SCOPING REPORT

SKILLS FOR THE POST-PANDEMIC WORLD

DECEMBER 2020

PUBLIC POLICY FORUM
FORUM DES POLITIQUES PUBLIQUES
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The Diversity Institute conducts and coordinates multi-disciplinary, multi-stakeholder research to address the needs of diverse Canadians, the changing nature of skills and competencies, and the policies, processes and tools that advance economic inclusion and success. Our action-oriented, evidence-based approach is advancing knowledge of the complex barriers faced by underrepresented groups, leading practices to effect change, and producing concrete results. The Diversity Institute is a research lead for the Future Skills Centre.

For more information, visit ryerson.ca/diversity or contact diversityinstitute@ryerson.ca. Follow us @RyersonDI

The Future Skills Centre 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 is a partnership between:

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ABOUT THE PROJECT

This is a joint project of the Public Policy Forum (PPF) and the Diversity Institute, funded by the Future Skills Centre (FSC) with support from Microsoft. Building on a longstanding project conducted by PPF and the Diversity Institute about the future of work, **Skills for the Post Pandemic World** tackles key questions facing policymakers, employers, training providers and workers as we collectively turn to face the post-pandemic future of skills, training and retraining. The COVID-19 pandemic has steepened trajectories and intensified shifts well documented in the future-of-work discourse. What was very recently future speculation is now present practice, and it is urgent that society responds in ways that will chart a path forward as the pandemic continues to unfold.

This project will face these rapid societal shifts head-on. Our research will contribute to the conversation about how to build a robust policy ecosystem that supports the reskilling, retraining, upskilling and mobility needed for workers and employers to navigate the new reality. Society will slowly reopen and business will resume, but there has been and will continue to be fundamental changes in the labour market, where many players must rise to meet new conditions.

The Skills for the Post-Pandemic World project will proceed in three phases:

1. **Scoping –** research and convening activities will inform a scoping paper that charts a course for further research by serving as a guide for the research and discussions that form the subsequent phases of the project.

2. **Knowledge acquisition and research –** A series of research projects will build on and contribute to the important policy dialogue around the future of skills in the post-pandemic environment.

3. **Knowledge mobilization –** PPF and Diversity Institute will work together with our partners to ensure the research is inclusive and disseminated broadly.

For more information about the project, please contact: Andrée Loucks, Policy Lead and Michael Crawford Urban, acting Director, Research, Special Projects (FSC).

ISBN: 978-1-77452-032-1

Skills for the Post-Pandemic World is funded by the Government of Canada's Future Skills Program.

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Skills for the Post-Pandemic World is made possible with support from

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The world of work exists largely as a function of the skills, education and training people have received and continue to pursue throughout their lives. In some ways, Canada's skills and training ecosystem functions well. But in others, we lag behind our peers and let many workers and students fall through the cracks.

Even before the pandemic, global megatrends like technological advances, evolving work relationships (including a shift toward the gig economy), and demographic changes were putting pressure on our already imperfect training ecosystem. Partly because of these shifts, Canada has for some time faced a skills and employment landscape characterized by risk, uncertainty and inequality. For example, the people who most need skills development opportunities—racialized communities, women, Indigenous people and persons with disabilities—have been least likely to receive them.

COVID-19 and the resulting economic crisis have exacerbated these challenges. The pandemic has also revealed much about technological and economic change in Canada, and the structural inequities and discrimination endemic to our society and economy. The crisis has highlighted how important it is for workers to possess basic digital skills so they can successfully work remotely where possible, and has shed light on the relative merits of automation, reshoring (to protect supply chains) and precarious work in a time characterized by uncertainty.

Regarding structural inequalities, the pandemic has exacerbated racial and gender inequities as well as those for Indigenous communities. And it has had a disproportionately negative effect on persons with disabilities. As one example, Black Canadians are more likely to die from COVID-19 than other groups because of their over-representation in front-line jobs and because of the intersection of race, poverty and poor health. As another, only 44 percent of Indigenous people significantly affected by COVID-19 applied for federal income support, compared to 50 percent of non-Indigenous people.

COVID-19 has led to new work arrangements, with some estimates claiming that 40 percent of jobs can be done remotely. But this is mostly true for higher-income workers. People in manufacturing, construction and care jobs cannot work remotely.

The magnitude of the pandemic and economic crisis, and the many second-order trends associated with it, raise new implications for how we think about education, the workplace and skills training.

Themes for further research

While we know that the trends associated with the COVID-19 pandemic are changing the ways in which we live and work, the precise implications for skills development are not clear. To fully understand, additional research is needed across the following eight themes:

1. **The current and future capacity of education and skills systems** – Before COVID-19, Canada's education and skills systems faced declining capacity and funding, and disparities were rife among demographic groups. The pandemic has exacerbated these challenges, mainly due to economic hardship resulting from declining university enrollment, government debt and business failures. We need to consider what expectations our education and skills systems must meet post-pandemic, and how new policies, technology, approaches and alternative funding arrangements can help meet rising demand for skills development and improved outcomes.
2. **Rethinking essential skills development infrastructure** – When it comes to work opportunities, the playing field is far from level and individuals' prospects vary dramatically according to their skill levels, assets and access to infrastructure. Low-income and rural students face disproportionately greater barriers to education, while women are disproportionately restricted in their access to work and education because childcare and homeschooling so often fall to them. Meanwhile, we have a limited grasp of what motivates individuals to pursue training. To better understand the factors at play, we need to examine questions related to structural barriers (broadband, childcare, income) and what goes into individuals' nuanced decision processes as they consider developing their skills.
3. **Skills for more inclusive workplaces** – Good public intentions to reduce racial and other inequities do not necessarily lead to change. The pandemic has illuminated long-standing inequities experienced by women, Indigenous and racialized people, newcomers and persons with disabilities. While there is some impetus to "build back better" post-COVID-19, employers have few practical toolkits to work with. And evidence tells us that equity training programs work only if undertaken in a context that embraces structural change. We need to better understand how COVID-19 has affected marginalized populations and their access to skills development. And we need to examine the levers that encourage employers to advance diversity and inclusion in the workplace and the tools needed to assist them in doing so.
4. **Skills for new work arrangements** – Because of COVID-19, many people are working remotely, and some families have been challenged as they try to keep up. Likewise, workplaces have been challenged to collaborate and think creatively online. Immigrants and new grads—and the people hiring them—have had to find one another and reach work agreements remotely, and then try to develop meaningful connections. We need more research on the nature of remote work and its implications for skills development. Who gets to work from home, and what types of skills do they need? What skills do people need to find jobs and learn well remotely, and how can employers best

support their employees? And what are the potential implications of these shifts for skills in a post-pandemic world?

5. **Immigration policies and practices** – Before COVID-19, it was believed that immigrants, especially highly skilled ones, would continue to fill our expanding labour market. While Canadians generally support immigration, the pandemic has caused friction and encouraged more of a "take care of our own" mentality. More research is needed to explore the implications of COVID-19 for Canada's immigrant and refugee policies. We need to examine disaggregated data on the impacts of COVID-19 on immigrants, how attitudes toward them have shifted, and whether Canada needs to adjust its immigration and resettlement policies to fill labour and skills gaps.
6. **How COVID-19 has accelerated innovation practices** – While COVID-19 has been devastating to most Canadians, it has also fuelled innovation and accelerated the adoption of new technologies, processes and policies. Some organizations have learned to reach broader audiences. We need more research on the new skills and training policies, services and practices, the emergence of which COVID-19 has accelerated, as well as on how insights and lessons generated by their emergence can be shared and scaled.
7. **Developing and supporting entrepreneurship** – While many discussions of skills and employment are dominated by large employers, evidence shows that small- and medium-sized enterprises (SMEs) and micro-enterprises have been disproportionately affected by COVID-19. Meanwhile, businesses owned by marginalized populations are most likely to be under-financed and operating in sectors at risk. Research is needed on the most pressing skills issues most facing small businesses and underrepresented groups. How has COVID-19 affected these businesses, and what skills and talent do they need to survive? And how can educational institutions adapt to respond to these challenges?
8. **Understanding jobs polarization and the levers needed to address it post-pandemic** – We face enduring challenges in our quest to develop shared frameworks that can define, assess, develop and use workers' skills. Overall, we lack a shared understanding of the challenge – or even a shared language—about skills, their assessment, development and use. We need to focus on practical ways to bridge skills and inclusivity gaps, and move to action—especially in ways that address the growing polarization of jobs that has been so starkly highlighted during the pandemic. How can we develop more useful shared frameworks for defining, assessing, developing and using skills, and encourage employers to adopt them? What policy, tax and procurement levers will promote collaboration for a more coherent employment ecosystem capable of better addressing growing concerns around income inequality?

The pandemic and economic crisis have generated new challenges and opportunities in Canada's skills ecosystem, and accelerated existing ones. How can we transform our skills agenda to address new trends in how we live, work, learn and socialize? We believe a research agenda focused on the themes we outline in

this paper will help Canada develop a new skills strategy for a more resilient, inclusive and innovative post-pandemic future. This scoping paper outlines the key issues at play, the questions they raise, and sets us up for the more detailed research provided by the eight thematic papers that make up the next phase of the project.

FOREWORD

COVID-19 has been the great revealer of chronic economic inequities in Canada. Countless research projects conducted for policymakers and academia describe the inequitable conditions under which diverse Canadians are attempting to find and keep decent work as well as access the social benefits that make Canada such a well-regarded destination for immigration and settlement. Canada aspires to be a place where people can get the education they want and find work in decent conditions that pays them a wage commensurate with their skills and qualifications. People raise their families in Canada with the expectation that their children will have access to the educational opportunities they need to thrive. This narrative of equal and equitable access, and the accessibility of opportunity, is deep-seated in the Canadian psyche. But is it borne out by evidence?

> **The pandemic has shown us that diversity matters. Intersecting factors related to race, gender, socioeconomic background and more impact our likelihood to have jobs and keep them during an economic crisis.**

Women have been more likely than men to lose their jobs because of the economic downturn, and were less likely to recover their jobs in the first waves of economic recovery. Racialized Canadians have suffered more with respect to their mental health during the crisis.[1] For some, the pandemic has exacerbated existing experiences of instability caused by the many hurdles immigrants face in Canada, such as the systemic undervaluation of their foreign credentials. And women from many circumstances and social locations have never before been less supported by social safety nets. Many have been prevented from accessing paid childcare, and deprived of the help of grandparents and family members—the very provisions that have allowed millions of women to balance family-work commitments in the decades since the Second World War.

Racialized Canadians, women and Indigenous Canadians all disproportionately face discrimination and harassment in the workplace and are perennially underpromoted and undervalued. Further, societal constraints on cis and trans women and gender diverse Canadians often funnel people away from secure and higher-paying jobs in STEM and towards lower-paying and more precarious work. Though providing accommodations for Canadians with disabilities is the law, persons with disabilities are systemically and perniciously discouraged from pursuing higher education and aiming high in their employment aspirations. This reality has come about due to the chronic absence of supports aimed at evening the playing field.

We know an enormous amount about the economics of how people from intersecting identities can be prevented from achieving their educational and employment goals. Worse, we also know that peoples' goals are often curtailed because of how others respond to their identities.

At the Public Policy Forum and Diversity Institute, we have been working hard to illuminate and bring awareness to the uneven access that Canadians have to a good, healthy life. Our collective goal with this research project is to gather deep and nuanced data about how the pandemic has touched and shaped all Canadians. The nature of the challenges described above mean that we entered this pandemic with different levels of readiness, resilience and ability to weather the financial shockwaves and social changes wrought by losing our jobs or losing hours, shifting to telework, or working at home with our children. We aim with this project to inform policy decisions that will help correct these imbalances and even out access to "the good life." Perhaps we can recover from this pandemic in better shape than we entered it—with better social supports for families and persons with disabilities, better recognition of the skills of racialized Canadians, immigrants and Indigenous peoples, and an overall better appreciation for the need to centre diversity and inclusion in policies that strive to stimulate our economic recovery.

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INTRODUCTION

Even in the best of times, uncertainty about skills needs and training opportunities is substantial and pervasive. It has long been a challenge to predict the skills Canadians will need to participate effectively in a changing economy and society. Now, as the COVID-19 pandemic and economic crisis have upended how we live, socialize, work and do business, our predictions and planning around skills are even more uncertain. The foggy future of work has arrived, and it is as unclear as ever. Indeed, our recent experiences have also highlighted gaps in our ability to predict labour market trends and the importance of developing new approaches to foresight—gaps that stand in the way of achieving a skills and employment ecosystem that is responsive, adaptable and resilient.

Canada's innovation, productivity and growth challenges are even more pressing now than they were before the pandemic and economic crisis. Also pressing is the need to ensure a more equitable distribution of opportunities for people to participate in and benefit from the economy. Canada has a once-in-a-generation opportunity to reset the skills and employment agenda and build a foundation for a more innovative and inclusive post-pandemic economy and society.

This paper contributes to the development of a post-pandemic skills agenda by clarifying broad changes and continuities in the economy and society that could have implications for skills and identifying a set of key themes on which further research is needed to better understand the challenges and opportunities which we face. In this way, it constitutes a scoping stage in a multi-stage research program that will help Canada shape a new skills agenda.

APPROACH

To identify key priorities for future research, we developed a multi-pronged research approach:

- We examined academic and grey literature to do two things: understand key skills and employment-related trends and issues in both the pre- and post-COVID-19 environment, and identify areas where we need to know more.
- We collected and analyzed relevant data on the key drivers of change in the economy and society that could have implications for skills, and for the state of, and trends in, skills requirements, training and development activities, and their distribution among different populations.

SKILLS AND TRAINING BEFORE COVID-19: TRENDS AND ISSUES

We often discuss the future of work as it relates to the jobs people currently hold, the form business currently takes and the ways people currently live. However, the world of work exists largely as a function of the skills, education and training people have received and continue to pursue throughout their lives. It is therefore impossible to have a well-rounded conversation about the future of work without understanding the processes for educating, training and retraining students and workers. In Canada, this ecosystem comprises primary and secondary education (K–12), post-secondary education systems (including universities, colleges and other formal training institutions and programs like apprenticeships), a network of on-the-job and on-demand training providers, and a suite of wrap-around policies and programs that enable Canadians to access this ecosystem.

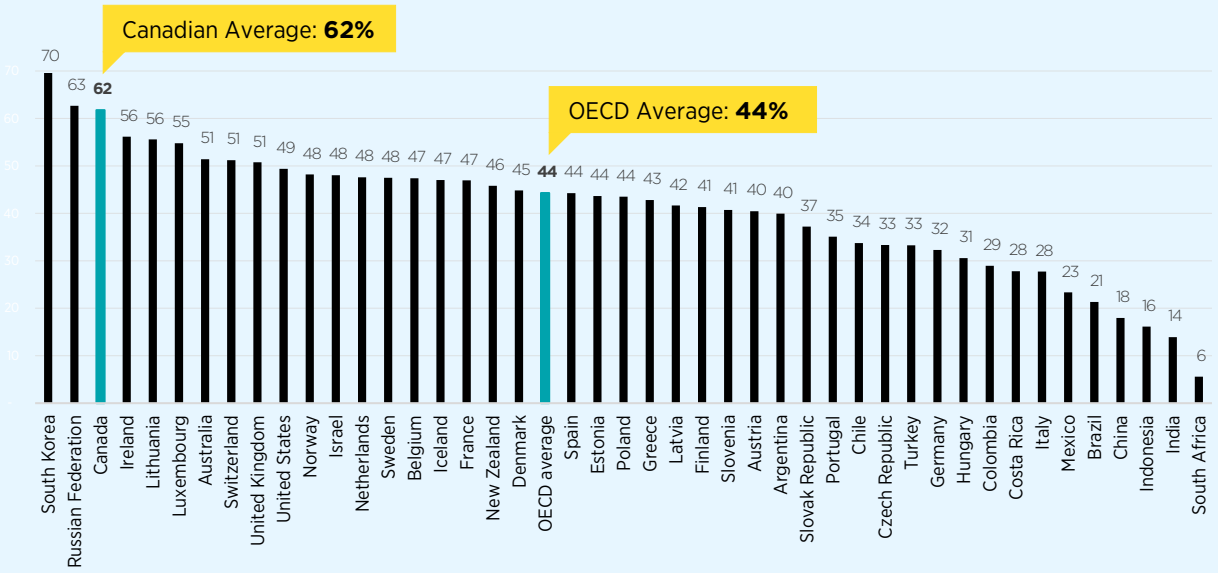
> **In some ways, Canada's skills and training ecosystem functions well. But in others, we lag behind our peers and continue to let many workers and students fall through the cracks.**

Even before the pandemic, global megatrends like technological advances, demographic changes and globalization were putting pressure on our already imperfect ecosystem. Some of these trends have been accelerated, exacerbated or redirected as a result of the pandemic. This section describes the key characteristics, trends and issues at play in this space.

DEFINING, MEASURING, DEVELOPING AND EMPLOYING SKILLS

Canada has one of the best educated populations in the world, with 94 percent of Canadians aged 25 to 34 having attained secondary education or higher, versus the Organisation for Economic Co-operation and Development (OECD) average of 85 percent.[2] Further, 62 percent of Canadians have a post-secondary education credential (defined by the OECD as a tertiary education), versus 44 percent in the OECD. In fact, Canada is second only to Russia (63 percent) and South Korea (70 percent) in the proportion of those aged 25 to 34 with a post-secondary credential.[3]

Figure 1: Percentage of 25-34 year-olds with tertiary education (2018)



Source: OECD. (2019). Education at a Glance 2019. OECD, Paris. www.oecd-ilibrary.org/sites/6b8d261f-en/index.html?itemId=/content/component/6b8d261f-en

Overall, those with a college or university education tend to be healthier, are less likely to be unemployed and have higher incomes than those with a high school education or less—in part because they have the foundational skills needed to develop new skills and knowledge as needed.[4] Despite these achievements, questions arise about how well-equipped post-secondary graduates are for the workforce. For example, employers and graduates have different perceptions of the skills graduates have and the skills they need.[5] Moreover, studies of university graduates in Ontario suggest uneven educational outcomes as well as links between low levels of skills attainment and under-employment.[6] Specifically, we know that not all graduates of high schools in Canada have the same level of essential skills. In fact, while high school graduation rates are climbing, average literacy and numeracy scores of high school-aged youth are on the decline in Canada.[7] For example, a study by the Higher Education Quality Council of Ontario (HEQCO) found substantive gaps in workplace-ready skill levels among post-secondary students upon graduation. Among other things, students perceived large gaps between the leadership, teamwork and creative/innovative thinking skills they were taught in post-secondary institutions versus what they would need in the workplace.[8] Students in the study were concerned across the board, feeling they were not receiving enough training across disparate areas such as industry-specific skills, business etiquette and creative/innovative thinking. Statistics Canada reported in 2017 that no reliable information existed about the specific skills graduates actually use in their jobs. This raises questions about the relationship between an actual transferable skills gap versus the perceived gap measured in the HEQCO study.[9]

PRE-EXISTING TRENDS AT PLAY

Before COVID-19, researchers had already begun to view skills as the new currency on the job market, and recognized the need to reduce friction by better connecting the supply and demand of skills.[10] Additionally, researchers recognized that a better connection was needed between real-time labour market information and stakeholders in the skills ecosystem.[11] That means focusing on understanding the forces changing the nature of the skills we need, particularly in the post-COVID-19 environment.

Researchers found there was a need to tighten the connection between post-secondary education and the work world, which could be achieved by focusing on essential skills (which are transferable) as well as technical workplace-specific skills taught through work-integrated learning.[12] Researchers also recognized a need to develop new responsive and adaptive models to help Canadians develop the skills they need—something that can be achieved through new technology that specializes in real-time skills assessments and improved skills-job matching.[13]

Understanding how to assess and address skills gaps has become increasingly concerning to actors in the skills ecosystem space as technology disrupts workplaces. One problem with skills gap assessments and retraining programs is that those currently in the lowest-skill jobs are the most likely to be negatively affected by technological disruption and least likely to have ready access to training.[14] This is because they may not be employed by a workplace that offers training, or face barriers to navigating training and subsidies for training offered by local, provincial/territorial, or federal governments. Throughout a person's retraining or upskilling journey, systemic barriers may prevent skills from being gained or effectively utilized, and program and policy experts aiming to move the needle need to take these factors into account.[15]

We need to focus not only on training, but also on the entire ecosystem of players involved in identifying, assessing, developing and utilizing skills. This means engaging with how the private sector invests to close skills gaps in its current workforces, and engaging all players in working to remove barriers that prevent employers from recruiting and retaining diverse workers.[16] In addition, government support is recognized as a viable way to ensure that underrepresented groups achieve success as business owners.[17]

Before the COVID-19 pandemic and the resulting economic crisis began, Canada's systems of education and skills development generated mixed results. Canada's K–12 and higher education systems have produced many graduates with strong foundational skills and knowledge, but skills development opportunities for people already in the labour market are limited, declining and unevenly distributed. In the face of technological change and economic disruption, the people who most need skills development opportunities have been least likely to receive them. Moreover, there is considerable evidence that organizations providing skills training, whether community groups or post-secondary institutions, are producing uneven results in terms of equipping job seekers for employment, and are failing to meet the needs of many learners. Employers are often looking for skills in all the wrong places, using recruitment and development processes

that are fraught and erecting barriers to qualified diverse applicants.[18] Many diverse and qualified candidates fail to see their abilities reflected in job descriptions and hiring processes. At the same time, most government programs and policies tended to be focused on meeting the needs of large employers rather than small- and medium-sized enterprises (SMEs), which comprise 88.2 percent of employment in the private sector in Canada.[19] There are, therefore, significant gaps in our understanding of the demand side of the skills and employment ecosystem. These imperfect, uneven results have been increasingly affected by megatrends unfolding around the world.

Technological change

Since long before the pandemic and economic crisis, changes in technology and the global economy have been generating new skills demands and challenges for organizations and workers.[20] Advances in artificial intelligence, robotics and other technologies have created opportunities for firms to improve productivity. These technological changes place a premium on new technical, social and managerial skills, while simultaneously threatening unemployment for workers in jobs characterized by routine and automatable tasks.[21] Before the pandemic, studies suggested that anywhere from 6 to 59 percent of jobs were at risk of automation,[22] with some groups such as Indigenous peoples positioned as more vulnerable than others.[23] However, new technologies are being adopted at an uneven pace. Many argue that such projections are overstated and that new technologies are as likely to create new jobs as destroy old ones.[24] Still others suggest that change is happening more slowly than we think and will be less catastrophic than is often predicted.[25]

Evolving work relationships

Some saw the gig economy as an exciting opportunity for new work arrangements, self-employment and entrepreneurship. But the rise of the gig economy and the non-standard, precarious employment arrangements it enables has also generated social and economic insecurity for many, and introduced new barriers to accessing training opportunities.[26, 27] Canada has persistently been plagued by the productivity and innovation paradox, where investments in innovation and research and development (R&D) have not produced the expected growth and expansion of employment. In addition, while the number of jobs had increased and unemployment had been relatively low prior to the pandemic, wage growth had been stagnant. Other critical issues—for example, the unpredictable impact of climate change—have often been overlooked, but are critically important in driving possible futures. Very few futurists and pundits have had their eye on the possible effects of a global pandemic, although growing concerns about employee health and safety have been on the radar.

In recent years, there has been a fall in levels of unionization and shifts to less secure and more precarious working relationships. Gig work is not new, but new technology platforms have fueled the proliferation of non-standard work arrangements, representing a shift that pre-dates the pandemic and economic crisis.

While some herald the gig economy as a new model of flexible work and choice, the impacts are highly dependent on resources and power relationships.[28] Some gig workers choose nonstandard employment because they are "pulled" toward greater flexibility and control over their work. But many more are forced into gig work out of necessity—or "pushed" because of a lack of other employment opportunities.[29] Again, understanding the role of skills is critical to understanding who gets pushed and who is pulled. There are significant differences, for example, between an Uber driver and a full stack Java developer.

On average, workers in non-standard employment tend to work fewer hours, earn less money, have limited or no extended benefits, limited employment security and fewer employer-sponsored training opportunities.[30, 31] Women, persons with disabilities, Black, Indigenous and racialized communities, immigrants and people with less educational attainment are more likely to be employed in precarious work, adding horizontal inequality to concerns about vertical inequality.[32] People doing gig work out of necessity typically lack access to the protections, benefits, and training and skills development opportunities they need to break into other employment.

Demographic change

Despite Canada's brand as a diverse and welcoming nation, and despite obvious demographic trends such as our aging population, an urgent need to attract and retain the best and brightest, and a need to fully employ all segments of the population, persistent problems of inequality and discrimination continue to manifest in underemployment, wage gaps and marginalization for some populations.

As of July 2020, 6,835,866 Canadians were over the age of 65 (which represents about 18 percent of the population) and the median age in Canada was about 41 years old.[33] As the population ages and the fertility rate drops, it is possible to take advantage of opportunities, prepare for vulnerabilities and anticipate demographic shifts. While the growing number of seniors compared to the working age population will likely result in a growing rate of dependency, we also see more seniors contributing to GDP well after age 65.[34]

Indigenous communities are a segment of the population where we see a different trend. These communities are much younger: between 2016 and 2026, 350,000 Indigenous youth will turn 15, the age at which they may enter the work force.[35] While this population has been inhibited from accessing the same quality of skills development and educational opportunities as non-Indigenous youth, their participation in the workforce has been valued at $27.7 billion annually. Boosting the proportion of this population who run businesses, employ others and otherwise engage actively in and with the labour force would be a boon to the Canadian economy.[36]

Finally, problems with Canada's immigration-to-employment pathway run deep. Immigrants to Canada are widely underemployed and unemployed across sectors.[37] While the Canadian immigration points system is weighted to help attract skilled and educated migrants, Canadian work experience is a critically important

prerequisite for getting many jobs. Canadian credential and accreditation systems across many trades and professional positions also do not recognize the value of foreign credentials, with experienced professionals often forced to redo all or most of their training to work in their areas of expertise.[38] Furthermore, applicants continue to be discriminated against on the basis of gender and perceived race.[39] Altogether, these various problems result in an enormous loss in skilled workers and GDP for the Canadian economy.

In short, even before the pandemic and economic crisis, Canada faced a skills and employment landscape characterized by risk, uncertainty and inequality, with competing policy priorities. COVID-19 has done much to further expose and exacerbate the challenges.

Who provides training, and who has access?

Before the pandemic, fewer than one third of Canadians were participating in job-related, non-formal skills development annually. Those who were received just 49 hours of annual instruction—below the OECD average of 58 hours.[40] Moreover, until recently, spending on training and development by Canadian firms had been on a two-decade downward trend, which means that already-scarce training opportunities were becoming even more scarce.[41]

An additional concern is that Canada is behind in understanding and widely articulating the skills needed for workers to thrive. This is partly because the information and support available to workers, employers, policymakers and job seekers is often fragmented and difficult to access.[42,43] Aside from our imperfect ability to predict the future, gaps exist in the language we use to define, assess, develop and employ skills—as well as the platforms and tools needed to support them. For example, in the domain of "digital skills" we contend with a garbled set of frameworks, platforms and skills, defining digital skills broadly to include everything from use of Microsoft Office to full stack Java development.[44] Similar confusion exists around the language and assessment of "soft skills" or "social and emotional skills". Efforts to develop common frameworks and taxonomies like the Government of Canada's Essential Skills Framework[45] are therefore critical to reducing friction between job seekers, employers and service providers.

Equally troubling is the fact that people who most need additional training have generally been least able to access it. For example, those with higher literacy scores are more likely to participate in job-related adult education and training. Only 15 percent of Canadian workers who score below Level 1 in the OECD's literacy assessment report participating in job-related education and training, while more than 65 percent who score at Levels 4 or 5 report the same.[46] Meanwhile, people with lower literacy are more likely to work in occupations being disrupted or eliminated by technological change. Higher risk of unemployment should come with better access to reskilling opportunities. The opposite is the reality in Canada.

LONGSTANDING UNEVEN OUTCOMES

The confluence of the factors described above, compounded by a historically complex policy and economic landscape, has led to significant disparities in education and employment outcomes for several equity-seeking groups in Canada.

The disparities in employment and wages for women, racialized people, Indigenous people and persons with disabilities are a function of complex intersecting factors.[47] Education is one of the strongest predictors of social and economic mobility, and in some instances is also associated with higher skill levels—another important factor. As is discussed below, ample evidence exists that not all segments of the Canadian population have equitable access to education and skills development opportunities. And, even when they do, they often face systemic discrimination, which limits their opportunities to apply their skills.[48] Thus, this is not simply a problem of providing more skills, but also of ensuring employers are equipped to utilize them.

Systemic racism against Indigenous communities

Canada has long exhibited substantial disparities in educational attainment. Most notably, the skills and educational attainment of Indigenous people continue to lag that of non-Indigenous Canadians.

> **In 2016, 55.6 percent of Métis, 39.7 percent of First Nations, and 30.5 percent of Inuit aged 25 to 34 had a post-secondary credential, compared to 70.6 percent of non-Indigenous Canadians.[49]**

Significant differences in educational outcomes also exist between First Nations, Métis, Inuit, between status and non-status First Nations people and between Indigenous people in different geographical locations.[50] Not only do Indigenous people bear the scars of historical abuse, past and ongoing colonization, and racism and violence, but half of all Indigenous people also live in rural and remote locations, which have less access to educational institutions and essential infrastructure, such as housing and transportation, which are essential to the pursuit of learning. When we add the digital divide to the equation (the fact that some people have access to broadband infrastructure and the tools and skills to use it, while others do not) it is clear that these barriers are significant and often prohibitive.

Racialized communities and newcomers

Racialized communities have a higher rate of unemployment at 9.2 percent compared to 7.3 percent for non-racialized communities.[51] In addition to differences in rates of employment, a wage gap exists for racialized people in the Canadian labour force. Racialized immigrant men make just 71 cents for every dollar

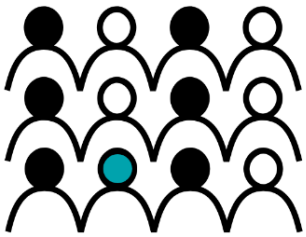
made by non-racialized immigrant men.[52] Similarly, racialized immigrant women earn 79 cents for every dollar earned by non-racialized immigrant women.[53] Black communities have higher rates of unemployment compared to the overall rate for racialized communities, at 12.5 percent and 9.2 percent, respectively.[54] Non-racialized immigrants experience better outcomes compared to racialized immigrants. Black, Indigenous and racialized communities also report feeling undervalued and disrespected at work. A 2019 report by Catalyst Canada found that 33 to 50 percent of Black, East Asian and South Asian professionals report being emotionally "on guard" to monitor for and protect against bias and discrimination in the workplace.[55] Further, 8 in 10 Black Canadians reported experiencing one of several forms of day-to-day micro-aggressions, such as having others project low expectation onto their work or being treated in a condescending way.[56]

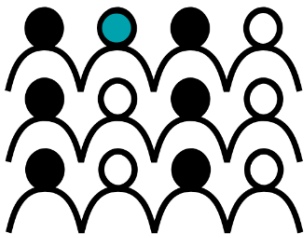
BIPOC Experiences

Racialized immigrant men make just 71 cents for every dollar made by non-racialized immigrant men

Racialized immigrant women earn 79 cents for every dollar earned by non-racialized immigrant women

Black, Indigenous and racialized communities also report feeling undervalued and disrespected at work





33 to 50 percent of Black, East Asian and South Asian professionals report being emotionally "on guard" to monitor for and protect against **bias and discrimination** in the workplace

8 in 10 Black Canadians reported experiencing one of several forms of day-to-day **micro-aggressions**

One study found that direct experiences with racism are common amongst Black Canadians across all walks of life in the Greater Toronto Area. Of those who identified the occurrence of common, direct racist experiences, two thirds said they frequently or occasionally experienced racism and discrimination.[57] Another study on the experiences of immigrants in the Peel region of Ontario found that racism was an important factor moderating racialized immigrants' experiences of arrival and integration into Canadian society. This impacted their well-being and ability to climb the socio-economic ladder. In addition, those identifying as Black experienced significantly more discrimination in seeking employment than other racialized immigrants who, in turn, experienced more discrimination than white immigrants.[58] Studies in the Greater Toronto Area revealed Black students were more likely to be streamed out of courses intended for university-bound students, and are more likely to be suspended and less likely to receive support than any other group.[59] The Black Experience Project revealed complex systems of anti-black racism, which manifest as 50 percent of Black youth reporting they did not feel they belonged at their school.[60]

There is long-standing support for the idea that Canada is making poor use of its highly skilled immigrant workforce by systematically devaluing immigrants' skills.[61] While Canadian immigration systems demand that incoming workers have high levels of foreign credentials, these qualifications are notoriously under-recognized in Canada, leading to a significant and disheartening immigrant wage and employment gap across sectors.[62, 63] Job applicants with "foreign-sounding" last names are 20 percent less likely to get called for interviews in a large company and 40 percent less likely to get called for an interview in an SME than those with Anglo-Saxon names, despite having identical credentials.[64] For instance, only 39 percent of internationally educated engineers could find a job that required a university degree, compared with 71 percent of Canadian-born engineers at the same level.[65] Stories of immigrants with Masters degrees in computer science driving for Uber or working as security guards are legion. Similarly, in skilled trades, where there are demonstrated labour shortages, internationally trained workers face many barriers finding jobs.

Women workers

Over the past several decades, women have made significant gains in labour market participation across multiple sectors. In 1950, only one in four women between the ages of 25 and 54 had a job.[66] By 1990, this had increased significantly to 76 percent of women.[67] Part of the increase can be explained by changing social norms, better distribution of unpaid household and care work,[68] increased educational attainment,[69] increasing demand for social and fundamental skills[70] and greater availability of jobs in the service sector. However, further increases in the participation rate have slowed in recent decades due to barriers such as a

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lack of affordable childcare,[71] unconscious bias and lack of access to the skills and training programs women need to work in
high-skilled occupations. The experiences of Black, Indigenous and racialized women, as well as newcomer women and women with disabilities, are even more difficult.[72] These additional barriers are reflected in the fact that racialized women make 87 cents for every dollar non-racialized women make in Canada.[73]

Part of the explanation for this wage gap is that there is an employment gap, with women more likely than men to leave work after having children, or more likely to reduce their hours worked after having children. However, this does not entirely explain the wage gap, with women across industries earning less than men.[74] Other structural barriers, beyond the burden of unpaid work and childcare, are critical.[75] For example, women are dramatically underrepresented in leadership roles across all sectors, but particularly in the corporate sector. They represent a tiny fraction of the top 2 percent of wage earners in Canada.[76] To take just one example, and in spite of decades of employment equity policies, women still hold less than 25 percent of senior leadership roles in the global health workforce.[77, 78] But focusing only on gender is not enough. For instance, in corporate leadership roles, white women outnumber racialized women 12:1 even in the Greater Toronto area, where racialized women outnumber white women in the general population.[79] Numbers like these show why it is critical that we use an intersectional lens, a term coined by scholar Kimberlé Crenshaw,[80] when we look at gender disparities so that we can see the ways in which different intersecting forms of marginalization produce inequitable outcomes.

At the same time, recent research has tied some of these inequities to occupational segregation and underrepresentation in specific sectors, such as information and communications technology. In spite of 30 years of well-intended efforts to advance women in technology,

there are fewer women in computer science and only marginally more in engineering than 30 years ago.[81] Women who do succeed in these male-dominated areas often face toxic work environments. There is also evidence that an over-emphasis on science, technology, engineering and math (STEM), and an undervaluing of hybrid digital and "soft" skills, have reinforced barriers to women in everything from work-integrated learning opportunities to full employment and advancement.

Finally, while there are many contributors to the wage gap that interact in complex ways, educational and skills and employment barriers are key contributors.[82] Evidence shows that barriers start early and persist throughout the education system, with girls outperforming boys in standardized math tests in grade 3 but then self-selecting or being excluded in upper years.[83] In addition, the lack of a gender and inclusion lens on many skills-development programs has unintended consequences; for example, the initial focus on STEM in the federal Work Integrated Learning Programs (designed primarily to support the needs of large organizations) resulted in 75 percent of the funding going to men.[84]

Persons with disabilities

Women and men aged 25 to 54 who have disabilities are much less likely to hold a post-secondary credential (54.3 and 53.9 percent, respectively) than women and men aged 25 to 54 without disabilities (69.1 and 65.2 percent, respectively).[85] Almost all of the difference can be attributed to differences in university attainment (as opposed to trades and college credentials).[86] Two key factors that limit success in workplaces as well as post-secondary institutions are negative attitudes towards persons with disabilities and a lack of awareness about accommodation best practices.[87] Due in part to the cumulative impact of poor accommodations, which result in poorer educational and workplace outcomes for persons with disabilities, in the core working age range of 25 to 64, more than 28 percent of Canadians with severe disabilities and 14 percent with milder disabilities live in poverty, compared to 10 percent of others.[88] Perhaps the pandemic will help change this as a recent study of accommodations needed by persons with disabilities highlighted the importance of flexible work hours and working at home, two accommodations the acceptance of which has been significantly accelerated by COVID-19.[89] One contributor to this gap is that Canadians with disabilities are often hired in entry-level positions with low wages and precarious status without commensurate access to professional-development opportunities.[90] Even when they succeed in completing post-secondary education, graduates with severe disabilities face employment outcomes comparable to those without disabilities who have not completed high school.[91] [92]

Facing the future

Recognizing and understanding the importance of these disparities is critical to developing an effective skills and employment ecosystem. Those with good foundational skills are more likely to receive and benefit from future training and development opportunities, which makes them more resilient in the face of economic crises. Recent data, for example, show clearly that those with lower levels of educational attainment are

most vulnerable to automation and also to unemployment fuelled by COVID-19. At the same time, COVID-19 has exacerbated pre-existing inequalities and disparities, including social and economic barriers. And while Canadian youth across all income levels believe digital skills would be important to their future education and careers, those in lower-income households were less likely than those from higher-income households to say that they have access to digital technologies and opportunities to develop digital skills.[93]

WINDS OF CHANGE: WHAT THE PANDEMIC HAS REVEALED AND CHANGED

Social and economic conditions have shifted dramatically in recent months owing to two related drivers of change: the coronavirus pandemic and the resulting economic crisis.

COVID-19 spread quickly, causing illness and death for many, and continues to create acute risk for vulnerable populations, including older adults, people with certain pre-existing health conditions and socio-economically marginalized groups. Physical distancing and other public health measures implemented in response have changed the way we live, socialize, learn and work. While reducing the immediate health risk, these measures have generated other physical and mental health challenges.

The economic crisis is a consequence of the pandemic, but its depth and dimensions have been mediated by policies and other intervening variables. All but essential businesses were shut down for an extended period, with many workers experiencing reduced pay, hours and, in some cases, loss of employment altogether. Various government programs have aimed to keep businesses and people afloat during the crisis. But a dramatic drop in consumer demand persists, as does uncertainty about when it might return. Even once the economy recovers, it will have changed in many ways, including what we produce, how and where people work, and how employment and wages are distributed. Meanwhile, the economic impacts are massively uneven, with some sectors in virtual collapse and others thriving. Indeed, the pandemic has accelerated innovation in many sectors, even where it had previously been sluggish, as the need for social distancing and remote work required the immediate adoption of new approaches and technology.

The health and economic drivers of change have generated a suite of key trends in the economy and society that could have major implications for a post-pandemic skills agenda. Most of the trends we identify below existed before COVID-19. But the pandemic and economic crisis have significantly revealed, accelerated and deepened these trends, with profound implications for the skills ecosystem—including generating new skills challenges and opportunities, influencing which skills are increasing and decreasing in value, and emphasizing the need to address disparities in skills attainment and skills-development opportunities.

TECHNOLOGICAL AND ECONOMIC CHANGE

Digitization

For decades, digital technologies have been changing the way we communicate, create and consume. Brick and mortar retail locations have been supplemented, or in some cases replaced, by online commerce. Government service delivery is increasingly done online instead of in person. And incremental steps have

been made to move aspects of education and learning—both formal and informal—online. Even before the pandemic, many activities were taking on a digital form and generating new skills needs (such as technical skills to create, implement and use technologies) and revealing many skills disparities, such as in levels of digital literacy, opportunities to develop digital skills in education, and opportunities to participate in technology work.[94] [95] [96]

The pandemic and the resulting economic crisis have accelerated the digitization trend in business, government, education and social life. Physical distancing requirements and lockdowns have forced businesses to rely even more on online shopping and delivery to survive; school closures have prompted teachers and students to connect, teach and learn through digital platforms; and visits with family and friends have become digitally mediated events—all with mixed success. As restrictions eventually ease, many sectors will return to in-person interactions. But much of this new digitization and its effects on the organization of work, education and social life will persist.

The growth of digitization has had a profound impact on all aspects of life, but it has also highlighted the importance of digital and other skills needed to work, manage and drive innovation in the new environment. At the same time, the growing reliance on digital technologies has exacerbated the digital divide and inequality resulting from lack of access to infrastructure, tools and skills. While most acute in rural and remote communities, the digital divide also exists in urban areas as a result of social and economic inequality.

Automation

While some have associated recessions with rapid technology adoption and automation by firms,[97] others have argued that the effects of recessions are lumpy, with employment opportunities expanding overall even if some jobs are lost to automation. Because the pandemic has made certain types of labour more difficult to access due to health restrictions and changing risk calculations by workers, some firms have had strong incentives to automate,[98] although the effects vary considerably by sector.

The challenges facing equity-seeking groups, especially those facing multiple, complex forms of oppression or marginalization, have become more pronounced over the course of the pandemic.

In some sectors, however, COVID-19 may have the impact of increasing labour and skills demands as we reconsider what is essential work. The role of personal support workers, for example, a group that has been historically under-skilled, underpaid and under-valued, is being reconsidered. At the time of writing, student-teacher ratios are also being re-evaluated and the importance of cleaning staff is being emphasized like never before. More information is needed to understand how this will ultimately play out.

Reshoring

Changing patterns in international trade have put substantial pressure on firms and workers; some have seen opportunities evaporate while others have seen opportunities to reduce costs and grow internationally.[99] Clearly, COVID-19 has raised new questions around the need to repatriate our supply chain, particularly when it comes to essential projects and services such as food and personal protection equipment. Calls are already emerging to "buy Canadian" and use preferential procurement as ways to rebuild the economy. This suggests that companies may take new approaches to building international trade and supply chains, particularly in the manufacturing sector.

Precarious work

COVID-19 has had uneven impacts on the demand for precarious work. On-demand delivery, for example, has increased, whereas demand for day labourers has decreased. Highly skilled freelancers have seen ups and downs. The pandemic has underscored the precarity of these workers and their uncertain access to benefits and supports.

STRUCTURAL INEQUALITIES AND DISCRIMINATION

The challenges facing equity-seeking groups, especially those facing multiple, complex forms of oppression or marginalization, have become more pronounced over the

course of the pandemic. Importantly, there is clear evidence that women and racialized people are more likely to have experienced job loss.[100] Indigenous people are less likely to have access to the Internet and the skills they need to adapt to COVID-19, whether for home schooling, work or access to health services. Small businesses are the most affected by COVID-19, and women, racialized people and Indigenous people are more likely to own newer, smaller, less well-financed businesses in the sectors most affected by COVID-19.[101]

Exacerbated racial inequities

While the COVID-19 pandemic has brought historical and continued instances of systemic racism to the forefront, these inequities have been amplified by the global movement sparked by the killings of George Floyd, Breonna Taylor and other American Black men and women at the hands of police.[102] In Canada, the death of Regis Korchinski-Paquet and other Black women and men, highlights that anti-Black racism has never been just an American issue.[103] The Black Experience Project, which interviewed 1,500 people who identified as Black in the Greater Toronto Area, revealed that 50 percent did not think Canada was better than the United States. Rather, in the words of Olympic medalist Donovan Bailey, it was just "politer". In response to the global focus on movements to advance racial justice, employers across all sectors are examining how they can address systemic racism in their workplaces and move towards anti-racism. The evidence is clear: Black Canadians are substantially more likely to die from COVID-19 than other groups because of their over-representation in front-line and precarious jobs and areas with poor supports and protections, and because of the intersection of race and poverty.

The recent establishment of the Canadian Council of Business Leaders Against Anti-Black Racism[104] indicates that the current focus on advancing anti-racism may have an enduring impact on the Canadian workplace and could have implications for skills training. Many firms have put forward statements of acknowledgement and allyship highlighting the pervasiveness of systemic anti-Black racism in society at large, with some discussing how this manifests itself at their workplaces. New legislation, such as Bill C-25, aims to improve representation of designated groups in leadership roles. Other new national legislation such as the Pay Equity Act (2018), improvements to the Employment Equity Act (2019), and the Accessible Canada Act, Bill C-81, will improve working opportunities, workplace conditions, and pay transparency for the benefit of people who are commonly paid less than colleagues for the same work, such as persons with disabilities and women.[105] This increase in instruments available to help improve workplace equity will result in the increased application of a gender and diversity lens to funding and programs.

Exacerbated gender inequities

The reality and experience of gender inequity in the workplace and beyond has been heightened by the pandemic. Women have been on the frontlines of the pandemic response, including making up over 70 percent of the global healthcare workforce.[106] Beyond healthcare, the economic shutdown has devastated many women-majority sectors such as food services, hospitality, retail services and tourism, severely

impacting women workers.[107] In March 2020 alone, 1.8 million women workers either lost their job or lost hours.[108] Employment rates in the accommodation and food services sector, where women dominate, have been hit hard and are not forecast to recover by the end of 2020.[109] Ongoing physical distancing requirements and the rise of the "contactless economy" leaves great uncertainty about whether many jobs lost at the start of the pandemic will return in the recovery.

While women are more likely to hold jobs in sectors and roles affected by COVID-19, the increased burden of unpaid work and the lack of access to supports has led many women to leave their jobs to compensate for a lack of childcare outside the home.[110] Recent surveys shows that 7 in 10 Canadian women are experiencing increased anxiety, depression, isolation and illness due to their COVID-19-related unpaid care duties.[111, 112] Calls for feminist economic recovery plans, such as the one recently passed by the State of Hawaii,[113] indicate not only an increased consciousness of gender inequities, but also increasing political will to mitigate the economic and social fallout of these inequalities.

Exacerbated inequities for Indigenous communities

Indigenous people represent 4 percent of the Canadian labour force and could generate up to a combined household income of approximately $30 billion a year.[114] But even before the arrival of the pandemic, there were serious concerns that Indigenous workers were at disproportionate risk of job disruption due to technological advances and innovation. Since the onset of COVID-19, Indigenous people have been more likely than non-Indigenous people to report that COVID-19 has had "a strong or moderate impact on their ability to meet financial obligations or essential needs."[115]

> **Despite this high level of need, only 44 percent of Indigenous people who reported a strong or moderate impact applied for federal income support, compared to 50 percent of non-Indigenous people experiencing the same degree of impact.**

Indigenous workers are over-represented in industries at risk of automation, and in jobs associated with lower-tier skill levels.[116] This employment outcome is partly explained by a cumulative lower rate of educational qualifications at every level for Indigenous youth and adults, and across every distinct Indigenous group. However, significant differences exist among educational outcomes for First Nations, Métis, Inuit, between status and non-status First Nations people, and between Indigenous people in different geographic regions.[117] Employer-side barriers are also significant, with many Indigenous workers citing workplace bullying and discrimination as a cause of early departure from a job.[118]

Specific programs, such as those funded through the Indigenous Skills and Employment Training (ISET) Program (2019–present), are designed to increase skills and training for Indigenous youth and adults, and decrease skills and employment gaps between Indigenous and non-Indigenous workers.[119] While ISET

funded programs have recently been subject to scrutiny, one of their significant benefits is that they involve service and program delivery through local organizations. Indigenous skills and training programs need to be designed by people who understand local Indigenous cultures and appropriate protocols, and should be co-created with stakeholders from specific local communities to promote success.[120]

Economic crises such as COVID-19 can reveal latent gaps or weaknesses in workplace and social support infrastructure. People with lower levels of educational attainment went into the recent economic downturn with higher rates of unemployment than those with more education. In addition, the unemployment rate through April and May 2020 increased the most for people in these lower-level education brackets.[121] Indigenous peoples are over-represented among those with lower levels of education.

Disproportionate impacts on persons with disabilities

COVID-19 has also had a disproportionate effect on persons with disabilities, who are more likely to be in precarious positions.[122] Many were cut off from the supports they needed to survive, even while they are more at risk of COVID-19 affecting their physical and mental health. Those with cognitive differences and mental health issues may be experiencing more stress and fewer supports.[123] Although there is evidence that the move to flexible hours and home-based work may actually have benefited some persons with disabilities, there is limited data to inform policy development.

Anti-immigrant discrimination

Finally, pre-existing barriers have also been amplified for immigrants, many of whom are racialized, and many of whom are "last in, first out" in terms of employment. International students and newcomers also have less access to the supports they need during the pandemic. Newcomer families are less equipped to support their children with home schooling because they often lack the education, language skills or time and resources they need. All Canadians face the prospect of a generation of students in K–12 whose education has been disrupted by COVID-19, but this is far more pronounced for newcomers and other marginalized populations.

Additionally, COVID-19 has fueled increased acts of racism and hate targeting specific immigrant populations, such as those of Asian origin. These populations' businesses have also disproportionately suffered. While Canada has always experienced challenges to its immigration and refugee policies, the argument that labour force growth would largely come through immigration was widely accepted. With COVID-19, we have seen an ugly resurgence of racism, coupled with claims that "immigrants are stealing our jobs" even though many are doing jobs for which there are no Canadians available or interested.

NEW WORKING ARRANGEMENTS

In Canada, some have estimated that as many as 40 percent of jobs can be done remotely,[124] although the ability to work remotely is not evenly distributed across jobs or demographics.[125] For example, we know that remote workers are more likely to occupy higher income roles, be more highly educated and work in sectors such as financial services, professional and technical services and educational services.[126] Meanwhile, jobs in manufacturing, construction and agriculture cannot be done remotely.[127] While 33 percent of single men are in jobs that can be done remotely, this climbs to 50 percent among single women.[128] Before the pandemic, 2.1 million people in Canada were working remotely.[129] By the end of March 2020, approximately 5 million more workers had transitioned to remote work.

It is not clear if telecommuting will be a permanent or temporary phenomenon—or how long the "temporary" arrangements might last.

While many organizations have had remote work policies for decades, they were seen more as a perk than a necessity, in part due to a premium on "facetime" and outdated notions of supervision.[130] The rapid adoption of telecommuting in the face of COVID-19 has shown that remote work is not only possible for many, but also effective. With little to no commuting,[131] remote workers are shifting when they start work and may even be working longer.[132] Studies find this may result in higher productivity,[133] and the flexibility[134] it offers may be more conducive for the different roles workers have outside the workplace, such as caregiving.

At the same time, individuals are split on the desirability of remote work, with some hoping to continue and others looking forward to returning to their office. Some workers are experiencing higher stress and mental health issues after losing the social interaction they value at the office. A recent survey by Statistics Canada reported that 52 percent of respondents found their mental health worsened over the course of the pandemic, and 88 percent experienced at least one symptom of anxiety in the two weeks before the survey.[135] It is likely that this is fuelling an increase in the impact of mental illness in the workplace, which in 2011 cost employers $6 billion dollars due to absenteeism, presenteeism and turnover.[136]

Many others lack the physical space, technological infrastructure or skills to work remotely. Unpaid work—particularly childcare and home schooling—has made remote work a crushing burden for many women. The new skills required for managers to supervise and lead in a remote work setting are also considerable. This raises questions about the role of the employer and other players in providing skills and other supports (subsidizing rent, utilities, etc.) to enable workers to thrive remotely.

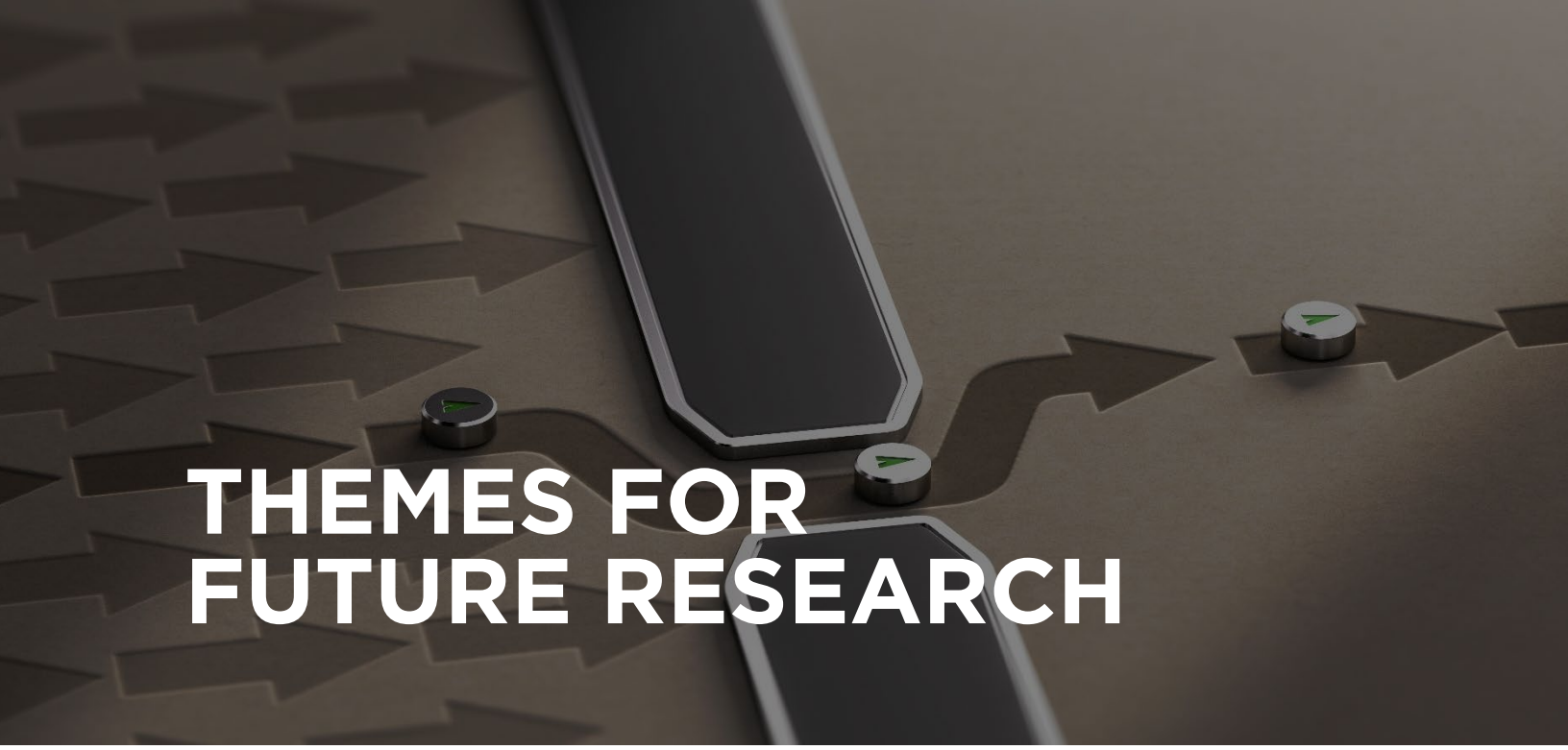
Care work is an example of a sector that has been transformed by COVID-19. Rather than being at risk of automation, workers are in high demand. This has multiple layers of implications for private and public sector employers, and also for individuals who have outsourced care work so they could pursue paid employment or entrepreneurship. Despite increasing evidence of the importance of care workers, under-

funding, poor working conditions and limited skills development are major issues. Globally, there is an alarming shortage of care workers. According to the International Labour Organization, 2.3 billion people will be in need of care by 2030. At present, there are only 381 million workers in the global care workforce.[137]

UNCERTAINTY

In the preceding pages, we have illustrated trends that the pandemic has accelerated, heightened or otherwise transformed in some way. But there is a caveat. Underpinning the entire health, economic and social context in Canada and beyond is a high level of uncertainty. Conditions are in flux owing to the unpredictable trajectory of the virus, the ever-changing policies and measures being adopted to address it, the resulting economic fallout, and people's behavioural responses to all of it. The magnitude and direction of the underlying drivers—the pandemic and economic crisis—and the second-order trends, raise new implications for how we think about education, the workplace and skills training.

What skills will be relevant in a few months and a few years? That depends in part on subsequent phases of the COVID-19 pandemic and policy responses. Both are characterized by great uncertainty.



THEMES FOR FUTURE RESEARCH

While it is clear that the trends associated with the COVID-19 pandemic are changing the ways we live, work and learn, their precise implications for skills development and use are not immediately clear. Moreover, it is not entirely clear what the magnitude or long-term direction of these trends might be. Since the onset of the pandemic there has been an explosion of research into its impacts and strategies for rebuilding, but we recognize the need for additional research and thought in at least eight areas in order to more fully understand the trends and their skills implications.

1. **Education and skills systems capacity**
2. **Rethinking essential infrastructure for supporting skills development**
3. **Skills development for more inclusive workforces**
4. **Skills for new work arrangements**
5. **Immigration policies and practices**
6. **Innovative and emergent models**
7. **Developing and supporting entrepreneurship and small businesses during the recovery**
8. **Understanding jobs polarization and the levers needed to address it post-pandemic**

1. Education and skills systems capacity

Are Canada's systems of skills development capable of meeting post-pandemic skills development needs? Before the pandemic, education and training systems faced high expectations and levels of funding that were arguably insufficient to deliver on these expectations. Moreover, job-related training, and skills development opportunities are comparatively limited in Canada. And although access to and achievement in education is generally high in Canada by global standards, disparities exist among demographic groups in their access to educational and skills development opportunities.

With the arrival of COVID-19, colleges and universities face uncertainty about enrolment, which means less funding from tuition, as well as new costs related to moving instruction online and ensuring that physical spaces meet health guidelines. Governments facing debt from COVID-19-related support programs are looking at ways to cut costs, and many have already targeted educational institutions. Additionally, business training and development budgets are likely to be in the crosshairs as firms look for ways to manage their own challenges—exactly when reskilling and upskilling are needed to manage change in the workplace.

- Considering that expectations are rising and changing, and that funding is becoming more uncertain, it is not clear that these systems have the resources and capacity to deliver on a post-pandemic skills agenda. But it is in this challenging context that training providers, employers, and policy makers are exploring innovative ways of delivering skills training. Innovations such as micro-credentialing and updates to apprenticeship programs provide insight into how the education and skills system can and must adapt in order to continue meeting the needs of workers and employers. What is the prognosis for Canada's education, skills and training systems' ability to meet ongoing and changing skills development needs? What expectations will the systems be asked to meet, and will they have the resources to do so?
- How will the challenges facing skills and education systems affect the kinds of skills and education provided? Critically, who will have access and opportunities to develop new skills?
- What policies, strategies and alternative funding arrangements could be adopted to help the skills and education systems sustain operations and meet rising skills development demands?

2. Rethinking essential infrastructure for supporting skills development

Our understanding of the skills and employment ecosystem needs to recognize the ecosystem's complexity and nuances. We need to better understand the factors at the macro, meso and individual levels that enable and lead Canadians to choose upskilling and reskilling opportunities.

There is anything but a level playing field regarding access to opportunities, which vary dramatically with an individual's skill level, assets and access to infrastructure. We know for example, that as education moved online and into the home during the pandemic, low-income students and those in rural areas, who already faced higher barriers, were at greater risk of being left behind. And if education continues to have a substantial online component in the months and years ahead, students from lower-income households could be even further disadvantaged.

We know that the burden of childcare and homeschooling has significantly restricted access for many women to work and education. Meanwhile, there is considerable evidence that flexible formats, individual supports, and "wrap-around" services—programs which integrate and coordinate assistance with income, childcare, transportation support, mental health, counselling and mentoring, even food—can dramatically increase the ability of marginalized populations to access skills development opportunities.

Some organizations do a better job than others in meeting the needs of diverse populations for skills and training and some individuals pursue and persist in training in spite of barriers that cause others to give up. Understanding the factors that shape the choices people make to pursue training, whether essential skills, professional upgrading or work-based programs is critical. There is considerable evidence that individual factors such as self-confidence and perceived benefits and opportunities play a role and that "stereotype threat"—a phenomenon whereby individuals perform worse than they would have otherwise due to negative stereotypes about their social group—and discouragement may impede efforts. But rather than assume that one size fits all, we need to better understand the complex array of factors that create or impede opportunities and draw on behavioural economics and other social psychology literatures to understand which "nudges" or incentives are likely to have the greatest impacts and under which conditions. Thus, this research will examine an array of questions related to:

- Structural barriers – childcare, broadband, housing, income and policies.
- Individual decision processes – self efficacy, confidence, access to information and incentives.

3. Skills development for more inclusive workforces

This pandemic has focused attention on the long-standing inequities experienced by women, Indigenous and racialized people (particularly those who are Black), as well as newcomers, persons with disabilities and others from diverse, equity-seeking communities facing intersecting forms of marginalization. As noted above, public consciousness of racial inequities is growing, which is leading to demands for structural change. At the same time, decades of advocacy have shown that good intentions do not necessarily drive change.

For the skills ecosystem in Canada, demands for accountability and action on systemic racism have implications on the types of skills we must teach the next generation of workers to have truly inclusive

workforces. What does it mean to be an anti-racist employer? What skills must be emphasized in onboarding for workers? How do you manage and work on diverse teams in an inclusive way? Who is responsible for teaching these fundamental skills, and how should we go about it? These are just some of the questions that need to be addressed to truly grapple with the increased consciousness of racial inequities in Canada as they relate to the world of work.

The evidence is clear that, despite a dominant discourse regarding the skills gap that focuses on deficiencies in workers, systemic discrimination, exclusionary policies and practices, and employers looking for skills in all the wrong places are critical contributors to our current employment equity challenges. There is currently an impetus to "build back better" post-COVID-19 and rethink approaches to training, hiring and retaining employees. But there is a dearth of practical tool kits to help employers move forward. And there is evidence to suggest that well-intentioned training programs targeting privilege, unconscious bias or anti-Black racism are ineffective if not undertaken in a context that has embraced structural changes as well as inclusive policies and practices. While many large employers are signing onto proclamations and making commitments, SMEs struggling to survive are not as engaged in the discussion. Moreover, while women have been central to the fight against COVID-19, they are almost invisible in discussions about economic recovery, which have tended to focus primarily on men. There are also risks that, for many, diversity and inclusion are "nice to haves" when the economy permits, and that recent gains will be set back decades with a "last in, first out" approach.

This report will focus on:

- Continuing to analyse and track disaggregated data on the impact of COVID-19 on underrepresented and marginalized populations.
- Understanding the barriers COVID-19 has exacerbated in terms of access to skills development, upskilling, reskilling and skills utilization faced by women, racialized people (particularly those identifying as Black), Indigenous people and those with disabilities.
- Applying a gender and diversity lens to programs focused on strengthening skills and employment for recovery.
- Examining the levers – policy, programs, incentives – that encourage employers to set targets, and develop and implement strategies, effective policies and practices that advance diversity and inclusion in the workplace.

4. Skills for new work arrangements

Because of COVID-19, workers are coping with remote work and learning on the job. When the pandemic hit, the transition to remote work was rushed and occurred without the planning or resources needed to support all workers equitably. Some skills are fundamental to ensuring one can telecommute adequately—including

digital literacy and the ability to use different technologies. But when the transition occurred, many workers—particularly those from lower income families where multiple members and children compete for access to one computer—did not have access to the technology required or were living in conditions that did not afford adequate work space or even air conditioning.

Apart from the physical and technical infrastructure needed to support remote work, workers and their managers require a host of new skills. How do co-workers collaborate effectively online? How can groups think creatively? How do managers build trust with workers they never see face to face? Furthermore, the skills needed likely differ by role. Opportunities to develop skills will vary according to the features of organizations and their employees, as well as according to the resources available to them. Even before the pandemic, remote work was seen as a suitable arrangement for workers whose duties outside work required a flexible schedule. Newly remote workers might require even greater flexibility at a time when their ability to participate in skills development may be challenged by other demands.

New entrants to the Canadian job market, including immigrants and new grads, may have additional needs for remote work arrangements. Searching for and landing a job may require new sorts of skills in this time of remote hiring—and not only for jobseekers, but also for those doing the hiring. For those who have secured employment, developing new and meaningful connections with managers and colleagues remotely may also require new skills and behaviours.

All of this points to a need for research that examines the nature of remote work and its implications for the skills needed to work effectively in both crisis and post-pandemic contexts.

- Who gets to (or has to) work from home? How does this differ by occupation, age, race/ethnicity, sexual orientation, Indigeneity, rurality and other variables?
- What types of skills (technical, foundational, social, emotional, etc.) are necessary to transition to, and perform effectively in, remote work arrangements?
- What types of skills are necessary to search for remote work, as well as to recruit, hire and onboard remote workers?
- What types of skills are needed to manage and support remote workers, and to ensure that collaboration and innovation continues?
- How does the digital divide influence the ability to learn, teach and re-skill for remote work arrangements?
- How and by whom should remote work skills development be delivered? What are the respective roles for employers, educators, service providers and other organizations and institutions?

- How are employers providing new supports—e.g. mental health services or accommodation for those with disabilities—to ensure healthy and safe remote work environments?

5. Immigration policies and practices

Before COVID-19, it was widely accepted that much of Canada's labour market growth would come through immigration, and that significant investments should be made in developing programs to advance the attraction of highly skilled immigrants, ease transitions for international students and, to a lesser extent, improve working conditions for temporary foreign workers. There was also recognition that we needed to do a better job supporting and integrating newcomers to Canada, as many felt they had been recruited on the basis of their advanced professional skills and then blocked from using these same skills to gain employment when they arrived in Canada. While surveys suggest that Canadians generally support immigration, immigration levels have fallen dramatically with the onset of the pandemic, due largely to COVID-19-related travel restrictions and the closure of many international borders. But there is also troubling evidence of increased racism that targets some populations in particular, as well as the emergence of a "take care of our own" mentality. At the same time, some continue to insist that increased immigration is the key to prosperity. We need to do more research to consider the impact of COVID-19 on immigrants already in Canada (who, evidence suggests, are more impacted than the average Canadian) and also to explore the implications for Canada's immigrant and refugee policies, particularly with respect to our traditional reliance on immigration to fill labour and skills gaps.

The questions here are:

- Drawing on disaggregated data that looks at different populations, regions and skill levels, what are the impacts of COVID-19 on immigrants?
- Have attitudes to immigration policies and programs changed?
- Does Canada need to adjust its immigration and resettlement policies, particularly as it looks to fill labour and skills gaps and build its entrepreneurial and innovation culture?

6. Innovative and emergent models

While the impact of COVID-19 has been undeniably terrible for most Canadians, regardless of their socio-economic status, education and employment, there is also some evidence that it has fuelled innovation and accelerated the adoption of new technologies, processes and policies at a pace never seen before. An important contribution to understanding the impact of COVID-19 on skills and training is to identify and document cases of innovative approaches worthy of replicating and scaling. Freed of time and space constraints of regular office hours, for example, many organizations have found ways to expand and reach broader audiences. While labour markets and training ecosystems historically have been highly regional, this may offer opportunities for new approaches.

We need to know more about how innovation in the employment ecosystem has been accelerated by COVID-19. Questions driving this research include:

- The adoption of what new policies, services and practices relevant to the skills and employment ecosystem have been accelerated by COVID-19?
- What evidence is there that innovative and emergent models are driving improvements in outcomes? What other impacts are these new models having?
- Are there ways to share lessons, and scale and replicate examples of what has worked?

7. Developing and supporting entrepreneurship and small businesses during the recovery

Employers and entrepreneurs are critical stakeholders in the future of work, and the needs and interests of employers should be at the centre of economic recovery considerations. However, most discussions of skills and employment are dominated by large employers. The evidence is also clear that SMEs have been disproportionately affected by COVID-19, and micro-enterprises and self-employed entrepreneurs have been affected even more. Women, racialized people, Indigenous people and those with disabilities who own businesses or are self-employed are more likely to be small, under-financed and in sectors most at risk (e.g. services). But while they are disproportionately impacted, they are also less likely to qualify for supports. Additionally, there is evidence that they lack some of the skills and supports—e.g. financial literacy, technological literacy, access to advice and coaching—they need to survive. Support for employers and entrepreneurs stimulates the economy, grows jobs and drives recovery and early-stage start-ups. Micro businesses and self-employed people are often the seedlings that grow into larger enterprises. Supporting entrepreneurs is important to Canada's economic growth. The skills and employment ecosystem requires attention to both supply and demand.

This paper will focus specifically on the skills issues that are important to the creation, scaling and maintenance of entrepreneurs and SMEs, with particular focus on underrepresented groups.

Questions include:

- How are the impacts of COVID-19 different for entrepreneurs and SMEs, particularly diverse entrepreneurs and majority SME owners?
- What skills do they need to survive and thrive?
- Given the issues of economies of scale, access to HR supports, competing priorities etc., how can we support diverse entrepreneurs and SMEs in accessing and developing the skills and talent they need to compete?

8. Understanding jobs polarization and the levers needed to address it post-pandemic

We have seen that the skills and training ecosystem in Canada in becoming increasingly complex, with existing gaps and disparities widening in many cases. The ecosystem itself involves complex relationships between training institutions, service providers, employers, workers, learners, regulators, and policy-makers, among others—and with the changes brought on by the pandemic, it is increasingly critical to build a shared understanding of the impact on the socioeconomic wellbeing of workers and learners in Canada. One critical element is therefore investigating the troubling trend of "jobs polarization" in terms of skill levels and income. While this polarization was already occurring before the onset of COVID-19, it is clear that the pandemic has dramatically exacerbated it as higher paid workers have shifted to remote work with relative ease, while many lower paid workers have been asked to risk their lives by continuing to work on the front lines of the pandemic.

Adding the idea of jobs polarization into the income inequality debate will help to enrich our collective understanding of the causes of growing inequality and to better focus the policy debate on addressing the structural forces driving this polarization. The scope for this investigation is vast and encompasses everything from labour policies designed to improve job quality for low-skilled workers to education and skills-training programs aimed at helping workers move up the skills ladder to reforms to our income support systems targeted at those who slide down the skills ladder - or fall off of it due to injury or illness.

Questions for this research include:

- What evidence exists that there is a growing polarization in jobs?
- To the extent that we are witnessing a jobs polarization, how and in what ways is this polarization connected to wider increases in income inequality?
- Has the pandemic exacerbated the trend towards jobs polarization? Has this trend been uniform or are their important differences between different types of workers and different types of jobs?
- What levers exist for policymakers to manage this polarization and potentially reverse it?

In the face of persistent uncertainty in our social, cultural, political and economic lives, we need to get a better handle on what is, and what is not changing, and think carefully about a new skills agenda.

CONCLUSION

The pandemic and economic crisis have generated new challenges and opportunities in Canada's skills ecosystem, and accelerated existing ones:

- Technology adoption has accelerated, with implications for firms and workers;
- Disparities in education, employment and skills development opportunities have been further exposed;
- The importance of care work—and the need to better prepare and compensate people to perform it—has been highlighted; and
- Disruption in the nature and location of work and socializing has further illuminated the digital divide and raised concerns about the skills needed to work, hire and manage remotely, as well as to connect with family and friends.

How should we transform our skills agenda to address the new and accelerating trends altering how we live, work, learn and socialize? This paper has clarified broad changes and continuities in the economy and society that could have implications for skills. It also identified a set of themes on which further research is needed to better understand the challenges and opportunities and outlined a research agenda for the next phase of this project.

In the face of persistent uncertainty in our social, cultural, political and economic lives, we need to get a better handle on what is, and what is not changing, and think carefully about a new skills agenda. Our research and thinking have been guided by a commitment to understand the post-pandemic skills issues that will affect prospects for innovation, growth and prosperity, and that have implications for our ability to achieve a more equitable and inclusive economy and society. We believe a research agenda motivated by these same commitments, and focused on the themes we outline in this paper, would help Canada develop a new skills agenda for a more resilient, inclusive and innovative post-pandemic future.

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