



Canadian Apprenticeship Forum
Forum canadien sur l'apprentissage

Regional Roundtable Summary

Addressing the Essential Skills Gap

Edmonton, AB
March 2, 2017





Background & Context

One of the concerns often expressed around apprenticeship training is a weakness among apprentices when it comes to essential skills. Non-participating employers point to this as a barrier to hiring. Many pre-apprenticeship programs include components to upgrade essential skills. Essential skills deficits are among the identified reasons for difficulty at technical training and failure to pass examinations. Are essential skills gaps affecting Canada's apprenticeship completion rates? Many apprenticeship stakeholders think so. This is perhaps why there are a great many initiatives underway in all parts of Canada and among every stakeholder group to support essential skills development at every stage of apprenticeship training.

Yet, addressing essential skills is riddled with complexity. There is a lack of common understanding about what skills are essential and whether these differ by trade. How well does an apprentice need to read or write to be successful? Or, are these essential skills adequately addressed during primary and secondary education, leaving us with gaps related to document use, math, computers, communication, problem-solving and teamwork? If these are skills required in all aspects of life and work, regardless of occupation or region, why is it necessary to upgrade essential skills among people with a high school diploma? Conceivably, this isn't an "apprenticeship issue" at all, but something the apprenticeship community addresses out of necessity.

There is an understanding that apprentices may have essential skills gaps because they have, in general, been away from formal learning. The majority of apprentices register in their 20s, several years after graduating from high school. Even if the skills learned in high school are retained, there is a recognition that students who turn to the skilled trades may have been more engaged in classes that offered hands-on learning over academics. This may have even been the inspiration for their career choice. Yet, when it comes to dealing with fast-paced learning at technical training, and being productive and efficient in the workplace, there is little doubt that proficiency with math, problem-solving and teamwork are necessary tools of the trade.

With this context in mind, the Canadian Apprenticeship Forum hosted a roundtable discussion on March 2, 2017 in Edmonton. The Canadian Apprenticeship Forum shared recent research about the business case for essential skills training in skilled trades workplaces. Panelists from SkillPlan, the Northern Alberta Institute of Technology (NAIT), SAIT Polytechnic and CLAC shared insights into ongoing initiatives designed to address essential skills among apprentices. More than 75 participants engaged in a roundtable discussion to identify best practices and talk about what's working across the country.

This report summarizes insights gathered at that event.



Canadian Apprenticeship Forum Research

As a starting point to understanding the disconnect between the skills apprentices have upon entry and the ones required for success, it is useful to look at the “essential skills training” underway in the skilled trades community. Whereas skills taught at high school are generic, the ones employers tend to support are specific to the work environment. At technical training, essential skills upgrading is often directly applicable to course content and is aligned with practical, work-based scenarios. When unions offer upgrading support, the skills gained are trade-appropriate and contextual. It is not difficult to see why this learning would be more effective than high school class content.

In recent CAF-FCA research on this topic, direct feedback was solicited from 6,074 employers in construction, manufacturing, transportation and service trades to understand the essential skills training landscape. Of these, 496 employers discussed the costs and benefits of essential skills training, though only 149 estimated their return on investment. Nearly half (45 per cent) of those surveyed provided formal essential skills training, largely focusing on capacity to adapt to new work processes (32 per cent), working with others (27 per cent), thinking independently to solve problems (25 per cent) and working with digital technology (25 per cent). Literacy and numeracy training was less common, though these skills were deemed important.

Employers indicated that training reflects a culture of training in the workplace (71 per cent), a commitment to employee learning (70 per cent), a need to keep up with industry (56 per cent), workplace change (48 per cent) and demographic shifts in the workforce (23 per cent). For those able to provide a substantive understanding of the costs and benefits of essential skills training, there was a median return of \$3.08 for every dollar invested in this type of training. Though the return on training investment insights are preliminary and based on a relatively small sample, this research provides a first look at this topic with an apprenticeship lens.

Stakeholder Panel

CAF-FCA thanks Sue Grecki from SkillPlan, Alan Kabotoff from NAIT, Brian Moukperian from SAIT Polytechnic and Ken Eerkes from CLAC for sharing insights into the work each is doing to support the development of essential skills among apprentices. They responded to questions posed by our facilitator, Warren Wilson, and the audience.

Among the key points raised during this discussion, Sue provided a practical example of the difference between Level 2 and Level 3 essential skills – terminology that is common within the essential skills community, but not well understood otherwise. With regard to document use, for example, she explained that someone with Level 3 essential skills is able to review multiple documents and summarize key points across them. This requires the ability to compare



documents and draw conclusions about similarities and differences between them, something that someone with Level 2 skills is not able to do effectively.

Ken spoke about a collaborative initiative between CLAC, Edmonton Public Schools, Building Trades of Alberta, Merit Contractors Association, Skills Canada Alberta and Careers: The Next Generation. The group is committed to ensuring Edmonton schools are supporting students with an interest in skilled trades careers, building curricula and resources that reflect the nature of work in these occupations. This could be a best practice for industry-education collaboration in the future.

Brian and Alan were able to give participants a deeper understanding of the ways technical training institutions are supporting apprentices with interactive learning supports. Both schools have recognized the impact of gaps between high school and technical training, then between technical training blocks, to a learner's capacity to excel at school. For example, 16 trades programs at SAIT Polytechnic have developed video vignettes, diagrams and photos hosted on a secure website, giving students 24/7 access to learning objects. These are important study tools for apprentices trying to grasp key trade concepts. Orientation and math preparation courses also help establish the conditions for success.

Roundtable Discussion

After the panel, participants engaged in a discussion intended to inform future efforts among apprenticeship stakeholders. In small groups, attendees were able to learn from each other and share their individual experiences, then report to the larger group to share their insights.

Foundational skills critical to success

When asked to consider which essential skills must be prioritized for skilled tradespeople, no clear consensus emerged. In fact, in addition to the nine essential skills identified by Employment and Social Development Canada, the group suggested cultural sensitivity, work ethic, a productivity focus, ability to adapt, attitude, dexterity and mechanical skills are just as "essential" to skilled trades work as literacy and numeracy.

Common areas of focus were the ability to work with and communicate to others, reflecting the strong emphasis on teamwork in skilled trades workplaces. Math was also mentioned frequently, both in terms of trade-specific math and the need to ensure apprentices have skills associated with financial management. The concept of financial literacy was closely tied to an apprentice's ability to return to technical training throughout the course of their apprenticeship, but was also mentioned in the context of employment gaps. This is a particular challenge in the Alberta market right now, where a scarcity of work is impacting apprentices and journeypersons alike.



It was also relatively common to hear participants talk about continuous learning. Many skilled trades are adopting new technology and innovative materials on a regular basis. Essential skills were seen to be the foundation needed to adapt to the increasing complexity of skilled trades work, where there is a need to learn new processes and equipment on an ongoing basis.

Some groups commented that basic literacy, numeracy and digital skills should be present upon graduation from high school, whereas employers, unions and post-secondary educators might focus on trade-specific and more advanced skills related to problem-solving and critical thinking.

Which skills and when?

Participants then addressed the question of which essential skills should be taught at the various stages of a tradesperson's development. Without exception, groups suggested that the K-12 system should focus on trades awareness and exposure, reducing the stigma associated with skilled trades careers and providing young people with a chance to explore the skills required to succeed in these occupations. Closely aligned with this thought, the group found clear consensus around the idea of teaching math using practical, real-life examples about how it is applied in the skilled trades context. This was seen as a way to make math more engaging and less theoretical.

At pre-apprenticeship and pre-employment training, participants saw an opportunity to contextualize the essential skills required within different trades. By weaving essential skills into these programs, prospective apprentices would be more likely to have a foundation for success in the workplace. This was also the point at which the group identified opportunities to underline the importance of safety, physical health and wellness, and financial literacy. Participants throughout the room suggested that this is an ideal time to test learners for essential skills gaps and learning challenges so individual learning plans and supports, such as tutoring, can be put in place.

During an apprenticeship, there was clear recognition that time is at a premium and essential skills upgrading becomes more challenging. Here, the group suggested the need for ongoing financial support, online resources and tutoring, and other wraparound supports that target individual learning needs. There was also consensus around the idea that employers and mentors have a bigger role to play at this stage of an apprentice's development, making it important that journey person mentors are provided with resources to reinforce essential skills concepts and illustrate the importance of lifelong learning. This foundation was viewed as critical to a journey person's ongoing development, when the concepts of continuous learning, mentorship, as well as specialized and supervisory training become important to career progression.



Addressing the needs of particular groups

Roundtable participants were asked to consider whether certain groups of apprentices have specialized needs and, if so, what supports are required to address them. For Indigenous apprentices, there was a desire to see specialized assessments that take into account culture and community involvement. Funding was identified as an ongoing challenge. Wraparound services that support individual learning needs, respect cultural differences and overcome feelings of isolation were seen as important elements of any essential skills program focused on Indigenous apprentices.

The group suggested that youth would benefit from workplace tours and early exposure opportunities to address a general lack of knowledge about the skilled trades. Assessing essential skills in high school and embedding development activities in all courses might also prove useful. In general, participants felt that youth would be more inclined to develop the skills they need in the workplace if given hands-on activities, greater exposure to the nature of the skills required and ways to associate their classwork with practical, workplace examples.

When it came to the needs of current apprentices, roundtable participants were focused on ways to ensure individuals could be successful. The emphasis was on good mentoring, online and preparatory training, essential skills upgrading and tutoring. The group believed there were opportunities for all stakeholders to support apprentices in developing their essential skills, from employers offering training in the workplace to learning strategy classes at technical training institutions to ensure apprentices develop good study and exam habits.

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For more information on this subject:

- Request a copy of CAF-FCA's research presentation by emailing info@caf-fca.org
- Access [essential skills research reports](#) on the CAF-FCA website
- Attend our next roundtable discussion on the [Building Blocks for Youth Success in the Trades](#) at the National Skills Canada Competition in Winnipeg on June 1