

BC'S (NOT SO) GREAT APPRENTICESHIP TRAINING EXPERIMENT

A DECADE RECONSIDERED



BC's (Not So) Great Apprenticeship
Training Experiment: A Decade Reconsidered

Prepared for the BC Federation of Labour
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Executive Summary

MORE THAN A DECADE HAS PASSED since the establishment of the Industry Training Authority (ITA) and the introduction of a 'BC model' for trades training in British Columbia in 2003. The 2003 BC model is distinguished by the deregulation of skilled trades and modularized training and certification.¹ Today, British Columbia remains distinct from other provinces in its approach to apprenticeship training.

The impacts of BC's 2003 model have now come into focus just as growth in the demand for skilled trades and the need to replace an aging workforce approach peak levels. While many of the general goals of the 2003 revisions have been achieved, including increasing the overall number of apprenticeship registrations and completions, the system has had a number of unintended consequences. Using data from the Statistics Canada Registered Apprenticeship Information System (RAIS) database, this report reveals a number of troubling findings:

- Overall apprenticeship completion rates have declined compared to a decade ago and relative to other jurisdictions.
- Lower average rates of completion for trades that are compulsory in other jurisdictions suggest that the absence of compulsory trade certification in BC decreases the motivation for apprentices to complete.
- Significant increases in program registrations and certifications have been achieved, but much of the increase can be attributed to a small number of trades and a subset of newly established sub-trades which do not afford workers the same degree of mobility as nationally recognized Red Seal trades. Many of the newly established sub-trades introduced to meet industry demands have been eliminated due to low enrolment and poor training outcomes.
- Certification in Red Seal trades has declined significantly in BC, from 84% in the 2001 to 2004 period to 65% in the 2011 to 2014 period. This decline is greater than that experienced in the rest of Canada and suggests fewer tradespeople in BC are completing the full Red Seal certification since implementation.
- Trade deregulation and modularized training and certification has resulted in a 'trade shift' toward a higher concentration of registrations and completions in a smaller number of trades. This 'trade shift' is on opposite ends of the pay scale, with highly paid industrial trades on one end and service sector occupations with lesser qualifications on the other.

¹ Modularization refers to the re-designation of trades into modularized sub-trades as opposed to large parent trades.

- The continued ‘narrowing and shallowing’ of trades training system carries a major risk. If economic conditions change or the types of skills in demand change in BC, the workforce risks not having the depth and breadth of skills, both individually and collectively, required to adapt.
- The increased incidence of workplace injury suggests that the ITA under the 2003 BC model has been unable to ensure the quality of safety training programs in BC. The injury rate for BC tradespeople is nearly four times that of their counterparts in Ontario. Although reported lost-time injuries in the skilled trades have been decreasing across all jurisdictions, injury rates have been consistently and significantly higher in BC than in other provinces and have not changed substantially since 2010.

Recent changes to BC’s system suggest many of its failings are already being corrected. Training times for many trades have increased to be in line with those of other jurisdictions, and many smaller apprenticeship programs created under the 2003 system have been eliminated in favour of returning to the original apprenticeship format (e.g., re-instating the full scope carpenter trade apprenticeship instead of dividing it into two sub-trades). The BC government should provide leadership and policy direction to correct many of the system’s failings, rather than leaving industry to adopt necessary changes on an ad hoc basis.

RECOMMENDATIONS

1. The BC government should re-instate compulsory certification in consideration of public, worker, and environmental safety, general public interest, and the viability of skilled trades training and apprenticeship.
2. The reinstatement of compulsory certification should be accompanied by a clear framework for the review of trades for compulsory certification and an effective compliance and enforcement policy. Both should be based on evidence-based analysis and input from industry, including labour organizations.
3. The BC government should discontinue modularized training and certification, and should realign trade standards and certification requirements with the rest of Canada.
4. The BC government should recognize the traditional role of trade unions and labour organizations in supporting apprenticeship and providing training by strengthening formal representation of labour organizations in the governance of BC’s trades training system.

The future success of BC’s apprenticeship system depends on its ability to develop the skilled workers employers need, with the breadth and depth of skills and qualifications required to adapt to changing economic conditions and innovation. An effective trades training system is essential for developing and maintaining the skilled workforce required for a well-functioning economy.

Introduction

BRITISH COLUMBIA IS UNIQUE from other provinces in its approach to apprenticeship training. The establishment of the Industry Training Authority (ITA) in 2003 ushered in a BC model that modularized trades training, decreased training time requirements, deregulated trades certification requirements, and increased the role of industry² (and diminished the role for labour organizations) in determining certification and training standards. Over a decade has passed since the ITA's creation and it has become apparent that this 2003 model has achieved mixed results.

An in-depth analysis conducted by Prism Economics and Analysis, based primarily on Statistics Canada Registered Apprenticeship Information System (RAIS) data, suggests that, a decade on, the 2003 BC model has resulted in many unintended consequences which pose serious risks for the long-term viability of trades training in British Columbia. These risks are coming into focus just as the growth in demand for skilled trades and the need to replace an aging workforce approach peak levels, making the need for skilled trades more critical now than ever. This risk has been heightened due to the anticipated skills requirements from planned large-scale capital projects within the next five years. BuildForce Canada projects trade requirements in the non-residential sector to expend by nearly one quarter (24%) by 2021 from 2006 levels.³

An effective trades training system is essential to develop and maintain the skilled workforce required for a well-functioning economy. Apprenticeships play a critical role in fostering skilled certified journeypersons for over 300 designated apprenticeable trades and occupations across Canada. Certificates of Qualification (CofQs), typically earned following a four- to five-year period of combined on-the-job and in-school training, signal that an individual has the knowledge and experience required to competently and safely work across the full scope of their respective trade. A recognized CofQ has become

The establishment of the Industry Training Authority in 2003 ushered in a BC model that modularized trades training, decreased training time requirements, deregulated trades certification requirements, and increased the role of industry (and diminished the role for labour organizations) in determining certification and training standards.

- 2 In other jurisdictions across Canada, "industry" is meant to include both employer and labour stakeholders. In BC, with the 2003 ITA policy changes, a new definition for industry was adopted that included only employer stakeholders.
- 3 BuildForce Canada Construction and Maintenance Looking Forward British Columbia 2017 to 2026 Highlights report, BuildForce Canada, 2017.

This paper examines the state of BC's apprenticeship system to assess the outcomes of its experimental 2003 model in terms of its impacts on core system measures such as registrations, completions, and completion rates.

effective in alleviating skill shortages by facilitating the mobility of workers between sectors and across regions. It is also important for groups such as new immigrants in recognizing foreign-earned credentials to facilitate access to employment.

In Canada, the designation of trades, establishment of training and certification requirements, and apprenticeship training policy fall under the jurisdiction of individual provinces and territories. In the past, differing training and certification requirements have imposed barriers to labour mobility, impacting economic growth. More recently, efforts to harmonize standards and facilitate the recognition of qualifications between provincial apprenticeship systems has led to regional harmonization initiatives and numerous labour mobility agreements.⁴ The Red Seal program, established with federal support and funding and managed by the Canadian Council of Directors of Apprenticeship (CCDA), created a national standard for certain trades that are common in most jurisdictions to facilitate interprovincial mobility.⁵

The drive to harmonize trade standards via the Red Seal program is not new. The Red Seal program was first established in 1952. In 1995, the provinces signed an Agreement on Internal Trade (AIT) that, among other things, set up a process for improving labour mobility among the provinces. Chapter 7 of the AIT specifically mentions the Red Seal program as a means of promoting labour mobility in the trades. Distinct and often divergent economic and political conditions over the decade following the AIT eventually pulled provincial apprenticeship programs in different directions. British Columbia pursued a different model altogether.

This paper examines the state of British Columbia's apprenticeship system to assess the outcomes of its experimental 2003 model in terms of its impacts on core system measures such as registrations, completions, and completion rates. The paper also identifies evidence of structural changes in the system and considers their impact on the long-term sustainability of trades training in BC. The paper considers previous research as well as an independent review of data from Statistics Canada's Registered Apprenticeship Information System (RAIS).

4 BC has signed three major labour mobility agreements: the Trade Investment and Labour Mobility Agreement (TILMA) between BC and Alberta; the New West Partnership Trade Agreement (NWPTA) between BC, Alberta, and Saskatchewan; and the Agreement on Internal Trade (AIT) with all Canadian provinces. Atlantic provinces have aligned standards through the Atlantic Apprenticeship Harmonization Project (AAHP).

5 The Red Seal is an endorsement that is attached to a journeyperson's Certificate of Qualification and is recognized in most jurisdictions as establishing the equivalency of the worker's certification across Canada. There are 55 recognized Red Seal trades across Canada. While these are the biggest trades, there are almost 300 trades that qualify for apprenticeship and certification in all the provinces. Most of these are not Red Seal trades.

Overview of the BC Training System

THE ORGANIZATION OF BRITISH COLUMBIA'S apprenticeship and certification system is similar to that of other provinces. The system is governed by the Industry Training Authority Act [SBC 2003] and administered by the Industry Training Authority (ITA) — a Crown corporation — responsible to but independent of the provincial government. The ITA is managed by a Board of Directors appointed by the Minister of Advanced Education, Skills and Training. Between 2005 and 2007, the ITA established six Industry Training Organizations (ITOs) in the automotive, construction, horticulture, resource, tourism, and transportation sectors. These industry-specific, not-for-profit legal entities were established by industry and are accountable to and co-funded by the ITA. The mandate of the ITOs was to take responsibility over industry's sector-specific training including defining industry strategies, developing program standards, and initiating program development activities. In 2014, the ITOs were dismantled and replaced with Sector Advisory Groups.⁶

As in other provinces, the path to becoming a certified journey person requires an individual to complete an apprenticeship program. This process requires an individual to contract (indenture) with an employer and complete the technical, on-the-job training requirements. The key difference between the BC model and other provincial systems is the adoption of modularized training and certification which allows apprentices to earn certificates of qualification (CofQs) in progressive levels that focus on specific aspects of the trade.

In the early 2000s, the BC Ministry of Advanced Education undertook a systematic review of the province's industry training system, which culminated with the release of a report, *Industry Training: Toward a New Model*, in December 2002. The report argued that existing apprenticeship programs were too rigid, too lengthy, and not focused on employer needs. The authors asserted that the system was unable to meet employer demand for skilled workers. They recommended dramatic changes to the industry training system to ensure that employers would be able to fulfill their skill requirements in response to BC's shifting economy and demographics.

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6 ITA, "Eleven Industry Sector Advisory Groups Formed to Advise on Skilled Trades Training," <http://www.itabc.ca/sites/default/files/docs/news/news-releases/SAG%20provincial%20NR%20FINAL.pdf>

The redesign of trades training and certification was intended to achieve several key results, including to:

1. Increase the number of individuals who obtain a trade certificate of qualification, and provide those who do not with a lesser credential. At the time, approximately half of the individuals who started an apprenticeship did not finish.
2. Increase the number of youth who pursue apprenticeships (at the time, the average age of an apprentice was 28).
3. Decrease the amount of time it takes to complete an apprenticeship to lessen the training commitment on employers and apprentices.
4. Increase the number of skilled workers by allowing experienced tradespeople to undertake certification examinations that validate their competency and skills in the trade without the necessity of completing a formal apprenticeship program.
5. Eliminate the need for compulsory trades training and shift the regulation of work to other government agencies through the *Safety Standards Act*.

Employers became responsible for identifying skill requirements and developing training programs to meet those needs, while at the same time diminishing labour participation.

To fulfill these objectives, BC implemented significant changes to its apprenticeship training system, creating a BC model in 2003 characterized by:

1. **MODULARIZATION OF TRADES TRAINING:** Instead of covering the full scope of a large, varied trade like carpentry, an individual could acquire certification as a former, framer, and finishing carpenter through a series of progressive credentials. The modules could be completed cumulatively to cover the original full scope of the trade.
2. **DECREASED TRAINING TIME THROUGH A COMPETENCY-BASED APPROACH:** Trade modules were further subdivided into competencies. Once an individual demonstrated sufficient skill in all of the competencies through practical assessments, they could receive the credential. This approach replaced time-based training where apprentices needed to achieve a required number of hours to advance.
3. **DEREGULATION OF SKILLED TRADES:** The compulsory status given to certain trades was eliminated, as this was seen as a legal barrier to work in the trade. In addition, since modularization divided the scope of work of trades, it was deemed necessary to eliminate any compulsory status assigned to these trades in BC.
4. **GREATER INDUSTRY ROLE:** Employers became responsible for identifying skill requirements and developing training programs to meet those needs, while at the same time diminishing labour participation.

CREATING A BC MODEL FOR APPRENTICESHIPS

The implementation of the 2003 BC model has left BC with a training system radically different in many aspects from other provinces. Although some of its general objectives have been realized, there are a number of unintended consequences.

Significant increases in program registrations, completions, and certifications have been achieved, following similar increases in other jurisdictions. However, overall trade certification completion rates have not increased; in fact, there is evidence that completion rates have declined compared to a decade ago and relative to other jurisdictions. Many of the new sub-trades — introduced as a result of employers' proposals and to increase workforce certification rates — have been discontinued due to low uptake. The general incidence of workforce trade certification has been left mostly unchanged, and a larger proportion of certifications are in non-Red Seal trades.

One of the key differences between the BC system and other apprenticeship systems in Canada is the lack of compulsory trades. Prior to the implementation of the 2003 BC model, BC had 11 compulsory trades in line with other provinces, including electricians, steamfitter/pipefitters, sheet metal workers, and plumbers. Currently, BC remains the only province with no compulsory-designated trades.

Compulsory certification restricts the practice of a trade, or certain aspects within the trade, to certified journeypersons or an indentured apprentice. The designation and the criteria used to designate compulsory trades vary from province to province, but they are generally based on worker and public safety, and the broader public interest. The latter can include economic considerations, e.g., value for money and quality assurance.

The designation of compulsory status to the majority of trades occurred in the mid-20th century and was concentrated in construction trades and public services such as automobile mechanics and hairdressers. The number of trades designated as compulsory varies among provinces, ranging from three in Prince Edward Island to 23 in Ontario. The most common compulsory trades include electrician, crane operators, refrigeration and air-conditioning mechanics, and automotive service technicians. Table 1 provides a comparison of Red Seal compulsory trades across provinces.⁷

The implementation of the 2003 BC model has left BC with a training system radically different in many aspects from other provinces. Although some of its general objectives have been realized, there are a number of unintended consequences.

⁷ Note that the only Red Seal compulsory trade in the Territories is Construction Electrician in the Yukon.

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Table 1: Comparison of Compulsory Trades in Canada by Jurisdiction

Common Compulsory Trades	AB	BC	MB	NB	NF	NS	SK	ON	PEI	QC
Auto Body Technician	✓					✓		✓		
Automotive Service Technician	✓			✓		✓		✓	✓	
Boilermaker	✓			✓		✓				✓
Construction Electrician	✓		✓	✓	✓	✓	✓	✓	✓	✓
Hairstylist	✓		✓			✓		✓		
Mobile Crane Operator	✓		✓	✓	✓	✓		✓		✓
Plumber	✓			✓		✓	✓	✓		✓
Refrigeration & Air Conditioning Mechanic	✓		✓	✓		✓	✓	✓		✓
Sheet Metal Worker	✓			✓		✓	✓	✓		✓
Sprinkler System Installer			✓	✓		✓		✓		✓
Steamfitter – Pipefitter	✓		✓	✓		✓		✓	✓	✓

Source: Ellis Chart, CCDA.

Another key difference is the considerable number of non-Red Seal-designated⁸ sub-trades established in British Columbia. Although all provinces have unique trades to reflect specific provincial needs and economic make-up, in BC the modularization of trades training and certification has led to the establishment of sub-trades focused only on certain competencies as opposed to the full scope of practice of the parent trade. It established a system of step-by-step credentials, allowing an individual to acquire certification in incremental areas, or modules, with the option of advancing to complete the full scope of the original parent trade. Table 2 below compares certification requirements for select Red Seal trades and related sub-trades designated in BC. Table 3 provides a list of other trades specific to BC.

8 “Designated” trades are governed by provincial and territorial regulations under respective Acts of Apprenticeship. These regulations outline the administrative procedures and in some cases the standards and conditions of training for specific trades.

Table 2: Certification Requirements for Red Seal and Related BC Sub-Trades

Red Seal Trade	Apprenticeship Term		BC Sub-trade	Apprenticeship Term	
	Years	Hours		Years / periods	Hours
Automotive Technician	4	6,000	Automotive Service Technician 1	1	1,500
			Automotive Service Technician 2	1	1,500
			Automotive Service Technician 3	1	1,500
Mobile Crane	2	4,020	Boom Truck Operator – Folding Boom Unlimited tonnage	2	-
			Boom Truck Operator – Stiff Boom Unlimited tonnage	2	-
			Mobile Crane Operator – Hydraulic 80 tonnes and Under	2	-
			Mobile Crane Operator – Hydraulic Unlimited tonnage	2	-
Cook	3	5,000	Professional Cook 1	1	1,000
			Professional Cook 2	1	1,000
Carpenter*	4	6,480	Residential Framing Technician*	1	500
Roofer	3	3,600	Residential Steep Roofer	2	2,400

*The Residential Framing Technician program has recently been suspended and the Carpenter program harmonized with national training standards requiring 6,360 work hours and 840 in-school hours of training.

Table 3: Other BC-Specific Designated Trades

Designated Trade Name	
Aircraft Structural Technician	Heating Technician
Arborist Technician	Logistics and Distribution 3
Architectural Sheet Metal Worker	Logistics and Distribution Person 2
Asphalt/Paving Laydown Technician	Marine Mechanical Technician
Automotive Refinishing Prep Technician	Parts and Warehousing Person 1
Climbing Arborist	Partsperson 2
Dairy Production Technician 1	Petroleum Equipment Service Technician
Dairy Production Technician 2	Piledriver and Bridgeworker
Embalmer	Production Horticulturist
Embalmer and Funeral Director	Residential Building Maintenance Worker
Funeral Director	Sawfiler/Fitter (Benchperson)
Geothermal Technician	Security Alarm Installer (Security Systems Technician)

Source: Ellis Chart, CCDA.

Although many of these trades may reflect the unique requirements of the BC economy, the modularization of Red Seal trades simply partitions the scope of the full trade. As such, unless an individual completes all the modules of a Red Seal trade, the mobility of that worker is limited both in terms of the potential to work outside of BC and to work for different employers specializing in discrete areas of related work.

REDUCING TRAINING TIME REQUIREMENTS

Changes to the system resulted in BC having among the lowest apprenticeship training time requirements in the country for many of the Red Seal trades.

The introduction of technical competency assessments, with reduced duration requirements, was intended to enable apprentices to progress through modules more quickly to achieve the trade certification. Under the 2003 model, individuals could receive a credential once they demonstrated sufficient aptitude across all of the competencies through practical assessments. It is important to note that the practical assessments are not standardized, rather assessed by individual employers on the job. This approach replaced time-based training where apprentices needed to achieve a certain number of hours to advance in their trade.

Changes to the system resulted in BC having among the lowest apprenticeship training time requirements in the country for many of the Red Seal trades. This means individuals in BC can become journeypersons in much less time and on-the-job experience than in other jurisdictions. For example, to become a certified construction electrician in BC requires 7,200 hours of combined on-the-job and in-school training. This compares with a high of 9,000 in New Brunswick and Ontario. The 2003 system also reduced the length of in-school periods and total weeks of technical training in many cases. Recent changes have raised on-the-job and in-school training time requirements for a number of trades, bringing them up to national averages; but many remain at the low end or below national ranges. Harmonization of training requirements and trade standards with those of other provinces should be a goal for the ITA and the BC government to reduce barriers to worker mobility.

Many changes occurred only recently following the release of an independent review of the roles and function of the Industry Training Authority, led by Jessica McDonald. The 2014 report, "Industry Training and Trades Training in BC: Recalibrating for High Performance," examined the state of the 2003 model and made 29 recommendations to lead to improved outcomes for the trades training system.⁹

9 All of the recommendations were officially adopted by the government; however, not all of the recommendations were implemented whole-heartedly by the ITA. For example, McDonald recommended that "industry" should include labour in a meaningful way, as in the rest of Canada. In response, the ITA added one labour seat on the Board of Directors and continues to insist on only a token number of labour representatives in other "industry" roles, such as on the Sector Advisory Groups. See workbc.ca/getmedia/729cbe02-d9cb-4c8c-b19c-2c006483e99f/ita_review_final_report.pdf.aspx

Assessing the Impacts of the BC Model – A Decade Later

SINCE THE ESTABLISHMENT of the 2003 apprenticeship training model, BC has become a distinct outlier relative to the rest of Canada in terms of its training requirements and shift in focus away from full-scope trades to specific trade modules. What impact has this had on the overall health of the system? This section of the report analyzes BC's apprenticeship system using data from the Statistics Canada's Registered Apprenticeship Information System (RAIS) database to assess the overall impact of the BC model. The analysis considers the impacts on core system measures such as registrations, completions, and completion rates.

RISING REGISTRATIONS, BUT AT WHAT COST?

Apprenticeship registrations are affected by two main factors: the individual's decision to pursue an apprenticeship and the employer's decision to take the person on as an apprentice. The government has a role in funding the apprenticeship system (creating training spaces), determining whether/what are compulsory trades, apprenticeship ratios, setting employer incentives, etc. A central objective of the 2003 BC model was to increase the relevance of apprenticeship training and the number of program registrations. The modularized training approach was intended to enable individuals to obtain lesser qualifications in a shorter timeframe as they ultimately progress toward certification for the full scope of the trade. This would incentivize individuals to pursue an apprenticeship program who were otherwise deterred by the long duration of a traditional apprenticeship. Employer-driven ITOs, now replaced by Sector Advisory Groups, were established to ensure that new trades designations and programs met employer and industry needs. Many of these objectives have been achieved, but at a great cost to the overall effectiveness of the system.

An analysis of Statistics Canada RAIS data shows that new apprenticeship registrations indeed increased dramatically following the establishment of the ITA. Apprenticeship registrations in BC increased from just over 6,000 in 2003 to nearly 15,000 by 2007 (Figure 1). Following this initial rise, the number of registrations decreased during the 2009 recession years, but has since returned to 2007 levels. The dramatic rise in registrations has been cited by the ITA and

This section of the report analyzes BC's apprenticeship system using data from the Statistics Canada's Registered Apprenticeship Information System (RAIS) database to assess the overall impact of the BC model.

others as evidence of success for BC’s great apprenticeship experiment. A closer look, however, shows the increase was driven by several factors — both related and unrelated to the 2003 model.

The first factor was the timing of a strong and protracted economic upcycle powered by a global resource boom, which coincided with the establishment of the ITA. Rising expansion demands in BC and the rest of Canada drove construction employment up 84% in BC between 2003 and 2008. The strong expansion also propelled new apprenticeship registrations in the rest of Canada, which increased 73% over the same period. Figure 1 below compares an index of new registrations in BC to the rest of Canada. Although new registrations in BC grew faster than the rest of Canada over the mid 2000s, much of the increase can be attributed to particularly strong economic growth and construction employment in the province. Figure 2 compares the index of new registrations to construction employment growth.

Figure 1: Index (2000 = 100) of New Registrations in BC and the Rest of Canada

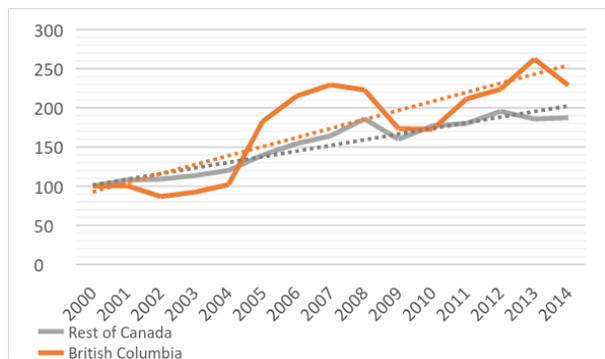
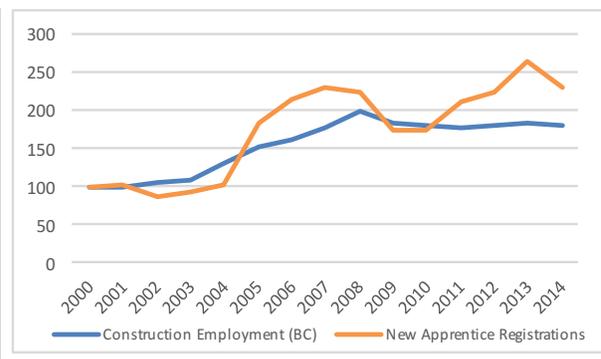


Figure 2: Index (2000 = 100) of New Registrations and Construction Employment in BC



Source: Statistics Canada, RAIS, LFS.

A second factor was the creation of many new apprenticeship programs for both new sub-trades and Red Seal programs in the years following the establishment of the ITA. Twenty-eight programs had no registrations prior to 2005. Registrations in these newly established programs ballooned to more than 4,100 between 2005 and 2009, accounting for over half of the 7,890 increase in total apprenticeship registrations over the same period. The increase in new registrations was also influenced by the new ACE-IT programs which designated high school students as “apprentices.”

These new programs had a significant initial impact on registrations, but demand for a large number of them declined quickly while others thrived. By 2013, 11 of the 28 new programs had been discontinued (see Table 4 below). Between 2009 and 2014 the number of new registrants in the 28 new programs dropped to 2,800, compared to 4,100 over the first five years. Many of the discontinued programs such as railway car technician, motor vehicle transmission technician, and tire repairer were small and specialized. Others, including both of the carpenter sub-trades (residential framing technician and construction formwork technician), were discontinued in favour of reverting back to the single program. Table 4 below provides a summary of new programs

introduced between 2005 and 2009 and total new registrants across two periods. Programs **in red** have since been discontinued.

Table 4: New Apprenticeship Programs in BC and Total Registrants, 2005–2014

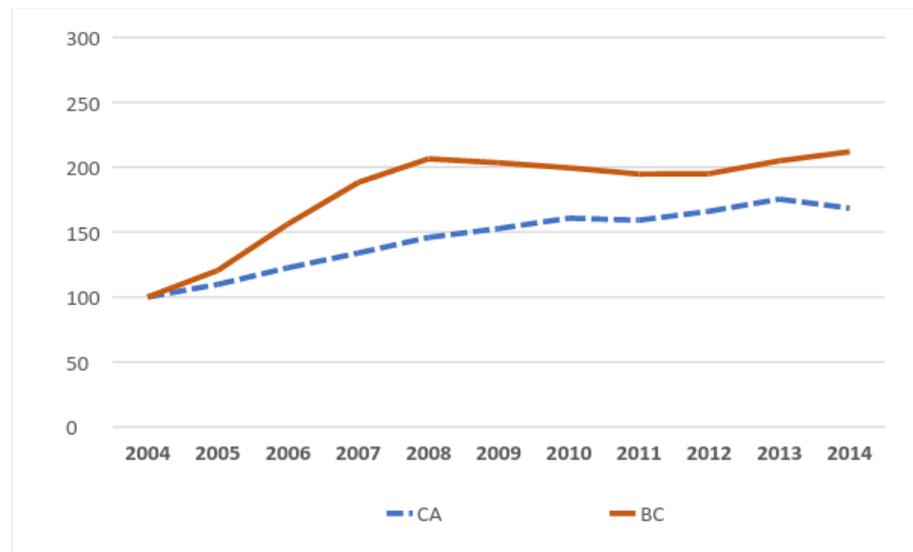
Year of Program Creation	Program	Total Registrations	
		2005 to 2009	2009 to 2014
2005	Ironworker (Reinforcing)	390	87
	Construction Formwork Technician	69	0
	Native Residential Construction Worker	1005	0
	Industrial Electrician	201	213
2007	Communications Electrician	105	0
	Residential Framing Technician	891	291
	Building Envelope Technician	27	0
	Railway Car Technician	30	144
	Domestic/Residential Heating Technician	102	39
	Domestic/Residential Geothermal Technician	9	9
	Heavy Equipment Operator	312	843
2008	Partsperson (Industrial Engine and Equipment)	24	0
	Horticulturist Nursery Greenhouse	42	159
	Utility Arborist	138	243
	Embalmer and Funeral Director	42	72
	Architectural Sheet Metal Worker	111	300
	Residential Steep Roofer	3	78
	Hardwood Floorlayer	24	9
	Aircraft Structural Technician	105	150
	Motor Vehicle Transmission Technician	3	6
	Motor Vehicle Body Repairer (Prepper)	204	345
	Lithographic Pressperson	12	6
	Air Compressor and Pneumatic Tool Mechanic	3	0
	Tire Repairer	15	12
	Rig Technician	138	585
Platemaker	90	159	
2009	Hoist Operator (Tower Crane)	9	21
	Marine Mechanical Technician	6	12
	Total	4,110	2,778

The modularized approach to trades training distorts the data. Apprentices progressing through several levels of training to reach the certification requirements of the full Red Seal trade inflate new registration data by counting apprentices multiple times as they progress through the modules of the trade.

The modularized approach to trades training also distorts the data. Apprentices progressing through several levels of training to reach the certification requirements of the full Red Seal trade inflate new registration data by counting apprentices multiple times as they progress through the modules of the trade. Calculating total registrations rather than new registrations partially discounts this phenomenon and, as a result, total registrations show a less dramatic increase. In the four-year period following the establishment of the ITA, total registrations doubled due to economic growth and the introduction of new trades.

Since the initial expansion, BC apprenticeship registration growth receded for a period before rising again after 2012, while apprenticeship growth continued to trend upward in Canada. This partly reflects the short-term lift caused by the introduction of new programs and sub-trades and the timing of the peak in the resource cycle; registrations have reached a similar steady state in Alberta.

Figure 3: Index (2004 = 100) of Total Registered Apprentices in BC and the Rest of Canada, 2004-2014



Source: RAIS Data, Statistics Canada.

THE CHANGING ROLE OF APPRENTICESHIP TRADES TRAINING IN BC

The distribution of registered apprentices across major trade groups in BC has changed following the 2003 changes; today, there is a higher concentration of registrations in a smaller number of trades. Notably, there has been a net decline in registrations in the “other major trade” group category.¹⁰ This is a stark contrast to the rest of the country where registrations in the “other major trade” groups have surged reflecting the diversification of workforce demands.

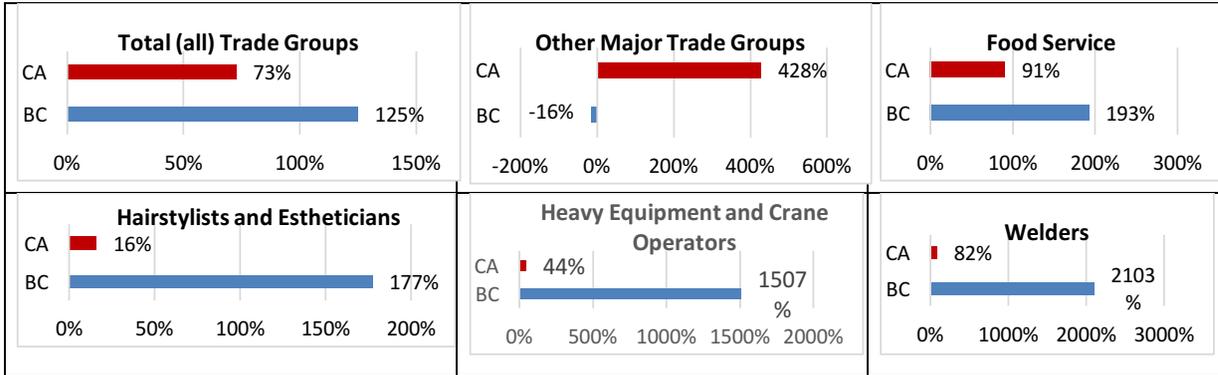
Economic change has brought a larger increase in construction trades in BC and across Canada, but in BC there has been a disproportionately high number of registrations in select programs, including cooks, electricians, heavy equipment operators, and welders. The number of apprentices registered in the food service trade group (primarily cooks) rose nearly threefold, from just under 2,000 in 2004 to 5,500 by 2014. This is more than double the increase in the rest of Canada, despite having similar employment growth for chefs and cooks. The number of registrations in various welder programs also increased substantially, from just 200 in 2004 to 3,500 in 2014. These two trades alone account for nearly one quarter (24%) of the total increase in active apprentices. Changes in certification requirements have also brought a surge in crane operator registrations, from under 100 between 2004 and 2006 to just over 1,000 in 2014.

Table 5: Occupational Employment Growth (% Change) in BC and Canada, 2003–2013

Occupations	BC	Canada
Total Occupations	14%	13%
G4 – Chefs and Cooks	27%	22%
H – Trades, Transport and Equipment Operators and Related Occupations	18%	13%
H0 – Contractors and Supervisors in Trades and Transportation	50%	33%
H1 – Construction Trades	40%	17%
H3 – Machinists, Metal Forming, Shaping and Erecting Occupations	9%	-6%
H4 – Mechanics	-4%	-3%
H6 – Heavy Equipment and Crane Operators, Including Drillers	33%	27%
H7 – Transportation Equipment Operators and Related Workers, Excluding Labourers	4%	6%
H8 – Trades Helpers, Construction, and Transportation Labourers and Related Occupations	15%	21%
J – Occupations Unique to Processing, Manufacturing and Utilities	-28%	-30%

¹⁰ The trade group “other” consists of miscellaneous trades and occupations not classified elsewhere. One must also be aware that many of the apprenticeship trades and occupations that have been introduced since the 1990s have been added to this group.

Figure 4: Change (%) in Registered Apprentices in BC and the Rest of Canada Between 2003–2004 and 2013–2014

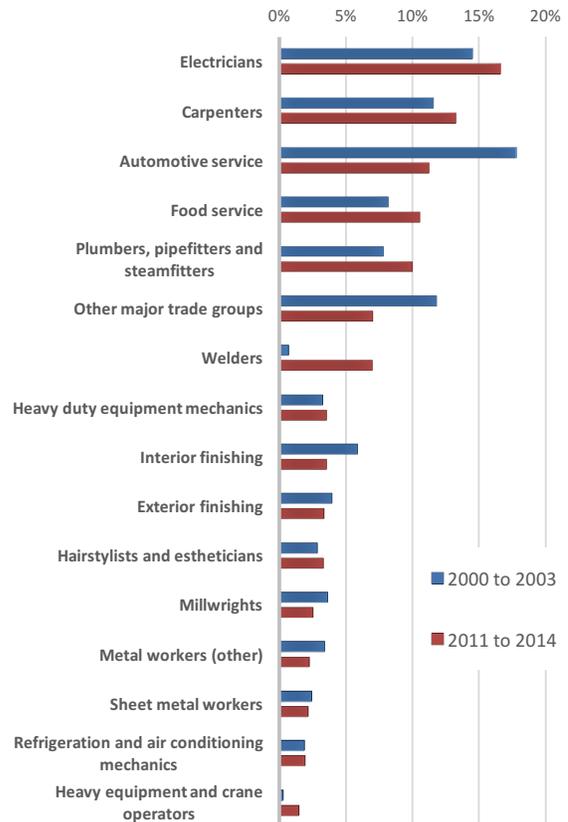


Apprenticeship registrations in the other trades category, which generally includes miscellaneous trades added since the 1990s, have declined since the BC model was implemented. Although BC’s system has added many new sub-trades of existing parent trades, it has developed few new trades compared to other provinces. New trades in other provinces were developed to reflect advances in technology and newly established film and IT sectors.

Registrations in the automotive service, interior finishing, and sheet metal worker major groups, which include a number of trades compulsory in other provinces, have also grown at a relatively slower pace.

The rapid rise in some programs and slower growth in others has resulted in a distinct shift in program registrations toward a fewer number of trades. The absence of compulsory certification requirements cannot be understated as a factor, though many others contributed to the ‘trade shift.’ Prior to the deregulation of trades, BC growth rates in registrations for compulsory trades were generally higher and more evenly distributed. Since the introduction of the ITA, there has been strong growth in some of the former compulsory trades, including electrician, pipefitter, and welder, but much smaller growth in automotive service technicians, plumbers, sprinkler fitters, and sheet metal workers. One obvious explanation could be the significant expansion in demands in the mining and oil and gas sectors in BC and neighbouring Alberta in which employers pay higher wages and certification is the industry standard.

Figure 5: Distribution of Apprentice Registrations by Major Trade Group



A continued ‘narrowing and shallowing’ of the trades training system carries the major risk that the workforce may not have the depth and breadth of skills, both individually and collectively, required to adapt if economic conditions or the nature of skill requirements change in BC.

This suggests that demand for trade certification and the value of a CofQ tend to favour trades at opposite ends of the pay scale. The divergence is driven primarily by market forces and employer demands. Specifically, the incentive of high wages and employer preference for certification in utilities and resource extraction sectors drives training demand for many highly skilled trades which tend to be highly mobile such as pipe and steam fitters. Electrical Safety Regulations under the Safety Standards Act restrict aspects of electrical work to electricians with an approved level of training, thus maintaining incentives for training and certification.¹¹ On the other end of the pay scale, training demand for lower paying service sector trades such as cooks, appears to be stimulated by short training time requirements of the modularized training model which requires lower levels of certifications. This in itself is not a negative, but the data suggests that apprenticeship training for many skilled trades outside a group of select industrial and service trades is stagnating and individuals being certified in only a single module of lower skilled sub-trades does not afford them the same level of workforce mobility.

A continued ‘narrowing and shallowing’ of the trades training system carries the major risk that the workforce may not have the depth and breadth of skills, both individually and collectively, required to adapt if economic conditions or the nature of skill requirements change in BC.

Table 6: Change in BC Program Apprenticeship Registrations, 2004–2014

Trade Group	Total Change in Registrations	% of Change in Total Registrations
Total Major Trade Groups	28,785	
Electricians	5,151	18%
Food Service	3,516	12%
Welders	3,516	12%
Plumbers, Pipefitters and Steamfitters	3,063	11%
Automotive Service	2,601	9%
Carpenters	2,472	9%
Heavy Duty Equipment Mechanics	1,389	5%
Hairstylists and Estheticians	1,092	4%
Heavy Equipment and Crane Operators	1,038	4%
Other	4,947	17%

Source: RAIS Data, Statistics Canada.

11 http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/12_100_2004#section4

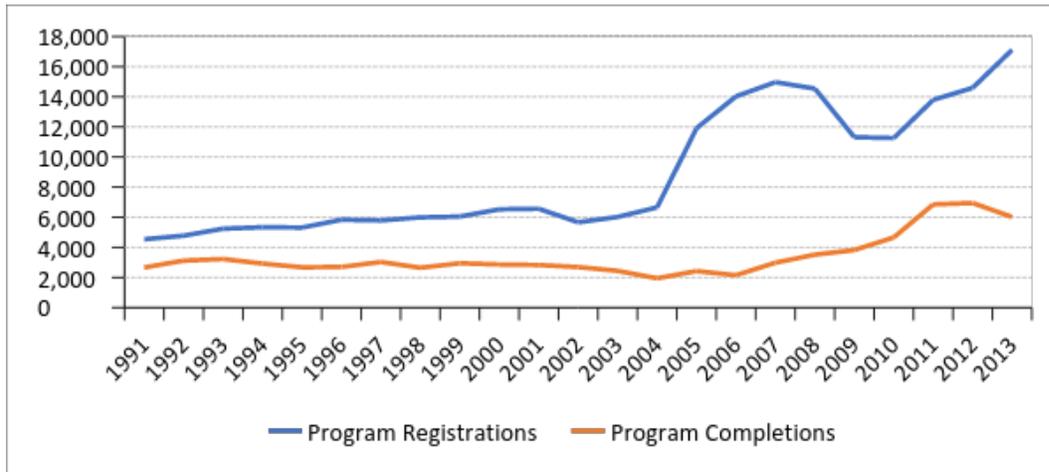
IMPACT ON COMPLETIONS

Apprenticeships and certification are crucial in developing the highly skilled, qualified trades workforce that can meet industry demand and address skill shortages. The CofQ credential is an important labour market signal that the person possesses the fundamental competencies and skills needed in the trade, which facilitates mobility between employers. Higher wages, lower unemployment, more productive workers, and higher return on training tax dollars are some of the positive outcomes when individuals complete their programs.¹²

Prior to the introduction of the ITA, apprenticeship completion rates in British Columbia were just over 50%. Although considered low by many, this was comparable to rates in other provinces. A cohort study published by Statistics Canada in 2010 found that, on average, just over half (53%) of BC apprentices who registered in 1994 and 1995 completed their respective programs by 2005. This was slightly higher than the national average of 49% (1994) and 51% (1995).¹³

After the 2003 changes, BC encouragingly experienced a marked increase in apprenticeship completion rates, following its spike in registrations. This sparked optimism for the policy change, given that increasing training completion rates was a key objective of BC's 2003 model. The number of overall completions peaked at nearly 7,000 in 2012 — more than twice the number of completions in the early 2000s. Not surprisingly, the largest increases in completions occurred in trades that experienced the biggest increase in registrations, including welding and food services. In 2014, these two trades accounted for nearly four in ten certifications issued in the province, compared to just 7%, or less than one in ten, in 2004.

Figure 6: Apprenticeship Registrations and Completions in British Columbia



Source: RAIS, Statistics Canada.

- 12 Literature on apprentice outcomes indicates that those who earn a certification are more likely to be employed full time and earn more than those with no certification. In contrast, those without certification are more likely to be unemployed and earn lower wages. Marinka Menard, Frank Menezes, Cindy K.Y. Chan and Merv Walker, National Apprenticeship Survey: Canada Overview Report 2007, (2007), 24-26.
- 13 Louise Desjardins and Nicole Paquin, Registered Apprentices: The Cohorts of 1994 and 1995, One Decade Later, (2010).

However, this rise in overall numbers is misleading. Although completions increased in BC following the surge in registrations, recent estimates using cohort ratios,¹⁴ which compare program completions to program registrations over time, reveal that overall completion rates in BC have actually fallen compared to the early 2000s and in relation to other provinces.

Applying the cohort-ratio measure to the 50 largest programs in BC (in terms of registrations) across time shows that overall completion rates in BC averaged 46% over the four years prior to 2004. A similar completion rate of 47% was estimated for the rest of Canada over the same period. These estimates are generally in line with the findings of previous Statistics Canada cohort studies over a similar period.

Applying the same methodology for the period between 2004 and 2014 (following the establishment of the ITA and the introduction of the BC model), the average overall completion rate in BC falls to 42%, compared to a small increase nationally to 48%. Even the ITAs own reports estimate completion rates at 36%. The decline in completion rates provides some evidence that the BC model has not achieved one of its key objectives: to increase training completion rates within skilled trades.

Figure 7: Overall Average Completion Rates in BC and the Rest of Canada, 2000–2003 and 2004–2014



Source: Prism Economics and Analysis.

This overall decline in completion rates is accompanied by marked differences in completion rates across individual programs in BC. Table 7 compares average completion rates for 22 Red Seal trades in BC and the rest of Canada.

Lower average rates of completion for trades that are compulsory in other jurisdictions suggest that the absence of compulsory trade certification in BC decreases the motivation for apprentices to complete. The link between compulsory certification and completions has been established in previous studies. A study conducted by Patrick Coe concludes that “apprenticeship programmes for

¹⁴ Cohort ratios provide a close proxy for actual completion rates that are comparable over time and across jurisdictions.

which certification is mandatory had completion rates that are about 10 percentage points higher than those without mandatory certification.”¹⁵

Yet the analysis of BC completion rates suggests that lack of compulsory certification may contribute to lower completion rates in some trades, but not others. Completion rates in BC for automotive service technicians and refrigeration and air-conditioning mechanics are above the averages for the rest of Canada, and, in the case of automotive service technicians, significantly so (59% versus 46%).

In the case of air-conditioning mechanics, the higher completion rate may be influenced by the high union density. Unions together with their employer counterparts have made enormous investments in training and training facilities. This collective joint investment is to ensure workers have the best training that meets the needs of employers. There is strong evidence in BC, and the rest of Canada, that this investment and commitment to a culture of training provide direct benefits to apprentices, journeypersons, and tax payers. The 2014 Independent Review of BC’s Industry Training Authority (commonly known as the McDonald Report), found “the success of union programs in terms of moving apprentices through to completion is undeniable when compared to the traditional method used for the overall system.” Research conducted in Ontario by the Ontario Construction Secretariat also found evidence that apprentices who attend training at a union training centre are more likely to attend trade school and complete, and experience lower levels of unemployment and higher earnings both during and after their apprenticeship.¹⁶

In certain programs, whether delivered through union-employer training centres or not, there is a strong motivation for apprentices to complete even though there is no legal requirement to work in the trade. Higher wages for certified journeypersons in the trade, pre-screening requirements for entry, industry standards, opportunities in other provinces, and expectations or support from employers likely contribute to apprentices in these trades completing their programs. Employers of trades with elevated safety concerns, such as powerline technicians, will be motivated to fully train their apprentices. The complex nature of the work in these trades tends to attract individuals with stronger basic skills positioning them to succeed. Certification requirements in other provinces may also affect completion rates in BC for trades that tend to be more mobile (e.g., boilermakers).

Lower average rates of completion in BC for most trades that are compulsory in other jurisdictions, however, appears to confirm that an absence of compulsory certification has had a negative impact on overall completion rates. For example, BC completion rates for hairstylists, crane operators, plumbers, steamfitter/pipefitters, and sprinkler fitters are lower than the national average, and many continue to trend lower.

15 Patrick J. Coe, “Apprenticeship programme requirements and apprenticeship completion rates in Canada,” *Journal of Vocational Education and Training*, 2013.

16 Completion Counts, Ontario Construction Secretariat, 2013.

The analysis of BC completion rates suggests that lack of compulsory certification may contribute to lower completion rates in some trades.

Apprentices who attend training at a union training centre are more likely to attend trade school and complete, and experience lower levels of unemployment and higher earnings both during and after their apprenticeship.

Table 7: Comparison of Average Completion Rates for Individual Programs in BC and the Rest of Canada, 2004–2014

Row Labels	British Columbia	National Average
Automotive Service Technician (CT)	59%	46%
Boilermaker (CT)	77%	79%
Bricklayer	10%	40%
Carpenter	26%	35%
Construction Electrician (CT)	50%	59%
Cook	40%	32%
Hairstylist (CT)	7%	62%
Heavy Duty Equipment Technician	56%	49%
Industrial Instrumentation and Control Technician	49%	48%
Industrial Mechanic (Millwright)	64%	58%
Machinist	54%	49%
Metal Fabricator (Fitter)	36%	38%
Mobile Crane Operator (CT)	27%	62%
Motor Vehicle Body Repairer (Metal and Paint)	37%	35%
Painter and Decorator	19%	31%
Plumber (CT)	49%	55%
Powerline Technician	88%	74%
Refrigeration and Air Conditioning Mechanic (CT)	56%	54%
Sheet Metal Worker (CT)	46%	49%
Sprinkler System Installer (CT)	40%	61%
Steamfitter/Pipefitter (CT)	40%	62%
Welder	33%	47%
Average	44%	51%

Note: **Red = Lower average completion rates**, **Blue = Higher average completion rates**, (CT) = Compulsory trade in other jurisdictions.
Source: Prism Economics and Analysis.

CERTIFICATION RATES IN RED SEAL TRADES ARE DECLINING

Echoing the trend in overall certification, fewer workers in Red Seal trades in BC are obtaining certification. Certification rates in Red Seal trades averaged 65% in BC between 2011 and 2014, down significantly from 84% during the period between 2001 and 2004. The rest of Canada experienced a much smaller decline, falling from 88% to 76%. This implies that fewer individuals are progressing to complete the full scope of the trade since the 2003 model was implemented, or that more workers are working in the trade without the full certification.

Figure 8: Share of Certification in Red Seal Trades in BC and the Rest of Canada



Source: RAIS, Statistics Canada.

The analysis of completions suggests that despite the large increase in registrations and completions, certification in Red Seal trades has fallen in proportion to other modular sub-trades. This implies that the share of the workforce in BC that is certified in full-scope Red Seal trades has also declined. Workers certified in single first-level modules have lower level qualifications and as such are not afforded the same degree of workforce mobility.

HIGHER RATES OF WORKPLACE INJURY

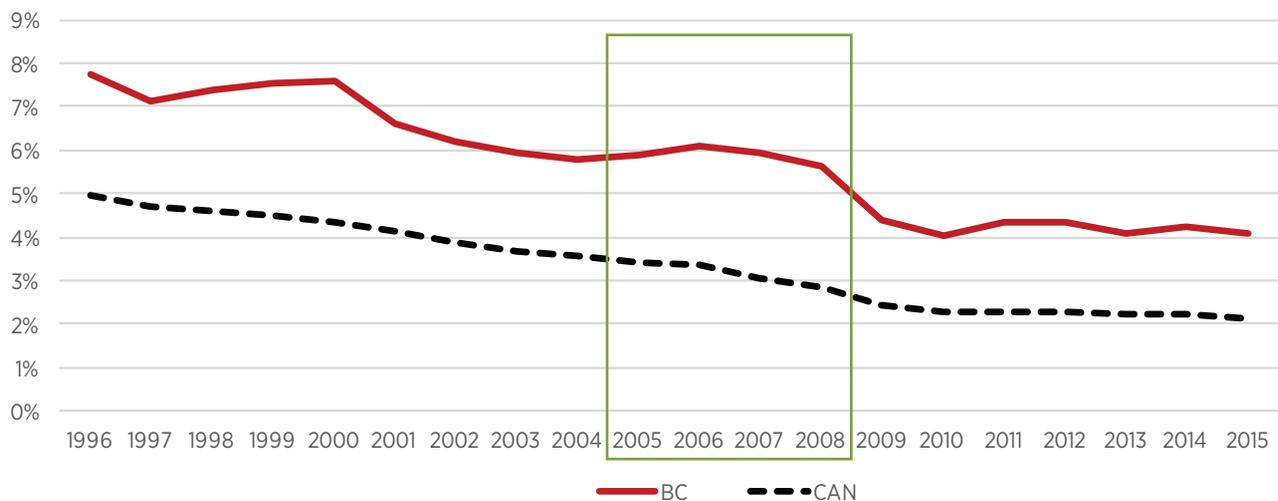
Skilled trades workers face frequent and substantial risks in the course of their work. A growing emphasis on safety over the last 20 years has brought steady declines in lost-time injuries as a share of the trades workforce across Canada.¹⁷ During the early 2000s, the rate of injuries in BC was higher than the national average but was steadily decreasing. In 2004 this trend abruptly reversed and in 2006, BC experienced an increase in annual lost-time injuries of 0.31 percentage points, representing an additional 595 injured tradespeople (Figure 9). This increase occurred immediately after the elimination of compulsory trades and the adoption of modularized trades training. While this does

¹⁷ This number includes all workers categorized in NOC 72 industrial, electrical and construction trades, and NOC 73 maintenance and equipment operation trades.

not show causation, it does suggest that the disruption in the training system was correlated with an increase in workplace lost-time injuries.¹⁸

The injury rate for BC tradespeople is nearly four times that of their counterparts in Ontario. The good news is that reported lost-time injuries in the skilled trades have been decreasing across all jurisdictions. Yet injury rates have been consistently and significantly higher in BC than in other provinces and have not changed substantially since 2010. A report from the BC Auditor General in 2008 states that “one of the ITA’s main responsibilities is to ensure a quality training system. Such training helps ensure skilled trade workers are able to do their jobs properly and safely.” The report concludes that “the ITA’s quality assurance practices are not sufficient to help safeguard the quality of trades program development and delivery.”¹⁹ The increased incidence of workplace injury suggests that the ITA under the 2003 model has been unable to ensure the quality of safety training programs in BC.

Figure 9: Annual Lost-Time Injuries as a Share of Trade Workforce (NOCS 72 and 73)



Source: Lost time Claims by Occupation (NOC 72 and 73) Association of Workers Compensations Boards of Canada, and CANSIM Table 282-0142 Statistics Canada.

Youth are injured at work more frequently than adults in Canada. Common explanations for this disparity include: youths’ lack of awareness about their rights and responsibilities as workers; unsafe working conditions at the entry level; the often physically demanding jobs youth have; and youths’ willingness to take risks to please employers. Apprentices do not possess enough knowledge about their industry to effectively identify risks.²⁰ The rise in BC’s injury rate, therefore, could have been

18 A lost-time injury is defined as an injury where a worker is compensated by a board/commission for a loss of wages following a work-related injury (or exposure to a noxious substance), or receives compensation for a permanent disability with or without any time lost in his or her employment (for example, if a worker is compensated for a loss of hearing resulting from excessive noise in the workplace).

19 John Doyle, “A Major Renovation: Trades Training in British Columbia,” Office of the Auditor General, (2008): 45.

20 Milosh Raykov and Alison Taylor, “Health and Safety for Canadian Youth in Trades,” *Just Labour: A Canadian Journal of Work and Society*, Vol. 20 (2013): 34-36.

partially attributed to the widespread changes in the delivery of apprenticeship training, which shortened training times and eliminated compulsory certification in many trades. While the 2003 system enabled many more youth to work in the trades in BC, the changes could have had the unintended consequence of more youth getting injured at work.

LONG-TERM RISKS AND IMPLICATIONS

An effective trades training system is essential for developing and maintaining the skilled workforce needed for a well-functioning economy. The health of the apprenticeship system rests on its ability to provide workers in trades in the numbers required to meet the immediate needs of employers and industry. Long-term sustainability of the system requires that it develop skilled workers with the breadth and depth of skills and qualifications necessary to adapt to changing economic conditions and innovation.

Registration and completions data in BC following the introduction of the BC model shows that some objectives have been achieved, such as increasing the overall number of registered apprentices and completions. The successes, however, can be attributed to a small number of newly established sub-trades with lower qualifications and to a handful of Red Seal trades most commonly employed in higher paying industrial trades with higher mobility requirements.

The fact that certification rates in Red Seal trades have declined to 64% from 85% in the early 2000s suggests that BC's current training system runs the risk of 'narrowing and shallowing' its skilled trades workforce. The decrease in certification levels in most Red Seal trades appears to be in exchange for increased certification in other trades with limited scopes of practice and lower levels of certification, such as introductory level cook and welder programs.

Re-introducing compulsory certifications for certain trades in BC could play a significant role in “re-balancing” the distribution of skilled trades training.

THE CASE FOR COMPULSORY CERTIFICATION

Re-introducing compulsory certifications for certain trades in BC could play a significant role in “re-balancing” the distribution of skilled trades training. Compulsory certification requirements would increase labour market demand for certified workers and related apprenticeship training. Compulsory certification would likely put upward pressure on wages, attracting more workers to the trade, and has been found to raise the prestige of trades, increasing their appeal further. The original arguments for the deregulation of trades, which contended that compulsory certification restricted the supply of skilled trades, were short sighted and failed to consider the long-term impacts on supply. Failing to re-introduce compulsory certification for certain trades

could endanger their long-term viability, putting the BC economy and the public interest at risk.

WORKER AND PUBLIC SAFETY

Knowledge and competence in the full scope of a trade is necessary to perform work properly and safely given the complexity and variability of working conditions. Dangers in the workplace — on construction sites especially — are often hidden, and dangers due to poor workmanship by unlicensed and untrained workers can lie unseen for years. This presents enormous risks to public safety, the public interest, and the environment. At best, they can cost the public millions of dollars in redoing previous work. In the worst cases, they can kill and injure members of the public and other workers. Current regulations on work and certification requirements mandated by the BC Safety Authority are insufficient and lack enforcement. Without strong industry demand, BC certification rates for trades including crane operators, plumbers, sprinkler fitters, and hairstylists are significantly lower than the national average.

The Certificate of Qualification (CofQ) is the only proof that an individual has the full scope of skills, knowledge, and competence to perform a trade properly and safely. Certified workers are most prepared to recognize hazards and offer the best protection for worker and public safety. Identifying risk is a perception-based exercise: what looks like a risk to one worker may not be viewed as risky by another. A piecemeal approach to mitigate risk in the workplace misses this point.

UNDERGROUND ECONOMY

The re-introduction of compulsory certification in certain trades would likely help curtail activity in the underground economy. Statistics Canada estimates BC's underground economy was worth about \$6.3 billion in 2013, comprising a third of GDP, behind Quebec and PEI.²¹ Residential construction is identified as a significant driver of the underground economy. Participation in the underground economy circumvents consumer protections and presents significant risks and enforcement challenges, as a large share of work is unpermitted, uninspected, unregulated, and unseen. Compulsory certification would provide a mechanism through which the ITA could revoke the licences of individuals engaging in the underground economy and other unscrupulous practices. This would serve to better protect the public from improper work, and improve the health and safety of workers and the public.

Failing to re-introduce compulsory certification for certain trades could endanger their long-term viability, putting the BC economy and the public interest at risk.

21 TheDaily, Statistics Canada, statcan.gc.ca/daily-quotidien/160620/dq160620b-eng.htm.

Conclusion

The good news is that many of the system's failings appear to be on their way to correction as a result of the implementation of the recommendations from the 2014 ITA review.

IT IS CLEAR FROM AN ANALYSIS of BC's apprenticeship system that the 2003 changes have achieved mixed results. The overall number of apprenticeship registrations and completions has increased substantially, fulfilling one of the key objectives of the 2003 model. Yet most of these gains have been made in a few select trades, including cooks, electricians, and welders. Moreover, there is widespread evidence that completion rates have declined across the board and particularly in Red Seal trades. Fewer tradespeople in BC are progressing through the system to complete training in the full scope of their trade.

The modularization of trades training in BC carries significant risks. While the 2003 system may enable quick entry into the labour market for many trades, this comes at a cost to worker safety and mobility. Full certification is crucial to ensure workers are aware of the many risks involved in their trade and how they can be mitigated. It also broadens workers' skill sets so they can move to another employer or area of the trade should labour market conditions change. The Red Seal certification was specifically developed to facilitate inter-provincial mobility for trades workers and it is alarming that the 2003 model has initiated such a dramatic decline in Red Seal certification.

The good news is that many of the system's failings appear to be on their way to correction as a result of the implementation of the recommendations from the 2014 ITA review. Many of the newly created programs, which were too narrow in focus to garner substantial appeal, have been eliminated and some of the modular sub-trades have been reformatted to revert back to the original full scope of the trade, including the carpenter trade. However, these measures do not go far enough. BC is a distinct outlier from the rest of Canada in its abandonment of compulsory certification. It is evident that without compulsory designation, many trades will see fewer workers operating with any kind of certification. This poses significant risks for quality assurance in the trades, along with the safety of workers and the public.

The province should reconsider its stance on compulsory certification and realign certification requirements with the rest of Canada. It has already taken the step of increasing training times for many trades to be in line with those of

comparable jurisdictions. Yet this will have little impact if few apprentices are completing the full training in their trade. Government leadership is needed to correct these system failings. The risks to workers, the public, the environment, and to the trades training system are too substantial to leave to industry to correct on an ad hoc basis. Government should provide leadership and direction to reintroduce compulsory certification where necessary and identify training programs that have not benefited from increased modularization. The 2003 model has been successful in bringing more workers into the trades to alleviate labour shortages, but changes to the system are needed to ensure these workers are being trained adequately.

RECOMMENDATIONS

1. The BC government should re-instate compulsory certification in consideration of public, worker, and environmental safety, general public interest, and the viability of skilled trades training and apprenticeship.
2. The reinstatement of compulsory certification should be accompanied by a clear framework for the review of trades for compulsory certification and an effective compliance and enforcement policy. Both should be based on evidence-based analysis and input from industry, including labour organizations.
3. The BC government should discontinue modularized training and certification, and should realign trade standards and certification requirements with the rest of Canada.
4. The BC government should recognize the traditional role of trade unions and labour organizations in supporting apprenticeship and providing training by strengthening formal representation of labour organizations in the governance of BC's trades training system.

Government leadership is needed to correct these system failings. The risks to workers, the public, the environment, and to the trades training system are too substantial to leave to industry to correct on an ad hoc basis.



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