

Project Insights Report

# Rapid ‘On-The-Job’ Employee Upskilling for In-Demand Skilled Jobs: Higher Productivity, Retention and Career Pathways



## PARTNERS

Work-Based Learning  
Consortium



## LOCATIONS

Across Canada



## INVESTMENT

\$3,215,769



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## Executive Summary

The project, a follow-up to a previous collaboration between Future Skills Centre (FSC) and the Work-Based Learning Consortium (WBLC), focused on improving the effectiveness and efficiency of upskilling in several streams of work.

In particular, the main thrust of the innovative pilot was to reduce the training time for three upskilling programs by between 40% and 50% without compromising the quality of training and ensuring that workers obtained all the necessary knowledge and skills for proficient performance in their jobs. The project also sought to gain additional insights and test new methods of AI learning, blended modes of training and the scalability and portability of their approach to new sectors across Canada.

Overall, the approach was successful in reducing the training times from around 26 weeks to 16 weeks. Moreover, across the range of upskilling programs, there was a high level of completion, with nearly 90% of participants receiving their training certification. The project provided a formal schedule for the entire blended learning program—i.e., online and on-the-job—and necessary support to trainers. Given firms’ fluctuating and often intense production schedules, the schedules and trainer support were particularly salient in reducing the training time.

Finally, scalability and portability to other sectors was met with some success, including the development of new partnerships, but also with resistance from other technical colleges where their model of funding and training was already well established.

#### KEY INSIGHTS

- 1 Improved scheduling for production times and enhanced blended learning reduced training times for in-demand jobs by 40% without compromising the overall quality of upskilling.
- 2 Close to 90% of participants were certified in the accelerated rapid upskilling programs.
- 3 Support for on-the-job trainers is needed to address their time and capacity constraints to maximize the benefits of rapid upskilling initiatives.

## ► The Issue

The core problem the project aimed to address was the lack of efficient and effective solutions for upskilling and re-skilling current employees to meet the demands of new technologies and business practices. Because employers report difficulties in recruiting and retaining skilled workers, the project sought to bridge essential competency gaps and test new ways of enhancing technical skills.

In particular, the project aimed to develop and test several different and innovative approaches to rapid upskilling, and to provide timely and proven solutions that would benefit both employers and employees. This will ultimately contribute to higher productivity, retention and career pathways in in-demand skilled jobs.



## What We Investigated

The project aimed to address the need for upskilling and re-skilling employees in in-demand skilled jobs across Canada by researching employer needs and testing new ways to reduce the training time required without compromising the quality of the learning and job-readiness.

The project sought to reduce training time in existing training programs, including:

- CNC Machinist (Level 1)
- CNC Line Setup
- CNC Machine Operator

The project also built new training programs to respond to employer needs, which included e-learning and testing, virtual instruction, shop floor assignments, coaching, and remote assessments for the following in-demand roles:

- packer in the consumer good sector;
- graphic installation technician in the sign industry;
- industrial manufacturing operator in the industrial manufacturing sector;
- wind turbine blade repair technician in the renewable energy sector.

As part of this training, project partners built a solution that would allow for remote trainee assessments at client locations across Canada. Project partners also developed and piloted a competency coaching program for technical leaders, which focused on performance, personal interactions and realizing potential.

To complement existing and new training programs, the project also developed an AI tool for workers new to industry, especially immigrants, which aimed to improve technical language fluency in advanced manufacturing.

## ✔ What We're Learning

More than 110 participants engaged in various programs aimed at providing practical skills training to employees in skilled jobs. The certification rates across the various programs averaged nearly 90%.

### **Precise scheduling and supports helped alleviate time pressures**

Training opportunities, including trainee and trainer availability, rely heavily on the production schedule of individual company plants. This impacts the pacing of the rapid upskilling program aimed to reduce training times. This issue was exacerbated by the fact that companies typically chose the most experienced employees as trainers—in other words, those with the most time constraints. In this manner, the project highlighted the need for companies to schedule hands-on training opportunities with program trainees. Moreover, the assistance provided by WBLC to company trainers, which included monitoring coaches, helped to articulate and map out weekly assignments to minimize production-related disruptions and enable on-the-job training. The project highlighted the importance of supporting workplace trainers, who do not always have the necessary time or knowledge to structure hands-on training with trainees. In this regard, support from WBLC that provided monitor coaches and e-learning instructors was instrumental in the overall success of the project.

### **Combined training approaches make the most efficient use of worker time**

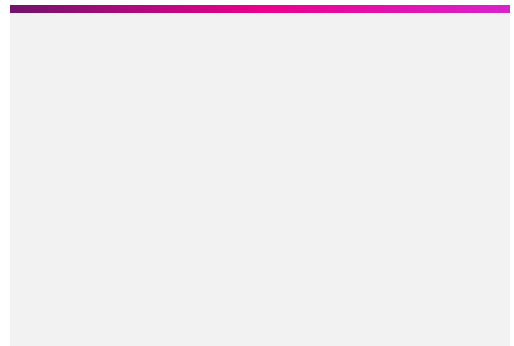
The program focused on ensuring the quality of training by providing a blended learning model that focused on the combination of online and on-the-job training. This approach also helped to reduce the overall training time required from 26 to 16 weeks. This was due in part to the strong input from employers on training content. The project systematically engaged with individual companies to create a set of industry-identified competencies that were leveraged for program development. Additional collaboration with subject-matter experts ensured the curriculum included the relevant technical competencies.

### **Further improvements are needed to maximize inclusivity**

Despite the project's successes, the evaluation report highlights areas for improvement, such as the need for targeted outreach and support strategies to effectively engage immigrant populations. Ensuring inclusivity and accessibility for all individuals, regardless of background or status, was identified as a crucial aspect for future initiatives.

## ★ Why It Matters

In the context of a rapidly changing world of work, ongoing efforts to upskill and re-skill workers is central to fostering inclusiveness, enhancing competitiveness and driving productivity. Despite these imperatives, Canada continues to be confronted by a number of issues that have led to underinvestment in workplace training initiatives.



One particular barrier to upskilling, particularly in sectors like manufacturing, is the opportunity cost associated with diverting valuable time away from the production line and toward training. However, the evidence from this WBLC project underscores, first, that demand-driven competency models can be effectively delivered in shorter time frames. This necessitates effective planning and coordination with management along with the implementation of a blended learning approach (bolstered by the integration of innovative AI tools). Second, by providing essential support to the workplace trainers, this approach mitigates risks of lost production time, thereby enhancing the feasibility of upskilling initiatives.



### **State of Skills: Effective Employer Engagement in Skills Development: From Rhetoric to Solutions**

Supporting employers in overcoming structural barriers to training investment is key to addressing labour and skill shortages.

[Read Thematic Report](#)

The project highlights a number of strategies and best practices to address barriers to upskilling in the workplace. Its success in navigating these challenges offers valuable insights into effective approaches that can be replicated across various contexts, thus contributing to the advancement of upskilling efforts on a broader scale.

## **► What's Next**

WBLC continues to offer [a range of training programs and tools](#) to support employers to develop and retain workers with industry-valued skills and certifications. All of the programs developed as a part of this project continue to be a key part of their training offerings.

FSC will continue to monitor the lessons learned on upskilling and re-skilling initiatives to better understand the necessary strategies to improve on-the-job training in Canada. This includes examining how different approaches such as coaching, financing, internal capacity building, hybrid models of learning and accreditation, and AI tools, among others, can address the barriers that employers and workers face to upskilling.

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

### How to Cite This Report

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