



Labour Market Matters

Special points of interest:

- Increase in work experience requirements for an apprenticeship program is found to be associated with an increase rather than decrease in probability of program completion.
- Positive return on investment found for workplace essential skills training.

“[A]pplicants who choose apprenticeship programmes with high work experience requirements could have characteristics that render them more highly motivated to complete their programs”



The amount of technical training required for an apprenticeship program was found to have very little impact on probability of program completion. Image: Serge Bertasius/Freedigitalphotos.net

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Increased work experience and technical training demands do not negatively affect probability of apprenticeship program completion

The demand for skilled trade persons in Canada is very strong and new apprenticeship registrations increased by threefold between 1991 and 2007. The number of apprenticeship completions however, did not increase and as a result average completion rates have dropped over the same period. A CLSRN paper by Patrick Coe (Carleton University) entitled [“Apprenticeship programme requirements and apprenticeship completion rates in Canada”](#)¹ examines the relationship between apprenticeship completion rates, and the characteristics of apprenticeship programmes, measures of the average age and sex of apprentices, as well as unemployment rates across trades, provinces, and time. The study finds that length of apprenticeship programs, and amount of technical training required are not necessarily linked to program completion rates. Using data from the [Registered Apprenticeship Information System \(RAIS\)](#) matched to data from historical [Ellis Charts](#) for the period 1991-2007 Coe makes several key findings relating to different types of apprenticeship programs and their completion rates. Surprisingly, the length of a work experience term in an apprenticeship program is linked to an increase in completion rates. Indeed, the study found that an increase in the work experience requirement of 1000 hours is associated with an increase in the completion rate of between 3 – 5

percentage points. This result appears to be at odds with the idea that problems such as employment instability and forgone income may be greater for those in longer apprenticeship programs, resulting in downward pressure on completion rates. Coe suggests that this positive relationship between apprenticeship program length and program completion rates may be related to the fact that the type of applicants who choose apprenticeship programmes with high work experience requirements could have characteristics that render them more highly motivated to complete their programs.

The amount of technical training required to complete an apprenticeship was also found to have very little impact on program completion rates. Indeed, the study found that an increase in technical training requirement of 100 hours is only associated with a decline in the completion rate of less than one percentage point. Similarly the study does not uncover any evidence to support the view that delivery of training via block release (rather than alternate formats) is a barrier to completion.

Interestingly, the study finds a negative relationship between program completion rates and the level of education required to enter the program. An increase of one grade in the level of required education was found to be



Patrick Coe
(Carleton University)

associated with a decline in the completion rate of 2.5 percentage points. This result is at odds with the general concern that poor literacy and mathematical skills of apprenticeship candidates are a barrier to completion. However, Coe postulates that candidates with higher levels of education are more likely to have alternative options relative to less educated candidates and therefore may be more likely to exit an apprenticeship program in favour of other opportunities. For example, an apprentice with a grade 12 education may be able to quit his or her programme to take up a university education, but this option is generally unavailable to an apprentice with a grade 10 education.

¹Journal of Vocational Education and Training. Volume 65. No. 4. 2013. (Previously released as: [CLSRN Working Paper no. 71](#))

The Business Case for Essential Skills Training in the Workplace

Reading, document use, numeracy, and oral communication are among a set of Literacy and Essential Skills (LES) that are considered to be foundational in the acquisition of all other skills, which enable individuals to evolve with their jobs and adapt to workplace change. Recent research has revealed significant gaps in literacy and essential skills among the Canadian workforce. Weaknesses in LES development in the Canadian labour force can result in lower wages, reduced job stability, and potentially raise risks of workplace injury for workers; in addition to lower productivity for Canadian firms. While anecdotal evidence suggests that LES training can work to eliminate gaps in essential skills, firms tend not to invest in this kind of training due to lack of concrete evidence providing a clear return on investment for such training. A project sponsored by the Office of Literacy and Essential Skills (OLES), a branch of Employment and Social Development Canada (ESDC) in partnership with the Social Research and Demonstration Corporation (SRDC), entitled [*UPSKILL: A Credible Test of Workplace Literacy and Essential Skills Training*](#) (CLSRN Working Paper no. 143) aims to fill the knowledge gap by evaluating workplace LES training with the most rigorous evaluation methods, which will provide firms with evidence to make a credible business case for investment in essential skills development.

UPSKILL utilized a random assignment design to reliably

measure the impact of LES training in the workplace. Over 100 firms and nearly 1,500 workers in the accommodations sector were enrolled across the country in eight provinces. A benefit-cost analysis also reveals a fairly significant positive return on investment. When bearing the full costs of training and release time for workers, firms are estimated to earn an average return of 23 per cent on their investment in the first year after providing a well-designed Essential Skills training program. In addition to improved worker productivity, firms were also observed to benefit from increased breadth of service quality and improved relations with customers – which lead to increased customer loyalty, repeat sales, and higher revenues. Increased task efficiency and accuracy were also



A small investment in training time (typically 20 hours) was found to be associated with an immediate increase in standardized literacy test scores, which continued to rise through the following year as program participants applied their skills on and off the job.

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observed among program participants – which lead to fewer errors and lower costs of supervision. Ultimately, these observed improvements contributed to greater job retention, leading to higher earnings for employees and lower turnover costs for employers.

“When bearing the full costs of training and release time for workers, firms are estimated to earn an average return of 23 per cent on their investment in the first year after providing a well-designed Essential Skills training program. In addition to improved worker productivity, firms were also observed to benefit from increased breadth of service quality and improved relations with customers – which lead to increased customer loyalty, repeat sales, and higher revenues.”

The study finds that LES training has a large positive impact on skill development, job performance, and a range of economic and social outcomes for workers. A small investment – typically about 20 hours – of time in the training program was associated with an

immediate increase in standardized literacy test scores, which continued to rise through the following year as program participants applied their skills on and off the job. The proportion of participants who met industry certification standards for their occupation also increased substantially compared to the control group who did not receive training. The study found that the greatest impacts of training on skills and job performance were found among those with lower scores on the pre-training skill tests rather than being concentrated among those with higher levels of education or skill to begin with.

The decision to invest in workplace training is complex. To date few studies have reliably measured the effects of Essential Skills training or its return on investment. UPSKILL provides many insights on how to effectively engage employers, on how best to implement Essential Skills training, and on the conditions that are more likely to lead to success. One of the keys to its effectiveness is in integrating Essential Skills training within the workplace in a way that is highly relevant to workers’ job tasks and employers’ business priorities. The UPSKILL project provides concrete evidence of a large return on investment – both for firms and workers – from Essential Skills training in the workplace, along with a series of insights on how positive effects of training can be maximized.

Endnotes

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