The Conference Board of Canada

In partnership with Future Skills Centre

Digital Skills for Today and Tomorrow

Perspectives From Canadian Employers and Industry Leaders

Issue Briefing | September 27, 2022

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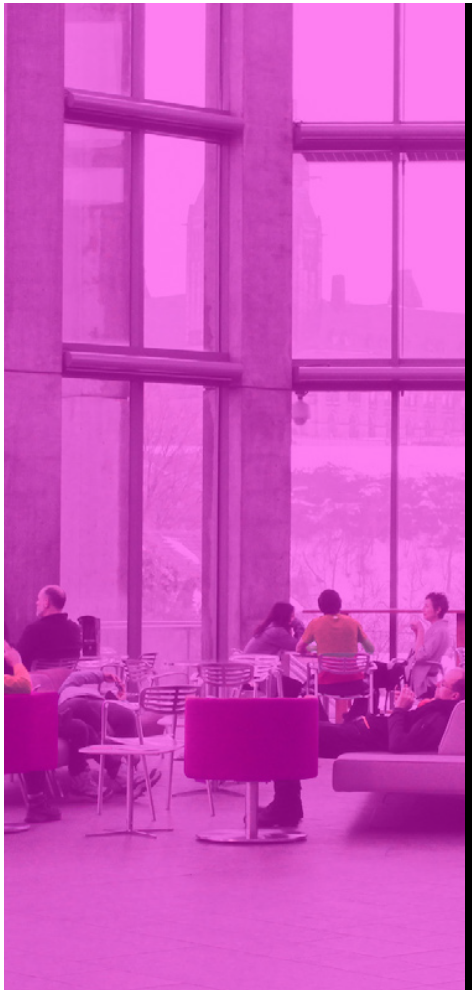

Future Skills Centre

The Future Skills Centre – Centre des Compétences futures (FSC-CCF) is a forward-thinking centre for research and collaboration dedicated to preparing Canadians for employment success. We believe Canadians should feel confident about the skills they have to succeed in a changing workforce. As a pan-Canadian community, we are collaborating to rigorously identify, test, measure, and share innovative approaches to assessing and developing the skills Canadians need to thrive in the days and years ahead.

The Future Skills Centre was founded by a consortium whose members are Toronto Metropolitan University, Blueprint, and The Conference Board of Canada.

If you would like to learn more about this report and other skills research from FSC, visit us at fsc-ccf.ca or contact info@fsc-ccf.ca.

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Key Findings

- The COVID-19 pandemic accelerated the pace of digitalization in the workplace, resulting in a critical need for more workers with advanced digital skills.
- Basic digital skills are no longer enough. Demand for advanced digital skills—in areas such as data analysis, cybersecurity, and Cloud technology—is robust and expected to continue growing.
- To adapt, innovate, and grow, Canadian businesses need workers who know how to leverage and apply their digital skills to solve problems and to inform business solutions.
- Reliance on legacy technology is a barrier to the digital advancement of some organizations. Government programs and incentives can help Canadian businesses keep up with the pace of digitalization.
- Workplace training and upskilling is key to solving digital skills gaps. Companies need to provide their employees with the time, space, and motivation to continuously develop their digital skills.

Introduction

The rapid digital transformation in Canada due to the pandemic could increase our productivity and growth potential for years to come.[1] How can Canada unlock this opportunity?

The pandemic changed how many Canadian workers do their job. For some, this change is minor. For others, it is seismic. A central feature of the shifts in working is the increased interaction with, and reliance on, digital tools. These tools—and the skills needed to use them—are largely what helped Canada weather the economic storm the pandemic caused and continue to support Canadian businesses in a strong recovery.

There is greater demand than ever for people who can operate in a digital economy and have the know-how to adopt and use digital technologies. Despite Canadians' potential to adapt to the dramatic digital shift sparked by the onset of the pandemic, literature suggests that we must better understand digital skills in the current climate to remain a competitive country and prepare for the future of work.[2]

Yet research[3] and industry surveys[4] consistently flag Canada's digital skills preparedness as falling short. The time to intervene is now.

1 Lane, *Going Digital Has Helped the Economy.*
2 OECD, *Preparing for the Future of Work in Canada*; Shortt, Robson, and Sabat, *Bridging the Digital Skills Gap.*
3 Hadziristic, *The State of Digital Literacy in Canada*; *Mahboubi and Mokaya, The Skills imperative; ICTC, Digital Literacy*; Middleton, *Digital Infrastructure for the Post-Pandemic World.*
4 Salesforce, *Salesforce Launches Global Digital Skills Index.*

In response, we conducted 21 in-depth interviews with executives and upper-level managers at leading Canadian companies and sector organizations to learn about their digital skills needs and the training required to best respond to these needs. Themes from these interviews were used to inform the design of a larger survey that will be used to garner insights from skills leaders[5] across Canada and shared in forthcoming reports. In this briefing, we summarize these main themes.

Overwhelmingly, participants indicate that digital skills are essential for success in the pandemic-era workplace and suggest they will continue to grow in importance in the post-pandemic world. They describe that having workers with digital skills is essential to keep up with the pace of digitalization and remain competitive.

However, respondents emphasized that the digital skills needed in the pandemic-era workplace go far beyond basic digital literacy. Companies need workers with strong abilities in more advanced digital areas such as data analysis, cybersecurity, and Cloud technology. Further, employers need workers who can apply their advanced digital skills to solve problems and inform decision-making.

Training and upskilling are key to solving these digital skill gaps. To train effectively, employers must foster a company culture that motivates curiosity of, and openness to, new digital tools. This means that employees need ample time, space, and resources to be able to contribute to the culture of learning, upgrading, and expanding of their digital skills.

5 By "skills leaders," we are referring to anyone with a specific focus or leadership role in their community, related to education, training, job transitions, skills, and/or the future of work.

The Digital Workplace

Canadian organizations are becoming increasingly digital. As a result of the pandemic, many Canadian companies had to shift to an entirely virtual workplace in a matter of days—a process that many employers previously believed would take years. Even though COVID-19 restrictions are lifting, remote work is not going away in many cases.

Many of the employers that we spoke with indicated that to continue to attract and retain top talent, it is crucial to provide knowledge workers with the opportunity to work virtually at a least a few days a week. Further, industries and sectors powered by in-person workers are relying on digital tools and technologies to assist or enhance operations more than ever. Given this, it's no surprise that projections suggest that over the next 10 years, nine out of 10 jobs will require digital skills.[6]

Interviewees suggest that the pace of digitalization places a growing strain on them as employers to not only attract and hire talent with proficient digital skills, but also to retain, cultivate, and train workers to have what it takes to keep up. When it comes to digital skills, even the most adept hires require the support and latitude to be able to maintain and improve those skills. This is true across many different industries—including banking, telecommunications, and insurance.

6 van Eerd and Guo, *Jobs Will Be Very Different in 10 Years.*

Across all industries, participants express that basic digital skills rarely suffice. For Canadian companies to grow and remain competitive in the pandemic era, they need workers who can implement and manage ever-changing technologies and are willing and able to continuously advance their digital skills.

Participants in this study speak extensively about the need for more. People from a variety of industries consistently indicated—in one way or another—that the basic digital skills—such as command of Microsoft Office, how to manage virtual calendars, and organizing and storing information on a computer—are rarely enough. They describe that even junior roles, or roles that have been typically seen as requiring little or no digital skills, are now requiring them.

Participants from industries that may not immediately be associated with "high-tech," such as construction and retail, indicate that they are undergoing massive digital transformations to remain competitive in the pandemic-era workplace. With these organizational changes, participants emphasize the need for talent that can manage technological tools and the need to upskill and train existing employees to get them up to speed.

> "The future of work is digitalization. If you can't find people or if you can't keep up with the emerging trends, then you're going to get left behind."
>
> **Manager at a large financial consulting firm**

Which Skills Are Employers Looking For?

Canadian employers across most sectors are looking for workers with advanced digital skills. But they also need workers who can apply advanced digital knowledge to inform business solutions.

Pinpointing the specific digital skills that companies need to remain competitive is tricky, as these skills are constantly evolving and will depend on specific job functions and roles. However, the employers we spoke with expressed a critical need for more workers with proficiency in advanced digital areas such as data analysis, cybersecurity, and Cloud technology. Competition for talent in these areas today is fierce. Employers expressed concerns related to salary inflation, as well as loss of talent to other countries, such as the United States, where salaries tend to be higher.

Canada is falling behind. There are simply not enough workers in Canada with the advanced digital skills that companies need to succeed. For example, a recent industry survey found that nearly 70 per cent of small and medium business owners surveyed are having a hard time hiring workers with the digital skills that their companies need in order to grow.[7] We heard from Canadian employers that because of the high demand and limited supply, they are being forced to look for digital talent outside of the country. To help solve this talent crisis, it is essential that we begin to train new and current Canadian workers in more advanced digital skills that go beyond basic digital literacy.

However, employers share that simply being able to use advanced digital tools is not enough. To continue to adapt, innovate, and grow, Canadian companies need more workers who can use their advanced digital knowledge to solve problems and inform decision-making. This is consistent with prior Conference Board research that highlights social and emotional skills, such as critical thinking, communication, and problem-solving, as skills that are in high-demand by Canadian employers.[8] It is not just about knowing how to use technology but being able to use that technology to help businesses succeed and grow.

> "Because everything is done digitally, it provides you with inordinate amounts of data and I think the skill set we actually need is how to take that data, use those analytics skills, and make it meaningful and actionable. That's the biggest gap that we see."
>
> **HR Executive at a large food retail company**

7 KPMG, *Canada Businesses Struggling to Find Skilled Talent.*

8 Giammarco, Higham, and MacKean, *The Future Is Social and Emotional.*

The Problem With Legacy Technology

Companies that rely on legacy technology risk falling further and further behind. Government incentives will be key in helping them to keep up.

A massive barrier to the digital advancement of some Canadian companies is their reliance on legacy technology. We heard from employers in industries— such as banking and entertainment— that legacy technology (e.g., old or outdated operating systems, applications, and software) remains critical for maintaining everyday business operations. However, legacy technology can be difficult to operate and maintain and there are fewer and fewer workers who are able to use it. This is because workers with the skills needed to operate legacy technology are beginning to retire, and newer workers are no longer being trained on old or outdated technology.

This creates a different kind of skill gap, in which the skills of the incoming talent pool are too advanced to meet the legacy technology needs of some Canadian businesses. The longer Canadian businesses continue to rely on legacy technology, the more they risk falling further and further behind.

Employers report that the solution is not to train current and new workers to operate old or outdated technology. Rather, Canadian businesses need to modernize their operations and systems, but this is no easy feat. Modernizing business operations that companies have relied on for decades will require a significant amount of time, money, and training. We heard from employers that incentives provided from the government, such as tax breaks and grants, will be key in ensuring that Canadian businesses are able to keep up with the pace of digitalization and remain competitive in Canadian and global markets.

Digital Skills Training and Upskilling

When it comes to training and upskilling, it is vital to instill a company culture of continuous learning and development.

To close digital skills gaps, Canadian companies cannot simply hire new workers with the advanced digital skills that they need, as such talent is in critically short supply. Experts,[9] as well as many of the employers that we spoke with, agree that training and upskilling the current workforce is essential to moving forward.

However, there are a few barriers that make this type of workplace training difficult to implement. In particular, employers are concerned that workers are already overburdened and reluctant to learn new skills. Between work, life, and the stresses associated with living in a pandemic, workers have a lot on their plate. Employers recognize that it is difficult for their employees to find the time and energy to engage in digital skills training.

The pandemic saw an increase in employee stress and other mental health-related challenges. For example, a recent report found that the percentage of Canadian employees reporting positive mental health dropped from 69 per cent pre-pandemic to 47 per cent in February 2022.[10] Reasons for this decrease in employee mental health throughout the COVID-19 pandemic include increased workload, overwhelming and unsustainable work, and difficulty managing home and work life at the same time.[11] It is therefore not surprising that employers are wary of adding to their workers' responsibilities.

To overcome this barrier, many employers emphasize that companies need to foster a culture of continuous learning and development, where upskilling becomes a regular part of one's job. In other words, digital skills training should replace, rather than add to, existing workplace responsibilities. This means that companies will need to carve out time during the workday for employees to engage in training, rather than expecting them to do so on their own time. For example, some of the employers we spoke with offer "training days" in which employees are permitted to forego their regular work responsibilities to focus solely on training. This type of practice must be implemented more widely.

Respondents emphasize that effective training goes beyond providing the space and time for employees to engage in training to build their digital skills. They also need to effectively communicate the value proposition, and clearly demonstrate that it is not only useful for organizational success, but crucial for one's own career advancement. Digital skills are often referred to as "future-proof" as they can help workers adapt and continue to succeed in times of change.[12] They are also transferable across many different industries and can help workers transition into new and higher-paying roles. Equipping workers with advanced digital skills can help businesses and individuals succeed in the future.

Without fostering this type of culture change, companies may continue to meet resistance from employees who are reluctant to invest their time and energy into learning new skills.

9 Fenlon and Fitzgerald, *Reskilling—A Solution for the Digital Skills Gap*.
10 Tilo, *Mental Health Crisis*.
11 Ibid.
12 Kelly, "*To Future-Proof and Continually Grow Your Career*"; Dondi and others, Defining the *Skills Citizens Will Need*.

> "If you're not communicating the reason why people need to learn something new, then there's going to be resistance because it's going to feel like somebody is adding to their job. They're not going to be able to see the value of the investment of their time and energy into learning. So there has to be a shared understanding before the development can occur."
>
> **Executive at a pharmaceutical sector organization**

It is also important to note that company training and upskilling is just one piece of the puzzle. Canadian businesses alone cannot solve the digital skills talent crisis. Increasing Canada's position in the digital skills landscape will require a multi-faceted approach. Canadian businesses, post-secondary institutions, and the Government need to work together to equip Canadian workers with the digital skills that are needed to help companies and communities thrive in the pandemic-era workplace we are living in now, and beyond.

Conclusion

To ensure that Canadian businesses succeed in an increasingly digital future, it is critical that we better understand the digital skills that employers need today to help predict and prepare for what is needed in the future.

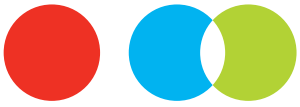
To build on the themes identified in this briefing, we will conduct a primarily quantitative survey with Canadian skills leaders across the country. We want to learn more about Canada's digital skills needs and how they may vary across different regions and industries. By doing so, we aim to reveal the specific digital skills that are needed and provide recommendations on the tools and training that can help Canadian businesses better prepare for the future.

Appendix A

Methodology

Background

This project was developed to address a call for a better understanding of the digital skills that we need to succeed in an increasingly digital future, as well as the tools and training required to respond to these needs. As a first step, we held 21 key informant interviews with executives and upper-level managers at leading Canadian companies, as well as representatives from sector organizations. The goal of these interviews was to hear directly from employers about their digital skills needs, the impacts of COVID-19 on the workplace, and ideas for training/upskilling. Insights from these interviews were used to inform this issue briefing, as well as a survey that will be delivered to 500 skills leaders across different industries and regions in Canada. Through this survey we aim to better understand the specific digital skills that are needed and provide recommendations on the tools and training that can help Canadian businesses better prepare for the future.



Interviews

The employers we spoke with represented various industries in Canada, including:

- Skilled trades
- E-commerce
- Construction
- Banking
- Accounting
- Broadcast media
- Professional services
- Telecommunications
- Retail
- Restaurants
- Electric utility
- Oil and gas
- Computer software
- Financial services
- Media and entertainment
- Pharmaceuticals
- Financial technology (FinTech)
- Manufacturing
- Insurance

The interviews were semi-structured and organized according to four different topics:

- How digital skills are defined/used and why they are important.
- Digital skill talent gaps and upskilling needs.
- Tools and training required to respond to these needs.
- COVID-19 and how digitalization is transforming the world of work.

All interviews were transcribed and recorded. Transcripts were anonymized and analyzed in NVIVO. To analyze the data, we used a focused coding approach and developed the codebook based on emergent themes in the interviews and literature.

Appendix B

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