



Project Insights Report

# Inclusive Work Integrated Learning – What works for whom?



## PARTNERS

Diversity Institute



## LOCATIONS

Manitoba



## PUBLISHED

June 2026



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## ☰ Executive Summary

In Manitoba, the demand for skilled workers continues to grow; with all sectors facing shortages of workers with digital skills and some sectors like agriculture, food and beverage manufacturing struggling to attract and retain talent.

At the same time, domestic and international students face significant challenges when pursuing STEM education and careers. Domestic students in Canada often face inadequate preparation in secondary education, as the high school system may not provide a strong foundation in STEM subjects.

International students encounter additional barriers to staying in Canada after graduation, including the lack of recognition of international credentials, difficulties obtaining permanent residence status, and cultural barriers to integration.

Work-integrated learning (WIL) programs serve as a mechanism to help individuals gain skills and work experience while bridging the gap between employer needs and the skills graduates bring to the workforce. However, these programs are often criticized for lacking diversity data or not offering tailored wraparound supports for equity-deserving groups, such as persons with disabilities and Indigenous Peoples.

The IntegratED program was designed to address the skills gap and labour market challenges in Manitoba's food and beverage manufacturing industry by providing skills training and work experience to support international students and recent newcomer graduates in STEM fields. Informed by consultations with 27 Manitoba employers and educational stakeholders, the program was designed to train, integrate and retain international students and recent newcomer graduates in STEM and help them overcome employment barriers both pre- and post-graduation.

The IntegratED program offers two streams: Industry Projects and Canadian Digital Adoption Program (CDAP) Internships. Each stream offered professional skills training, work experience, and wraparound supports to help bridge the gap between post-secondary educational knowledge and real-world experience and provide international students and newcomers with work experience in Canada's labour market.

Participants and employers were invited to share feedback pre- and post-program through surveys and interviews. This data was used to understand program successes and challenges and guide future improvements to the delivery of WIL opportunities.

The evaluation addressed the following questions:

- Did the IntegratED program improve participants' ability to build professional networks, career planning and development skills, and employability in the Canadian context for international students?
- Did the IntegratED program improve access to student talent and system navigation tools for small and medium enterprises in Manitoba's STEM sector?
- Did employers enhance their connections with post-secondary institutions? Did participation in the IntegratED program advance business objectives?

The results from the project were

- A total of 149 individuals participated across both the industry projects and CDAP streams. The program delivered 114 placements with 83 international students and 31 recently graduated newcomers.
- Both industry projects and CDAP internships were designed to address challenges identified by employers and post-secondary institutions; that is, graduates often struggle with both technical and non-technical skills, such as communication, critical thinking, and teamwork.
- The industry projects stream also provided opportunities to gain and apply industry-specific skills. In this stream, students applied STEM knowledge, gained work experience in Manitoba's food and beverage industry, and helped SMEs advance business objectives.
- A total of 23 employers in the agri-food sector provided 46 WIL industry projects in STEM. Over 215 SMEs in CDAP internships engaged to improve digital adoption strategies.

The design, delivery, and outcomes of the IntegratED program helps us understand best practices in WIL and workforce integration for international students and newcomers in STEM and has several learning for future WIL programs, particularly those focused on promoting improved labour market outcomes and social mobility for equity-deserving groups in Canada. For example:

- Inclusive WIL models, particularly those incorporating equity, diversity, and inclusion principles, are an effective way to support equity-deserving groups, particularly international students and newcomers. More work is needed to understand how different WIL models impact different equity-deserving groups.
- Industry-academic partnerships are key to providing students opportunities to improve workforce readiness. This approach also ensures an employment-focused approach that aligns training and placement opportunities with post-secondary education and employer needs.
- An iterative feedback design allows for real-time feedback, highlights areas for improvement, and ensures opportunities are based on employer needs.
- Programs for international students and newcomers are important; however, they can be strengthened. One potential policy recommendation is to reduce unemployment of skilled immigrants through language training and the recognition of foreign credentials.

#### KEY INSIGHTS

- 1 The IntegratED program included 114 placements with 83 International students and 31 recently graduated newcomers.
- 2 Organizations need support while participating in WIL opportunities to ensure positive outcomes, with shared objectives enhancing results and ongoing WIL services fostering equity among small and medium-size enterprises.
- 3 International students need additional guidance on project-specific tasks; such as leading meetings, understanding organizational communication and reluctance to disclose their international student status to employers.

## The Issue

In Manitoba, the demand for skilled workers continues to grow, with all sectors facing shortages of workers with digital skills and sectors like agriculture and food and beverage manufacturing struggling to attract and retain talent. In 2022, Manitoba's agricultural sector had approximately 1,300 unfilled positions. This shortage is expected to grow by 13% and result in over 1,900 vacancies by 2030.

Despite the demand for talent, domestic and international students in Canada encounter challenges in STEM education and careers. Domestic students often face inadequate preparation in secondary education, as the education system may not offer a strong foundation in STEM subjects like mathematics and sciences. Despite the substantial presence of international students in post-secondary STEM programs, they encounter numerous barriers to remaining in Canada after graduation – including difficulties obtaining permanent residence, cultural barriers to integration and discriminatory hiring practices in Canada's labour market.

The IntegratED program was designed to address the skills gap and labour market challenges in Canada's food and beverage manufacturing industry by providing skills training and work experience to support international students and recent newcomer graduates in STEM fields. The program supports students and graduates through two key initiatives: Industry Projects and CDAP Internships.

1. Industry Projects: A program that bridges pathways between post-secondary institutions and the labour market. It placed students in consulting roles within SMEs in Manitoba's food and beverage industry. Industry projects were integrated into university-level courses and offered by Dr. Dua in their fourth-year Food Science and Human Nutrition courses at the University of Manitoba.
2. CDAP Internships: A program aimed to enhance recently graduated newcomers' employability and leadership skills and provide organizations with advisory services and recommendations to assist them with their digital adoption journey.

These streams offered professional skills training, work experience, and wraparound supports to bridge the gap between post-secondary educational knowledge and real-world experience and enabled students and new graduates to gain work experience in the Canadian context. In terms of wraparound supports – participants in industry projects received stipends to cover transportation and incidental expenses while recently graduated newcomers in CDAP internships received wages that reflected their educational background, skills, and abilities.



## What We Investigated

Participants and employers were invited to share feedback pre- and post-program through surveys and interviews. This data was used to understand program successes and challenges and guide future improvements to the delivery of WIL opportunities.

The evaluation addressed the following questions:

- Did the IntegratED program improve participants' ability to build professional networks, career planning and development skills, and employability in the Canadian context for international students?
- Did the IntegratED program improve access to student talent and system navigation tools for small and medium enterprises in Manitoba's STEM sector?
- Did employers enhance their connections with post-secondary institutions? Did participation in the IntegratED program advance business objectives?

Surveys and qualitative interviews formed a key part of the evaluation. Data was collected at different stages of the program – onset, end-of-year, and post-program to understand the successes and challenges of the program. Continual evaluation and feedback were a foundational component of the program and led to program structure and delivery improvements.

Between 2021-2024 the IntegratED Program:

- Offered pilot program from 2021-2022 to inform the design and approach of the program.
- Conducted 27 key informant interviews with organizations and educational stakeholders to uncover educational barriers, skills gaps, and opportunities that influence individuals' transitions into the workforce and potential solutions to improve employability.
- Offered two streams of WIL opportunities: (1) Industry Projects embedded into fourth-year Food Science and Human Nutrition courses at the University of Manitoba and (2) CDAP Internships with SMEs seeking assistance with their digital adoption journey.
- Delivered 114 WIL opportunities, with 83 international students in industry projects and 31 recently graduated newcomers in CDAP internships.
- Engaged 23 employers in the agri-food sector to provide international students with 46 WIL industry projects.

Engaged over 215 SMEs in Manitoba to provide internships to recently graduated newcomers.

## ✔ What We're Learning

The IntegratED program provided WIL opportunities to both international students and recently graduated newcomers in STEM to support skills development and integration into the Canadian labour market.

### Key outputs of the program:

- **Total Participants:** 149 participants across both streams
- **Total WIL placements:** 114 work placements across both streams

- **Total Employers Engaged:** 23 employers in the agri-food sector who provided 46 WIL industry projects. Over 215 SMEs in CDAP internships engaged to improve digital adoption strategies.

### **WIL opportunities based on employer needs**

The IntegratED program used consultations with employers and post-secondary institutions to understand educational barriers, skills gaps and opportunities and influence individuals' transitions into the workforce. Interviews highlighted the need for technical, non-technical and industry-specific skills. These findings were used to design a program which offered international students and recently graduated newcomers the opportunity to apply their academic knowledge to real-world settings.

### **Iterative feedback and program design**

The IntegratED program used various data collection methods to gain real-time feedback on the program, including yearly feedback surveys, post-program surveys, and interviews. This approach allowed program administration to identify areas for improvement and implement these changes.

### **Program design and delivery learnings**

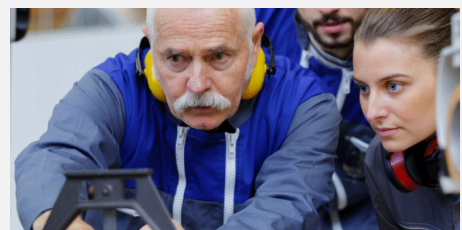
The IntegratED program faced challenges bridging cultural and professional skills gaps for international students, outreach, and tracking long-term participants' outcomes.

- Students needed guidance on running projects, leading meetings, and understanding organizational communication.
- International students may also be reluctant to disclose their international status.
- Organizations need support through the program to foster positive outcomes, including standardized onboard documents, human resource resources, and cultural awareness training.
- A strong tracking system is needed to improve response rates, maintain alumni engagement, and collect comprehensive data.
- The ability to secure funding remains a significant challenge and has affected key aspects of the program, such as stipends and operations.

## **★ Why It Matters**

The design, delivery, and evaluation of the IntegratED program provide insights into best practices in WIL and workforce integration challenges experienced by international students and recently graduated newcomers in STEM. These learnings have implications for future WIL programming and to promote labour market and social mobility for equity-deserving groups in Canada.

### **1. Importance of equity, diversity, and inclusion in WIL Programs**



### **State of Skills: Work-Integrated Learning**

The IntegratED program shows the need for inclusive WIL models that support equity-deserving groups. Research notes that existing WIL programs lack diversity data to understand program outcomes or offer targeted wraparound supports for equity-deserving groups. Future initiatives should incorporate equity and inclusion principles to ensure both participants and employers feel supported and can meaningfully participate.

## 2. Importance of collaboration between employers and post-secondary institutions

The IntegratED program showed that industry-academic partnerships provide opportunities for students to improve workforce readiness by aligning educational curricula with employers' needs. Many STEM programs do not adequately reflect industry needs, in terms of professional and soft skills and work experience, which creates obstacles for graduates. WIL programs, such as co-op programs and internships can be strengthened when designed in collaboration with employers.

## ► What's Next

Findings point to several policy recommendations.

### **Offer a pathway to permanent residency**

Establish a pathway to permanent residency for international students in high-demand sectors to support smoother transitions to long-term employment while filling critical shortages in high-demand occupations. Collaborate with the government and target areas with skill shortages to help retain essential talent.

### **Reduce underemployment of skilled immigrants**

Improve language skills, address barriers to recognizing foreign credentials and experience, and provide tailored support for successful labour market integration. Encourage employer initiatives.

### **Upskill and reskill the workforce**

Invest in programs that provide upskilling and reskilling opportunities for the existing workforce to keep pace with technological advancements and changing job market demands.

Work-integrated learning can be effective in developing technical and soft skills among learners at different levels, including in high schools, colleges and universities and in professional roles.

[Read Thematic Report](#)

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

Diversity Institute. (2026). Project Insights Report: Inclusive Work Integrated Learning – What works for whom? The Diversity Institute. Toronto: Future Skills Centre. <https://fsc-ccf.ca/projects/inclusive-work-integrated-learning/>

Funded by the  
Government of Canada's  
Future Skills Program



Inclusive Work Integrated Learning – What works for whom? is funded by the Government of Canada's Future Skills Program. The opinions and interpretations in this publication are those of the author and do not necessarily reflect those of the Government of Canada.

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