary solutions will help solve Canada's tech-sector skills shortage

As Canada's tech sector navigates the digital economy, universities and colleges must keep their sights on developing and implementing innovative solutions that will help Canadian businesses remain competitive in the global market.

Jane Goodyer

Opinion

Canada is facing a digital skills shortage that, if left unaddressed, will present a major barrier to business growth across all sectors and industries. As corporate leaders continue facing difficulties recruiting and retaining tech talent, universities in Canada can play a vital role in leading the development and implementation of innovative post-secondary solutions that address existing human resources gaps.

Exacerbated by the COVID-19 pandemic, the skills shortage in science, technology, engineering and mathematics fields has grown exponentially over the last few years. If our tech companies are to remain competitive in a constantly evolving global digital economy, we must act quickly to respond to existing information and communications technology (ICT) skills gaps or risk falling behind. This means that our efforts to attract talent and upskill the current workforce must keep a pulse on the evolving needs and demands of the sector.

For Canada, scaling up the tech workforce means creating affordable education pathways that will facilitate increased access to digital tech careers. Although Canada has a wealth of untapped tech talent potential, expanding the existing talent pool will require taking bold steps to transform the future of learning and employment in Canada's tech sector.

It was with this goal in mind that our team at York University's Lassonde School of Engineering collaborated with key leaders and experts in the tech sector to create a new work-integrated Bachelor of Applied Science in Digital Technologies program. These partners include Ceridian, CGI, Cinchy Inc., Cisco Canada, Connected, EY Canada, General Motors of Canada Company, IBM Canada, mimik Technology Inc., RBC, Saa Dene Group, Shopify Inc., TELUS Health, Treasury Board of Canada Secretariat, and TribalScale Inc.

Launching next fall, the four-year program will provide learners with the opportunity to earn a competitive salary while dedicating approximately 20 per cent of their work hours to theoretical, in-class learning during five-day block periods every six to seven weeks.

The benefits of our program will be two-fold. By combining a high-quality education with work-integrated learning, students will be able to immediately apply and build on their academic knowledge. Employers, on the other hand, can also expect to benefit from the model which will help them fill skills gaps within their companies by giving them access to a stream of highly skilled workers.

A first for Canada, this model has been used widely across the United Kingdom and has proven to be a powerful vehicle for social mobility. In a 2021 Impact Report, Manchester Metropolitan University, one of our key partners and the leading provider of this type of program in the U.K., reported that 78 per cent of their graduates received a pay raise and 64 per cent received a promotion during their program. A survey of their first cohort of digital and technology solutions graduates shows a 46

Canada is facing a digital skills shortage that, if left unaddressed, will present a major barrier to business growth across all sectors and industries, writes Jane Goodyear. *Image Pixabay*

per cent higher salary than the average U.K. computing graduate.

By bringing this fully work-integrated model to Canada, our goal is to open the doors for learners who may not have the time and/or money to pursue a degree and provide them with the necessary supports to build meaningful networks as they grow in their fields.

What's more, there has been a sharp increase in demand for more experiential learning opportunities over the last few years, a direct result of the pandemic. Corporate leaders know that remaining competitive within this new normal will require keeping pace with the changing nature of both working and learning.

An innovative post-secondary response to the skills shortage in the ICT sector can help affected businesses train, recruit and retain skilled digital technology specialists. As Canada's tech sector navigates the digital economy, universities and colleges must keep their sights on developing and implementing innovative solutions that will help Canadian businesses remain competitive in the global market.

Jane Goodyer is the dean of the Lassonde School of Engineering at York University.

The Hill Times