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State of Skills Report

Innovation in Training, Recruitment and Upskilling for Skilled Trades

LOCATIONS
Across Canada

PUBLISHED
November 2023

CONTRIBUTORS
Samir Khan,
Senior Research and Evaluation Associate at FSC

KEY INSIGHTS

1. Canada needs to address long standing shortages of skilled tradespeople to advance policy priorities around decarbonization, affordable housing and transforming industry to add more value to what we produce.
2. Tackling this challenge requires innovation to address persistent barriers of information, awareness, and perception of the trades to encourage more workers (and more diverse populations) to pursue trade career opportunities.
3. Collaboration among training institutions, employers, labour and workforce intermediaries, coupled with innovations in digital technology could help bridge learning gaps in many hard-to-address areas and support faster completion of re-skilling and upskilling.

The Issue

Attracting more Canadians to trades in demand
Like many economies across the world, Canadians (and Canadian employers in particular) recognize that Canada needs more skilled tradespeople. Not enough Canadians, however, appear to be interested in pursuing these careers. Rates of enrollment in apprenticeships are falling short of where labour demand is. Past efforts to increase numbers of skilled tradespeople through immigration have fallen short of their targets, with low admittance through federal programs and a lack of information available for new Canadians on how to get qualified. Policies that encourage companies to use government resources allocated for apprenticeship programs or tax credit incentives have mixed results. In an effort to address these shortfalls, the federal government has recently made changes to its Express Entry system in hopes of attracting candidates with expertise in carpentry, plumbing and welding.

Despite evidence showing strong labour market outcomes among Canadians working in the trades, reluctance to join the trades has long been understood to be a result of several factors.

- Attitudinal barriers, such as misconceptions about earning potential, negative perceptions of working environments and lack of status. Young Canadians have long been encouraged to pursue university education rather than trades-related training and often don't get accurate information about the future of trades from families or career guidance counselors.
- Technological change has also fed considerable anxiety about the future stability of "blue collar work."
- Experiences of discrimination and harassment and the general lack of inclusivity in many trades has resulted in few women, new Canadians and racially diverse groups working in trades that are in high demand.

Streamlining intake, training and upskilling processes
Pursuing a career in trades often involves a lengthy pre-apprenticeship training and the apprenticeship itself. Provincial and territorial trade certification systems (as well as the federal Red Seal program) provide a structured pathway for workers to develop specific trade-related skills through a combination of work-integrated learning and classroom-based instruction. Learning is offered by post-secondary institutions and training providers, including labour-led training centers, which play a key role in training would-be tradespeople and upskilling union members. Regardless of the provider, getting into these program and staying engaged in the full learning process can be challenging for workers due to cost and time. As well, they can often find work finishing formal programs. This challenge has been exacerbated by the backlogs in apprenticeship placements that emerged as a result of the COVID crisis, making it even harder for those who are pursuing trades to complete their training.

*Keeping skills up to date*Similar to other sectors, digitization and automation are transforming many tasks tradespeople perform, which may outpace the capacity of training and curriculum standards to evolve. Finding time and resources to keep up with these changing skills requirements can be challenging. Informal and self-directed learning often plays an important role in how workers keep their skills up to date. Given the extensive labour shortages, employers must carefully weigh the opportunity cost of time employees spend in formal training against their current labour needs. Self-employed tradespeople must incorporate career guidance planning into their day-to-day work and find creative ways to cover the costs of training and certification in new skills.

What We Investigated

FSC supported several projects testing components of the recruitment and training journey of tradespeople:

Recruitment through digital information and outreach services
Several FSC-supported initiatives tested approaches to overcome recruitment barriers in the skilled trades. FSC partnered with the BC Construction Industry Skills Improvement Council and Skillplan, to test approaches to overcome attitudinal and information barriers that discourage many Canadians from pursuing trade opportunities available to them. The approach involved consolidating diverse sources of information into digital resources to make information more accessible and relevant, particularly to groups that have traditionally stayed away from the skilled trades, such as young people, women, and racialized Canadians. Another approach FSC invested in, from Newfoundland & Labrador, involved working with young Canadians at the high-school level to support the development of core competencies needed to qualify for trades education. FSC partners Work-Based Learning Consortium and Canada Green Building Council also explored new approaches to recruitment, working with workforce intermediaries and unions to reach workers outside of trades who are either unemployed or at risk of unemployment and actively facilitating recruitment and retraining programs into trades programs.

Improving and streamlining trades training
Bolstered by innovations in digital platforms and educational technology, FSC partners tested how to improve the quality and efficiency of trades training programs for both new and existing tradespeople. Projects explored digital complements to existing training allowing for:

- self-directed learning,
- increased interaction between instructors and learners,
- supporting documentation of competency development during apprenticeships,
- experimenting with digital logbooks that help apprentices, journeyperson supervisors and employers better track the development of competencies and the completion of core components of training, and
- supporting asynchronous delivery to better accommodate the schedules of learners.

These tools support both initial training activities for new entrants into trades and upskilling of current tradespeople.

Connecting dots and facilitating collaboration
In a complex environment, FSC supported exploration of new ways for employers and training providers to collaborate, bringing together training providers and employers to define competencies and develop curriculum. Some projects also include collaboration with community organizations to offer wrap-around services to support the participation of workers through training and retraining efforts. If successful, these pilot programs hold promise for streamlining many accreditation processes, improving the quality of learning, and bolstering the confidence of learners and firms about their investments of time and resources.

✔ What We're Learning

Digital platforms + in-person guidance are needed to demystify trades
FSC partners are experimenting with digital approaches to support ongoing marketing of opportunities in trades, including the development of portals that bring together detailed information about specific sectors and occupations, training pathways, tools for assessing skills and defining gaps, and information on connecting to training providers and unions. Building these platforms requires extensive coordination between trades regulators, training providers, labour market information providers, unions and workforce intermediaries. Early learning indicated that while these tools could play an important role in facilitating entry into trades and workplace learning, more experimentation is needed to find the right balance between online information and in-person guidance. Larger questions remained about the cost-effectiveness and sustainability of these platforms.

Building connections between trades training and employers is crucial for those entering trades
Getting into apprenticeship programs can be challenging, particularly for young people or working-age Canadians who aren't aware of how to demonstrate required screening competencies or skills. FSC-supported programs have experimented with a variety of approaches to bridge the gap between interest in pursuing a trade, gaining entry into a specific training pathway and being able to maintain momentum throughout the certification process. One example is the platform being developed by Skillplan to enable recruitment into construction trades through a comprehensive labour market and career planning platform.

Some partners have attempted to facilitate worker transitions by preparing them for trades in new pre-apprenticeship programs. However, the success of these programs relies heavily on how well they are designed with employer needs in mind. New pre-apprenticeship programs should be recognized and valued by employers and training providers to successfully assist in getting into apprenticeship programs.

Innovations in digital technology could help bridge learning gaps in many hard-to-address areas and support faster completion of re-skilling and upskilling
There is some early promise that digitization might help reduce the duration of some components of trades-related training. While many aspects of trades-related training require on-the-job learning and classroom-based instruction, there are key components where educational technology (if carefully designed) could help address gaps in traditional approaches to training and apprenticeship. AI-enabled learning tools, for example, are being used to promote technical language training, which is especially important for workers who speak English or French as a second language. In a pilot phase, the asynchronous digital environment appears to have enabled mastery through repetition, especially because instructors can customize lessons and exercises based on data from learners. FSC partners are also testing technology that allows remote supervision of apprentices, which could help more learners complete required competency demonstrations in their own communities.

Digitization may also hold promise for making sure current tradespeople have opportunities to future-proof their skills. Asynchronous and hybrid-learning approaches for upskilling are showing some initial promise for enabling participation among workers and companies who are already being stretched by labour shortages.

Collaboration between employers, workforce intermediaries and other players to solve long-standing issues

On the employer side, FSC-supported approaches brought together stakeholders to understand specific employer needs and develop programs to facilitate entry into the trades in order to fill specific jobs. In these projects, workforce intermediaries played a key role in engaging employers and building connections to potential workers through service agencies reaching young and unemployed workers. For employers, their investment gives them a chance to shape and tailor curriculum and training to their specific needs. For workers in training, the connection between engaging in training and finding employment is more clear, and builds confidence as they undergo various aspects of the journey.

Why It Matters

Meeting Canada's skilled labour challenges is especially pressing as Canada undergoes significant economic transformation around decarbonization and the reorganization of supply chains. Large infrastructure projects emerging as a result of these processes (such as increasing the electrification of Canada's energy grid) will require significant skilled tradespeople.

Meeting the skilled labour shortages in the trades will also require encouraging greater participation among women, new Canadians, and Indigenous peoples, particularly in the mechanical, electrical, vehicle and construction trades. Finally, it will involve addressing wide discrepancies in labour market outcomes between men in trades and other groups.

In addition to addressing current challenges, continued automation and digitization will necessitate changes in the systems of policies, programs and practices that support ongoing training in trades.

The challenges are well-known and longstanding. Addressing them requires collaboration across a complex network of actors to encourage greater participation in skilled trades, support completion of training and apprenticeship programs, and careful experimentation with new ways of delivering training.

What's Next

Canada's net-zero targets and infrastructure needs will require significantly more skilled tradespeople with skill sets to work with new technologies. This transition presents an opportunity to resolve longstanding challenges in the trades with recruitment, access and inclusivity, but requires coordination across a system of actors. FSC is committed to supporting innovation in the skilled trades and will seek to work more closely with partners to identify promising practice and share those learnings across the skills ecosystem.

Projects in this Report

BOLD: Better Outcomes in Layoffs and Downsizing, Canadian Skills Training & Employment Coalition

Building the Skills of the Trucking Industry for the Future Using Innovative Technology, Trucking Human Resources Sector Council Atlantic

Digital Tools and Apprentice Learning On-the-Job, Canadian Apprenticeship Forum

Implementing a Virtual Recruitment and Assessment Centre for the Unionized Construction Industry, BC Construction Industry Skills Improvement Council

Rapid 'On-the-Job' Employee Upskilling/ Reskilling for In-Demand Skilled Jobs via Work-Based Learning, Work-Based Learning Consortium

Skills, Explore, Achieve, Revive, The Murphy Centre.

Workforce 2030: Rapid Upskilling for Green Building, Canada Green Building Council

Have questions about our work? Do you need access to a report in English or French? Please contact communications@fsc-ccf.ca.

How to Cite This Report
Khan, S. (2023) Project Insights Report: State of Skills: Innovation in Training, Recruitment and Upskilling for Skilled Trades. Toronto: Future Skills Centre. https://fsc-ccf.ca/projects/state-of-skills-skilled-trades/

Funded by the Government of Canada's Future Skills Program

Canada

This report was produced based on projects funded by the Future Skills Centre (FSC), with financial support from the Government of Canada. The opinions and interpretations in this publication are those of the author(s) and do not necessarily reflect those of the Government of Canada.