



Impacts of Customization and Wraparound Supports for Digital Skills Upskilling



Partners



The Diversity Institute conducts and coordinates multi-disciplinary, multi-stakeholder research to address the needs of diverse Canadians, the changing nature of skills and competencies, and the policies, processes and tools that advance economic inclusion and success. Our action-oriented, evidence-based approach is advancing knowledge of the complex barriers faced by under-represented groups, leading practices to effect change, and producing concrete results. The Diversity Institute is a research lead for the Future Skills Centre.



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Funder

The Future Skills Centre – Centre des Compétences futures is funded by the Government of Canada's Future Skills Program.

Funded by the
Government of Canada's
Future Skills Program



The opinions and interpretations in this publication are those of the authors and do not necessarily reflect those of the Government of Canada.

Authors

Wendy Cukier

Founder and Academic
Director

Diversity Institute

Professor, Entrepreneurship
and Innovation

Toronto Metropolitan University

Betina Borova

Senior Research Associate

Diversity Institute

Joy Wang

Research Assistant

Diversity Institute

Publication Date:

June 2025

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Executive Summary

The rapid advancement of technology, including artificial intelligence (AI), cybersecurity and data analytics, has transformed the global workforce, making digital skills essential across all sectors. However, digital skills gaps are particularly acute among specific equity-deserving groups such as women, newcomers, refugees and Black youth, contributing to occupational segregation, underemployment and economic disparities. Increasingly there is an understanding that human capital (knowledge, skills and attitudes) is only part of the solution. Attention to social capital (networks) and financial capital (resources) are also key. Developing digital skills is not simply a matter of training for competencies but is also a social process, particularly for equity-deserving groups who may face additional barriers in the career pathing continuum, including from the decision to enter training, building self-efficacy, audience appropriate curriculum and pedagogy, overcoming social and economic barriers, navigating services and opportunities, and ongoing success. While there are many digital skills development programs targeting equity-deserving groups, there is a lack of consistency in the considerations of their specialized needs or

the role of wraparound supports in addressing the needs of participants.

Wraparound supports refer to holistic and flexible services that address the personal, financial and/or logistical barriers faced by individuals throughout their career pathing journey. The purpose of wraparound supports is to help participants focus on their learning and career training without such barriers and allow them to explore career advancement opportunities. Wraparound supports are designed to meet four categories of job seeker needs: human capital (e.g., digital literacy, language and technical skills), personal needs (e.g., mental health support, confidence building, culturally informed career counselling), logistical needs (e.g., financial, transportation, child care) and labour market access.

The goal of this report is to contribute to continuing efforts to bridge the digital skills gap in Canada's workforce and promote access to opportunities in the digital economy for equity-deserving groups. To do so, this report draws on previous research to explore barriers and wraparound supports in six stages of the inclusive career pathing model:

- 1 Encouraging user entry,
- 2 Building self-efficacy,
- 3 Navigating careers and systems,
- 4 Assisting with economic and social barriers,
- 5 Providing good content and good teaching,
- 6 Sustaining support.

We also categorize these stages into three phases of the skills development process: program access (Steps 1 & 2), program completion (Steps 3 & 4) and employment outcomes (Steps 5 & 6). This categorization highlights how wraparound supports are needed during training programs and beyond. The report then examines wraparound supports and their impacts based on a case study of the Advanced Digital and Professional Training (ADaPT) program, which has four variants that support different equity-deserving groups. The case study examines the design and delivery of ADaPT and its variants, revealing that equity-deserving groups can access digital skills training opportunities and career advancement opportunities when provided with supports that meet their needs and address the barriers they face. Last, we offer policy recommendations to make digital skills training more accessible and inclusive. By integrating holistic supports, Canada can bridge the digital skills gap and create a more equitable and inclusive labour market.

Barriers to digital skills training

Equity-deserving groups such as women, newcomers and Black youth face intersecting barriers that limit their access to digital skills training and tech jobs. Women encounter gender biases, caregiving responsibilities and wage gaps which restrict their participation in fields dominated by men. Newcomers and refugees struggle with credential recognition, language barriers and trauma, leading to underemployment and limited access to digital training. Black youth face systemic racism, lack of networks and discriminatory hiring practices, which reduce their opportunities for professional growth and digital skills acquisition. Wraparound supports, such as career coaching, flexible training and mentoring, can help address these barriers and create more inclusive pathways to success in the digital economy.

Guidelines for developing customized wraparound supports

Customized wraparound supports are crucial for overcoming the intersecting barriers faced by equity-deserving groups, such as women, newcomers, refugees and Black youth, in digital skills training. To address these barriers, development and delivery processes of customized wraparound supports should consider assessing diverse needs, addressing underserved populations, embedding equity, diversity and inclusion, promoting employer engagement and inclusive workplaces and facilitating coordination between service

providers and other stakeholders. When these considerations are put into practice, the emerging key interventions include direct financial aid, employment placement programs, career counselling, mental health support, child care and transportation assistance. Additionally, providing access to technology, flexible scheduling, mentorship, networking and language assistance helps participants engage fully in training and succeed in the digital economy. Tailored wraparound supports create equitable opportunities and enable equity-deserving groups to thrive in a rapidly evolving digital workforce.

Impact of customization: ADaPT and its variants

The Advanced Digital and Professional Training (ADaPT) program, developed by the Diversity Institute at Toronto Metropolitan University, addresses Canada's digital skills gap, particularly for equity-deserving groups like women, Black youth and newcomers. Since 2014, ADaPT has offered work-integrated learning (WIL), combining digital skills training with wraparound supports such as career coaching, mentorship and job placements. Specialized ADaPT streams target unique needs, including ADaPT for Newcomers, ADaPT for Career Changers and ADaPT for Black Youth. These programs' demand-driven approach equips learners with high-demand digital and professional skills, offering flexible learning formats and essential wraparound supports to help participants transition into the workforce. ADaPT's strong collaboration with employers ensures that training aligns with industry needs, promotes inclusive hiring practices and provides real-

world job placements. Since 2020, over 1,500 participants have completed the program, with 94% identifying as from diverse backgrounds, showcasing ADaPT's impact on fostering a more inclusive Canadian workforce.

Recommendations

Enhancing wraparound supports in digital skills training is essential to ensure equity-deserving groups can fully benefit from these programs. Addressing barriers like financial constraints, caregiving and mental health challenges requires changes at the policy, organizational and individual levels.

Policy level

- Standardize definitions and frameworks for wraparound supports with attention to context, goals, specific needs of equity-deserving groups, best practices and evaluation of impact.
- Improve coordination and collaboration across funded programs and more standardized data collection on wraparound support goals, targets, eligibility criteria and impact.
- Include wraparound supports as part of programming targeting equity-deserving groups.
- Encourage public and private partnerships between employers, educational institutions and community organizations to reduce duplication and overlap and share resources and learning.
- Coordinate across government and donor levels to coordinate funding, streamline program access and improve awareness of services and best practices.



Organizational level

- Provide tailored wraparound supports by clearly defining wraparound supports and allocating flexible funding to meet the needs of equity-deserving participants.
- Adopt a collaborative financing strategy with multiple funding sources and employer partners to ensure the continuity of wraparound supports, especially comprehensive wraparound supports like financial assistance and child care.
- Ensure inclusive program design that integrates accessibility and addresses the needs of diverse learners. These include inclusive, trauma-informed processes in program design, as well as the availability of supports after the program training period to ensure well-being and confidence among participants.
- Promote enhanced navigation and cross-program collaboration by developing user-friendly interfaces to navigate various

programs and supports, which would allow the seamless connection between trainers, advisors and job seekers.

- Engage with employers to provide real-world job placements, internships and work-integrated learning opportunities.
- Ensure clearly defined goals and evaluation frameworks by assessing participants' experiences in the program and long-term impacts on their employment, confidence and well-being. These insights should be collected directly from the participants and used to guide improvements in program interventions and guidelines.

Individual level

- Educators and trainers should provide customized curriculum and support that is culturally responsive and accessible. They should also pursue equity, diversity and inclusion (EDI) and cultural competency training to enhance their understanding of the needs and barriers experienced by equity-deserving groups so that they can better foster an inclusive, accessible learning environment.
- Career counsellors should offer personalized and culturally competent guidance to provide individualized advice that respects learners' unique backgrounds and helps them build clear pathways for their career goals. They should also promote access to resources and networks by providing learners with targeted resources and industry contacts to aid their professional growth.
- Mentors should engage in EDI and cultural competency training to provide empathetic



mentorship that recognizes the diverse experiences of learners. They should also share industry knowledge such as industry trends, company cultures and career paths, and help learners build connections that will support their professional growth.

- Learners and trainees should engage actively in training by utilizing available resources, seeking feedback and connecting with mentors. They should also provide constructive feedback on programs to help educators and program administrators improve training and meet diverse needs. As well, learners and trainees can access opportunities by setting career goals and building networks with professionals and peers.



Introduction

The importance of digital skills in today's economy cannot be overstated. Rapid advancements in technology, including artificial intelligence (AI), cybersecurity, robotics and data analytics, have dramatically changed the global workforce landscape.^{1, 2} The COVID-19 pandemic further accelerated the digital transformation, shifting even non-technology sectors toward an increased reliance on digital tools and platforms.³ As a result, digital literacy has become essential for those working in the tech industry and nearly every other sector, including retail, finance, education and health care.⁴

According to recent studies, digital skills are in high demand and will continue to be as technology evolves, with many roles requiring a mix of technical and non-technical digital skills.⁵ Digital skills now encompass everything from coding and data analysis to proficiency in digital tools like Microsoft Office and social media management. With the growing integration of digital solutions in business operations, the need for employees who can effectively apply these technologies has surged. Unfortunately, the demand for these skills outpaces supply, contributing to a digital skills gap that leads to labour shortages and hurts the economy.⁶

Moreover, the lack of digital skills is a key contributor to underemployment and unemployment in certain populations, particularly equity-deserving groups. As of 2023, women make up only 34.8% of workers in Canada's digital economy despite representing 48% of the workforce.⁷ Black workers are also under-represented, with Black workers making up 4.5% of the workforce but only 2.6% of Canada's ICT sector.^{8, 9} Newcomer, refugee and immigrant talent is also underutilized. Despite having skills and credentials, more than one-half of immigrant professionals in science, technology, engineering and math (STEM) are unemployed, and many work in positions below their skill level.¹⁰ These groups are significantly under-represented in fields that require digital competencies, further widening the economic and social disparities they face.¹¹

To address the challenges these groups face in acquiring digital skills, the concept of wraparound supports has emerged as a critical solution. Wraparound supports are holistic and flexible services designed to address the unique barriers individuals face throughout their career pathing journey. These supports range from material assistance, such

as child care, transportation and financial aid, to more specialized services like mental health counselling, career coaching and mentoring. The goal is to ensure that participants can focus on learning and complete their training without being hindered by personal, financial or logistical barriers, while also offering opportunities for career advancement beyond core training activities.¹²

Building on previous research by the Diversity Institute, this report examines how tailored, holistic wraparound supports can empower individuals from equity-deserving groups—specifically women, newcomers, refugees and Black youth—in accessing digital skills training.¹³ We assess how wraparound supports can address barriers faced by equity-deserving groups in six stages of the inclusive career pathing model:

- 1 Encouraging user entry,
- 2 Building self-efficacy
- 3 Navigating careers and systems,
- 4 Assisting with economic and social barriers,
- 5 Providing good content and good teaching,
- 6 Sustaining support.

We also categorize these stages into three phases of the skills development process: program access (Steps 1 & 2), program completion (Steps 3 & 4) and employment outcomes (Steps 5 & 6).

The career pathing model is valuable for identifying barriers that occur throughout each step of the skills development process, which can inform the delivery of comprehensive, customized wraparound supports to address these barriers. Drawing from our examination of barriers at each stage of the career pathing model, we outline a variety of wraparound supports that address four categories of job seeker needs: human capital (e.g., digital literacy, language and technical skills), personal needs (e.g., mental health support, confidence building, culturally informed career counselling), logistical needs (e.g., financial, transportation, child care) and labour market access.

In addition to our review of existing research and discussion of types of wraparound supports, this report examines the impact of wraparound supports when they are put into practice. Specifically, we evaluate the impact of the Advanced Digital and Professional Training (ADaPT) program, an initiative by the Diversity Institute that has integrated wraparound supports with significant success.¹⁴ ADaPT provides high-demand digital and professional skills training to participants while addressing obstacles like a lack of work experience and professional networks. The program has been completed by more than 1,500 participants since 2020, with a satisfaction rate of 88.89%.¹⁵ Variants of the program for different equity-deserving groups have also been developed with great success, including the trauma-informed, culturally sensitive ADaPT for Newcomers, ADaPT for Career Changers which upskills individuals transitioning into new careers, the work-integrated learning program

ADaPT4Success and ADaPT for Black Youth supported by the Ontario Black Youth Action Plan.

Overall, this report will:

1

Identify the barriers and needs of equity-deserving groups:

In addition to assessing obstacles in digital skills training for women, newcomers, refugees and Black youth, we use the career pathing model to identify barriers in program completion, program access, and labour market outcomes and highlight how they can be addressed. Barriers include gender bias, caregiving responsibilities, social-economic barriers and systemic racism.

2

Outline customized wraparound supports for skills development based on job seeker needs:

This section defines wraparound supports and their role in digital skills development, highlighting key considerations for effective design and implementation, including an equity, diversity and inclusion (EDI) lens, employer engagement and coordination among service providers. Using the career pathing model, the report outlines types of supports that enhance engagement, learning and career success. It further address evaluation metrics and outcome measures for assessing the effectiveness of wraparound supports.

3

Evaluate programs and best practices: ADaPT and its variants are evaluated as a case study of a digital skills training program made successful through the integration of wraparound supports.

4

Offer recommendations: Based on the findings, the report proposes recommendations at societal, organizational and individual levels to improve the accessibility and inclusivity of digital skills training.

This report aims to contribute to the ongoing efforts to bridge the digital skills gap in Canada and ensure that equity-deserving groups have access to opportunities in the digital economy. The goal is to foster a more inclusive labour market where diverse talent can thrive and contribute to the country's economic growth and innovation.



A Career Pathing Model for Digital Skills Training

Digital skills training is essential for addressing skills gaps in a rapidly evolving workforce. However, training programs are not immediately accessible to workers, especially women, newcomers, refugees and Black youth. Obstacles like systemic barriers and discrimination and bias can inhibit their ability to participate in the digital workforce, including their participation in digital skills training. This section examines the barriers that women, newcomers, refugees and Black youth face in accessing and completing digital skills training, as well as their labour market outcomes.

The career pathing model is a vital framework for evaluating individuals' journeys throughout skills development programs and progression into the labour market (Figure 1). The model emphasizes the importance of supports in six steps of the journey:

- 1 Encouraging user entry,
- 2 Building self-efficacy
- 3 Navigating careers and systems,
- 4 Assisting with economic and social barriers,
- 5 Providing good content and good teaching,
- 6 Sustaining support.

We consider this model corresponding to three phases of skills development programs: program access (Steps 1 & 2), program completion (Steps 3 & 4) and employment outcomes (Steps 5 & 6).

Figure 1
Career pathing model.¹⁶



The career pathing model is useful for identifying a network of societal and individual-level barriers, thus allowing for an inclusive approach to address the diverse needs of members from different communities. Throughout the career pathing journey, equity-deserving groups encounter a multitude of barriers that hinder their ability to access and complete programs as well as their employment outcomes. To address digital skills gaps among equity-deserving populations, it is crucial to acknowledge the specific barriers they face and how these are shaped by their intersectional identities. Systemic obstacles related to race, gender, income and immigration status often overlap, compounding difficulties for equity-deserving groups.^{17, 18} These barriers restrict their full

participation in digital skills development and limit their access to high-demand tech jobs.¹⁹

A step-by-step exploration through the career pathing model also enables an intersectional perspective where individual experiences are considered, producing a more nuanced lens that can inform the development of comprehensive, customized supports.^{20, 21} By doing so, digital skills training programs can foster more inclusive pathways, helping equity-deserving groups gain the skills and opportunities they need to succeed and thrive in a tech-driven workforce. This section outlines how barriers occur for women, newcomers, refugees and Black youth and how they can be addressed at each stage of the career pathing journey.

Program access

Encouraging user entry

The initial decision to enter training programs can be challenging for equity-deserving groups. Factors to consider include pursuing training at the cost of taking time away from work, tight schedules due to child care and other family obligations, and systemic discrimination that discourages user entry.

Women struggle to attend training programs due to time constraints and lack of flexibility needed for participation.²² This is because



*women disproportionately
shoulder the burden
of child care, elder care and
other domestic
duties, often forcing them to
prioritize family
obligations over professional
growth.^{23, 24}*

In addition, women may be hesitant to pursue digital skills training due to discrimination and bias in ICT, which is a field historically dominated by men. Research shows that ICT workers often use gendered stereotypes and gendered speech and actions that can discourage women from seeking careers in technology.^{25, 26} For example, the ICT sector notoriously perpetuates a “bro” culture that

favours white men and is unwelcoming to women, racialized workers and newcomers.²⁷

For newcomers and refugees, the cost of taking time away from work and family often makes participation in skills programs not a viable option. Many newcomers and refugees struggle to integrate into the Canadian labour market due to the devaluation of foreign credentials and discrimination against foreign-sounding last names and accents.²⁸ Those who work often must resort to “survival” jobs that do not match their skills and pay a low wage, making it difficult to afford basic necessities like housing, child care, food and transportation.^{29, 30} Barriers like child care responsibilities are also compounded for newcomers and refugees who must support their families and cannot take time away from work to pursue training opportunities. Newcomers and refugees also have limited child care alternatives as they often cannot rely on immediate friends or family for child care and social support.³¹

For Black youth, entry into skills development programs can be a difficult decision due to pervasive anti-Black racism. Systemic racism leads to higher rates of unemployment, underemployment and wage gaps for Black youth, which limits their ability to invest time and resources in digital skills training.³² In low-income households, Black youth also disproportionately take on caretaker and provider responsibilities when a family member falls ill, sometimes meaning they must take on multiple jobs.³³ These responsibilities impede their ability to participate in skills training programs.

Building self-efficacy

Self-efficacy refers to a person’s confidence



in their ability to succeed and demonstrate resilience in the face of barriers.³⁴ Building self-efficacy is crucial for progressing through training programs, but it is often hampered by mental health challenges. Refugees and newcomers often face the psychological impacts of displacement, while Black youth and women may experience the emotional toll of systemic racism, discrimination or workplace hostility.^{35, 36, 37, 38} The lack of role models and mentors may also make it more difficult for individuals to envision success and pursue certain career opportunities.

There are a number of factors that prevent women from building self-efficacy in the digital workforce. Although research shows that women's participation in ICT is increasing, they are under-represented in leadership positions, and women in ICT lack experienced mentors to serve as role models and inspire motivation.³⁹ This under-representation, along with the gender discrimination and bias that persists in ICT, contributes to feelings of isolation and tokenism, as well as a lack of

confidence.⁴⁰ These experiences discourage or exclude women from fully engaging in digital skills development and accessing opportunities in these fields.^{41, 42}

For newcomers and refugees, barriers to building self-efficacy stem from personal and intergenerational trauma, as well as the struggles of settling into a new country. Challenges like unclear resident status, poor housing, social isolation and poor employment are all stressors that affect the mental health of newcomers and refugees.⁴³ In the context of employment, the devaluation of foreign credentials can also undermine the confidence of skilled newcomers and refugees as they are often forced to take jobs that do not match their skills and qualifications.^{44, 45}

Systemic anti-Black racism and bias are damaging to the mental well-being of Black youth. Anti-Black racism is prevalent in education systems, where educators project stereotypes and have low expectations of their academic performance, leading to low self-esteem and self-confidence in Black students.⁴⁶ As a result, Black students are less likely to engage in the curriculum and more likely to enrol in applied stream courses, limiting their pursuit of post-secondary STEM programs.⁴⁷ Those who find employment may face microaggressions and hostile work environments, discouraging them from seeking further professional development.⁴⁸

Program completion

Navigating careers and systems

Equity-deserving groups face barriers to navigating careers and systems when they do not have a clear vision of their potential career paths. These barriers are characterized by

challenges in labour market access, including under-representation of equity-deserving groups, lack of networks and discrimination and bias.

Women face significant barriers that limit their access to digital skills training, particularly in sectors dominated by men like ICT. Women's representation in Canada's ICT sector has hovered around 30% for over a decade, but when narrowing the focus to technical roles, representation drops further to about 21%.⁴⁹ Gender biases persist, with women often perceived as less competent in technical roles despite holding relevant qualifications. This bias manifests in hiring practices, workplace culture and limited career advancement opportunities. These barriers are even more pronounced for racialized women, women with disabilities and women from low-income backgrounds, with research showing that stereotypes are deeply ingrained in ICT hiring practices.⁵⁰ Furthermore, the motherhood penalty results in lower earning potential, delayed career progression and fewer opportunities for skill-building, particularly in fast-paced industries like tech.

The gender wage gap is another barrier faced by women. With lower earnings than men, many women struggle to afford the necessary technology, training fees or time off work to pursue digital education. This income disparity limits women's ability to access and complete digital skills programs, reinforcing their under-representation in high-demand sectors. Addressing the wage gap and providing accessible, flexible training options ensures women can fully participate in the digital economy.⁵¹

Newcomers and refugees represent a valuable



but underutilized segment of Canada's workforce, facing unique barriers to full participation in the digital economy. One of the main challenges is the recognition of foreign credentials. Many arrive with advanced degrees and substantial professional experience, yet Canadian employers often devalue their qualifications. As of July 2024, the unemployment rate for immigrants who obtained permanent residency within the last five years stood at 12.6%, significantly higher than the 5.6% for Canadian-born individuals.⁵² Over one-half of immigrant professionals in STEM are underemployed, working in positions below their skill level.⁵³ Racialized and women newcomers are especially affected by this issue.^{54, 55} This underutilization pushes skilled immigrants into lower-wage jobs, hampering their financial stability and limiting their ability to pursue further digital skills training.^{56, 57}

Language proficiency, a crucial requirement for most digital jobs, is a significant hurdle. Many newcomers face challenges with general communication and industry-specific jargon, limiting their ability to network or progress

within their fields. Refugees, often dealing with trauma, face psychological barriers that further complicate their ability to pursue training or employment.⁵⁸ As well, language training programs for newcomers often do not match the high language expectations that employers have for newcomer and immigrant employees.⁵⁹ As a result, newcomers who experience language barriers are perceived as less intelligent and are often unable to retain employment.^{60, 61}

Newcomers also face discrimination based on accents or foreign-sounding names, reducing their chances of being hired or receiving fair pay. Employers tend to determine who is “fit” for a position by hiring workers who come from similar backgrounds as them.⁶² Those who find employment may still struggle with underpayment or lack career advancement opportunities. These obstacles and financial insecurity restrict access to digital training programs essential for competing in the digital economy.⁶³



Black youth are disproportionately affected by unemployment. In 2024, the unemployment rate for Black youth reached 24.4%, which was more than double the unemployment rate for non-racialized youth.⁶⁴

Circumstances that lead up to these outcomes usually include barriers in education. Information on training programs and post-secondary options are vital to successful career pathing, but research shows that teachers and school counselors do not provide adequate support for Black and racialized youth in accessing and applying this information.⁶⁵ Instead, teachers and school counselors tend to provide confusing advice or discourage Black students from pursuing post-secondary education.^{66, 67}

Economic and social barriers

Social and economic barriers pose major challenges that affect equity-deserving groups throughout the training process and limit their ability to engage in digital skills training. These barriers inhibit access to resources like technology, Internet access, transportation and child care. Social factors like access to networking and discrimination also present difficulties.

The digital divide presents challenges for equity-deserving groups. While it is well-established that populations living in rural areas lack access to technology, it is important to note that these issues also affect low-income individuals such as women, refugees and Black youth living in urban areas.⁶⁸ These populations often lack the resources to purchase the technology required for digital skills training. Access to the necessary technology, including laptops, software and reliable Internet, is a crucial barrier for many equity-deserving groups. High broadband costs and limited digital literacy, particularly among resettled refugees and those with lower educational backgrounds, hinder their ability to access and benefit from digital skills



training.^{69, 70, 71} Many newcomers, particularly refugees, lack stable Internet access and rely on mobile phones, which limits their ability to engage with digital tools and online resources.⁷² However, accessing digital resources and technology is not a primary concern since many of these individuals are focused on attaining necessities like housing and employment.⁷³

Transport poverty is another struggle for equity-deserving groups with low-income backgrounds and/or live in remote areas. It affects individuals who do not own a motor vehicle and struggle to pay for public transportation to travel to essential places for work and training opportunities.⁷⁴ A major issue with public transportation is that it frequently fails to adequately serve areas with higher concentrations of racialized individuals, leading to challenges in access and mobility.⁷⁵ Women are also at higher risk of transport poverty, as research shows that women are more likely to take public transportation than men.⁷⁶

Additionally, a lack of access to professional networks hampers Black youth's chances of connecting with critical opportunities, such as internships, mentorships or entry-level positions essential for gaining digital skills. Without these connections, navigating the pathways to training programs—often reliant on industry recommendations or insider knowledge—becomes difficult. Coupled with socioeconomic disparities, such as limited access to technology and educational resources, these barriers widen the digital divide, restricting their ability to participate in training and thrive in the digital economy.⁷⁷

Employment outcomes

Providing good content and good teaching

Even when individuals from equity-deserving groups are able to access skills training programs, they encounter challenges in the content and pedagogy. These challenges originate from a lack of EDI considerations in program design and delivery, including target audience, design and pace of the curriculum, teaching style and access to coaching and support.⁷⁸ In turn, program participants struggle to cultivate skills that are aligned with available jobs in the local labour market, including digital literacy skills, literacy and basic skills, language and technical skills and employability and soft skills.⁷⁹

Program content and teaching are key to facilitating inclusive and productive skills development for equity-deserving groups. This is particularly important for individuals such as newcomers and refugees who may be unfamiliar with the “unspoken rules” of learning, as well as the behaviours and habits

needed to succeed.⁸⁰ Digital skills training must especially consider tailoring pedagogy and curriculum for participants with various levels of digital literacy. For example, some newcomers and refugees struggle with digital literacy if they struggle with language proficiency in their new country, are not as experienced with technology or come from older age groups.⁸¹

The design and delivery of training programs also play a major role in the engagement of Black youth. This principle is exemplified in the education system, where a lack of inclusive curriculum and Black educators have adverse effects on education and employment outcomes.⁸² For example, the education curriculum tends to lack inclusive content, often downplaying or dismissing Black history.⁸³ Furthermore, the under-representation of Black teachers and faculty members negatively affects the experiences of Black youth. One study shows that providing Black students with Black instructors can increase their participation in post-secondary education by 13% and decrease the likelihood of dropping out of high school by 29%.⁸⁴ As such, tailored supports like providing Black instructors as mentors and customized curriculum is key to addressing these barriers.⁸⁵ Having strong mentorship relationships also leads to valuable long-term support in the job market.⁸⁶

Sustaining support

Even when equity-deserving groups are able to complete programs or gain access to employment, they struggle to leverage the ongoing support required for success in their field, given that they lack access to the professional networks and social capital needed to advance in their careers. It is



widely understood that building relationships and networks (social capital) can be just as important as developing skills and knowledge (human capital) when it comes to finding a job or moving forward in a career.⁸⁷ While education and skills may form the foundation of a person's capabilities, access to meaningful opportunities often depends on their connections. Personal and professional networks can provide insight, open doors and offer career support that is not always available through formal channels.

For career advancement opportunities, it has long been argued that “weak ties”—that is, more casual and distant relationships outside one's immediate circle—are especially valuable for finding jobs and accessing resources, more so than “strong ties,” or close relationships often characterized by more frequent interactions. Despite the importance of social capital, equity-deserving groups face barriers that limit their access to the kind of networks that facilitate their long-



term success. This is particularly evident for immigrant women, where research shows that immigrant women consistently have a smaller number of “weak ties” relative to their Canadian-born counterparts. While the gap in these connections is most pronounced for newcomers, even established immigrants report having fewer acquaintances compared to those born in Canada. Barriers to forming new relationships not only hinder newcomers’ career advancement but also increase their vulnerability to social and emotional loneliness, with research showing that both recent and long-term immigrants report higher levels of loneliness compared to Canadian-born individuals.⁸⁸ This, in turn, can lower self-efficacy and further undermine confidence, motivation and overall employment prospects.

The issue of limited access to supportive networks is similarly evident in the mentorship experiences of Black youth. Research demonstrates the substantial benefits that mentorship can provide, particularly when mentors share similar backgrounds and can genuinely relate to the specific challenges and experiences faced by Black and racialized mentees.⁸⁹ However, mentorship opportunities for Black youth are significantly constrained

due to the under-representation of Black professionals in key positions. For example,

Black faculty members constitute only 1.9% of university faculty despite Black students accounting for 6% of university enrolments in 2021.⁹⁰ Additionally, the under-representation of Black professionals in STEM further undermines their entry into the field and career progression, as advancement often relies on informal networks and gatekeeping practices. Among racialized groups in Canada, Black employees in technology fields experience the lowest participation rates and earnings.⁹¹

While representation of women in the digital economy has been steadily increasing, from 17.5% in 2015 to about 22.5% in 2022, the slowest growth has been among women aged 45 to 54, who typically occupy mid- and senior-level roles.⁹² The lack of representation in more senior roles is closely tied to limited mentorship opportunities, which are critical for women’s success in the tech sector. Research consistently highlights the benefits of mentorship for women in the digital economy, including leadership development, higher retention rates and job satisfaction, and support in navigating gender biases and discrimination.⁹³ Results from one study suggests that women with mentors are 77% more likely to remain in digital roles after three years compared to those without.⁹⁴ However, the scarcity of mentors and role models creates a significant barrier for women,⁹⁵ further contributing to feelings of isolation and impostor syndrome, while also limiting their opportunities for career advancement given the important role that informal networks play in the field.⁹⁶



Guidelines for Developing Customized Wraparound Supports

To help equity-deserving groups to overcome barriers in career pathing, wraparound supports should adopt an inclusive approach that provides participants with more access and assistance to the allocated resources. The effective design and delivery of wraparound supports require clear guidelines and an understanding of the various personal, financial and logistical needs of different equity-deserving groups. This section explores the concept of wraparound supports, highlights their importance in the context of skills development and outlines key considerations for program design to better meet the needs of women, newcomers, refugees and Black youth. It also provides an overview of different types of wraparound supports, focusing on how they address barriers to program engagement and completion and enhance employment outcomes.

Defining wraparound supports

Wraparound supports, also referred to as supportive services, are holistic, flexible, family- or person-oriented and tailored to

meet a wide range of needs.⁹⁷ Designed to bridge gaps in access to resources, time and flexibility, they provide equitable opportunities for individuals who face barriers to completing training and securing long-term employment.⁹⁸ As such, wraparound supports play an integral role in the context of skills development by enabling equity-deserving groups to fully engage in and benefit from programs and training opportunities. While program providers can develop these supports independently, a collaborative design process involving community stakeholders, employers, and other relevant partners, such as mental health professionals, is far more effective.⁹⁹ This process ensures that wraparound supports are practical, impactful and responsive to the unique needs of participants.

To better understand the purpose of wraparound supports, we refer to previous research conducted by the Diversity Institute, which identifies four job seeker needs: human capital, personal, logistical, and labour market access (Table 1).¹⁰⁰ Wraparound supports must address all four needs to be effective and should consider that these needs vary among demographic groups and individuals.

Table 1

Categories of job seeker needs.

Human Capital	Personal	Logistical	Labour Market Access
<ul style="list-style-type: none"> • Opportunities to develop skills that are aligned with available jobs in the local labour market • Digital literacy skills • Literacy and basic skills • Language and technical language skills • Employability and interpersonal skills 	<ul style="list-style-type: none"> • Overwhelming need for support in mental health matters • Capacity to address intrinsic lack of motivation • Culturally competent approaches and programs for racialized groups (such as Indigenous Peoples and newcomers) 	<ul style="list-style-type: none"> • Transportation challenges in rural, small, suburban and urban areas, specifically travel distance, cost and availability • Needs related to financial instability such as child care, housing and health/dental care 	<ul style="list-style-type: none"> • Demographic or other impediments caused by employer perceptions (such as persons with disabilities, individuals within the criminal justice system, Indigenous Peoples and newcomers)

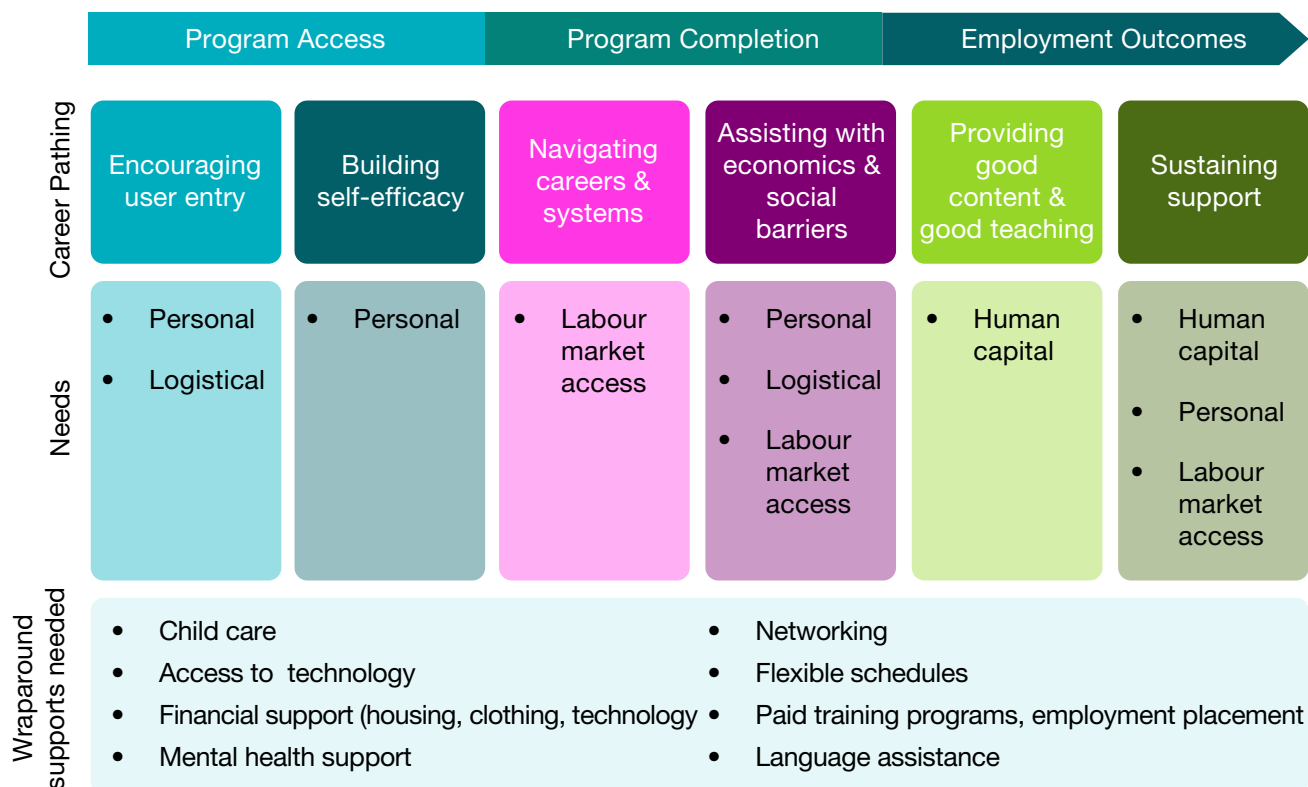
Despite their growing importance, the concept of wraparound supports lacks consistent terminology within the skills development ecosystems. Definitions vary significantly, with some programs narrowly interpreting wraparound supports as financial aid, while others include broader services such as mentorship, coaching and counselling. Moreover, many programs do not explicitly label their services as ‘wraparound,’ leading to confusion and limiting participants’ awareness of available resources. Establishing a shared framework and standardized terminology would enable service providers to better identify the needs their programs address and the gaps they leave unmet, helping to improve program design and delivery.

Types of wraparound supports

There are a wide variety of wraparound supports that address the barriers faced by equity-deserving groups throughout the career pathing journey. As outlined above, wraparound supports should be developed to meet various job seeker needs, including human capital (e.g., digital literacy, language and technical skills), personal (e.g., mental health support, confidence building, culturally informed career counselling), logistical needs (e.g., financial, transportation, child care) and access to labour markets. Figure 2 outlines job seeker needs at each stage of the career pathing journey, along with the wraparound supports that must be implemented to address them.

Figure 2

Career pathing phases, job seeker needs, and wraparound supports across different stages of skills development programs.



As demonstrated by Figure 2, as well as our discussion of barriers in the previous section, the four job seeker needs occur throughout the career pathing journey and must be addressed by holistic, tailored wraparound supports. As such, the types of wraparound supports in this section are categorized according to the job seeker needs they meet, highlighting the significance of each support.

Human capital needs

Language assistance

Language training opportunities are vital supports for newcomers and refugees who seek to pursue skills training and integrate into the labour market. Offering language assistance alongside technical training ensures that participants can comprehend and apply the course material, improving their

employability in the Canadian labour market.

Language support also helps newcomers integrate more effectively into Canadian society, making it easier for them to build careers and contribute to the economy.¹⁰¹

Official information about language assistance must be readily available, accessible and advertised to newcomers, as research shows that they tend to rely on friends, family and social media for information on settlement services.¹⁰²

Networking, mentorship and sponsorship

Providing structured networking opportunities, mentorship programs and sponsorship initiatives helps participants build social capital, expand their professional networks and gain industry visibility. It is essential

throughout the skills development process, especially in encouraging user entry, navigating careers and systems, and sustaining support in the job market. Mentorship offers guidance on navigating workplace challenges, such as racial or gender bias, and provides the professional advocacy needed for people to advance in their careers.¹⁰³



Black youth benefit from having mentors with similar backgrounds and lived experiences because they can be positive role models who offer relatable and supportive guidance.

The implementation of meaningful mentorship is a key part of culturally responsive practices in training programs, which promote better learning and successful outcomes for participants from equity-deserving groups.

Personal needs

Mental health support

Mental health support plays an important role in building self-efficacy. Mental health support helps manage stress, build resilience and focus on digital skills development. For women, balancing caregiving duties and career aspirations can be overwhelming, and mental health services offer much-needed emotional support to help them stay

engaged in training and work. Newcomers and refugees should also have access to mental health supports that are culturally adapted and delivered in their preferred languages.¹⁰⁵ Mental health support can also be offered in the form of trauma-informed career coaching for newcomers and refugees.

Logistical Needs

Direct financial support

Economic barriers present roadblocks at every stage of the skills training process. Access to financial support would not only alleviate these barriers but enable equity-deserving groups to participate in the skills training ecosystem and pursue fulfilling career paths.

Financial support such as grants, subsidies or stipends can allow participants to focus on training and skills development without financial stress. Such support is especially critical for newcomers and refugees, who may struggle financially upon arriving in Canada. By alleviating this burden, direct financial support helps level the playing field for those who might otherwise be excluded.¹⁰⁶ Work-integrated learning programs can also help individuals gain experience and skills while earning income.¹⁰⁷

Child care

Access to affordable child care encourages user entry and assists with economic and social barriers. Offering free or subsidized child care services allows women to participate in training without the added stress of finding or paying for caregiving. This support enables them to focus on their learning and increases their likelihood of success in completing their program and advancing their careers.¹⁰⁸ For example, in Quebec, the subsidization of child care



costs has helped increase the labour market participation of women.¹⁰⁹

Transportation

Reliable transportation is essential for many equity-deserving groups to access digital skills training and employment opportunities. Women, newcomers, refugees and Black youth from low-income or equity-deserving communities often face logistical challenges in attending training or interviews, especially if they lack access to reliable public transit or live in areas with limited transport options. Providing transportation support, such as subsidized transit passes or travel stipends, ensures that participants can consistently attend training and placements, overcoming geographical barriers that might otherwise exclude them.¹¹⁰

Access to technology

Providing access to technology is a key wraparound support that addresses challenges in the digital divide. It also helps relieve financial barriers to accessing technology, especially for low-income populations. Universities demonstrated this support during the COVID-19 pandemic by

subsidizing Internet access for their students and providing laptop and mobile device access.¹¹¹ By providing free or low-cost laptops, software and Internet access, training programs ensure that participants can fully engage with online learning platforms and build the technical skills needed to thrive in the digital economy.^{112, 113}

Flexible schedules

Flexible learning schedules are vital for participants juggling multiple responsibilities, such as work or caregiving. Women, particularly those with caregiving duties, need the flexibility to attend classes and training sessions at times that suit their busy schedules. Newcomers and refugees, who may be working to support their families, also benefit from asynchronous courses or evening classes that allow them to participate in training without sacrificing income. Offering flexible scheduling ensures that participants can complete their training without being overburdened by competing priorities.¹¹⁴

Labour market access

Career counselling

Career counselling is essential for equity-deserving groups to navigate the complexities of the job market. It is a valuable resource for helping individuals develop career-planning skills, which lead to positive long-term outcomes like career-planning self-efficacy.¹¹⁵ Moreover, career counselling can help women, refugees, newcomers and Black youth navigate careers and systems and sustain support in the labour market.

Career counselling helps women address gender biases in equity-deserving fields like tech, supports newcomers in understanding the Canadian labour market and how to have

their credentials recognized, and guides Black youth facing systemic racism and a lack of professional networks.¹¹⁶ For refugees and newcomers, trauma-informed career coaching is particularly beneficial as it acknowledges the psychological impact of displacement and trauma on their career development. Providing emotional and practical support in a safe, empathetic environment helps individuals overcome personal barriers, build resilience and gain confidence, enabling them to pursue their career goals more effectively.¹¹⁷

Employment placement



Employment placement programs are critical for bridging the gap between digital skills training and job opportunities for women, newcomers and Black youth.

These programs offer structured pathways to employment, where participants can demonstrate their skills and gain practical work experience in a supportive environment. For women, these placements help to counteract gender bias by offering tangible proof of their competencies in male-dominated industries. For newcomers and Black youth, these placements provide the chance to overcome hiring biases that might arise due to their background or a lack of professional networks. Paid placements are particularly beneficial, as they make the programs accessible to individuals who cannot afford unpaid work and demonstrate

to employers the value of the participant's contributions.¹¹⁸

Key considerations for equity, diversity and inclusion in wraparound supports

Education and training are critical drivers of social mobility and access to employment opportunities. However, for equity-deserving groups in particular, these must be paired with holistic supports that address a wide range of needs. Research highlights that while such groups rely heavily on training programs, they often encounter significant personal, logistical and financial barriers that hinder their ability to access, complete and apply the skills acquired.^{119, 120} This is especially true in digital skills training programs, which are increasingly essential in today's technology-driven economy.

To be effective, wraparound supports must be thoughtfully designed and implemented, with careful consideration of the specific needs of equity-deserving participants. These supports should bridge gaps in access, reduce barriers to program completion, and promote meaningful outcomes, such as sustainable employment and long-term career progression. Grounding the design process in the following considerations enables programs to deliver a comprehensive and impactful support system.

Assessing Diverse Needs: Designing tailored and effective supports requires a thorough and accurate assessment of program participants' challenges. Without understanding the diverse barriers faced by different groups, programs risk excluding those they aim to support. In addition to identifying these challenges,

adopting a strengths-based approach that emphasizes participants' abilities and potential can foster greater motivation and engagement throughout their training journey.

Addressing Underserved Populations:

Program design must address the unique challenges faced by participants in different geographic and demographic contexts. For instance, newcomers and refugees often require culturally sensitive career counselling that integrates trauma-informed support, mental health resources and employer connections to help them navigate the systemic barriers effectively.¹²¹ Tailoring programs to meet these specific needs ensures underserved populations receive equitable access to opportunities.

Embedding Equity, Diversity and Inclusion

(EDI): EDI-informed wraparound supports enhance accessibility, flexibility and cultural relevance, ensuring programs are better positioned to foster meaningful outcomes. However, programs lack accessible, up-to-date resources, creating challenges for individuals with limited digital literacy, English proficiency or Internet access. Additionally, services often fail to integrate culturally sensitive and trauma-informed approaches, leaving systemic barriers like racism, intergenerational trauma and discrimination unaddressed. Research highlights the importance of peer learning, mentorship and community-building, particularly for newcomers and racialized groups, as essential elements of effective EDI-informed supports.¹²²

Employer Engagement and Inclusive

Workplaces: Employer engagement is a critical factor in the success of wraparound supports and can be leveraged to provide

work placements, internships and work-integrated learning opportunities. Partnering with employers who demonstrate a commitment to EDI ensures that participants transition into workplaces where they feel supported, valued and equipped for career advancement. Inclusive employers reinforce the impact of these partnerships by fostering an environment that addresses the needs of equity-deserving groups. For example, as a result of the COVID-19 pandemic, many companies in ICT have adopted flexible work-from-home policies, which are beneficial for working mothers.¹²³ Such partnerships not only enhance the effectiveness of wraparound supports but also promote meaningful and equitable workforce integration.

Coordination Among Service Providers

and Other Stakeholders: The effectiveness of wraparound supports depends on collaboration between service providers, community organizations and employers. A lack of coordination can result in duplication of efforts, fragmented service delivery and missed opportunities to pool resources. Improved collaboration fosters the sharing of information, alignment of program goals and better use of funding. By creating an integrated support system, stakeholders can maximize impact and provide participants with a seamless and accessible pathway to available resources.

Incorporating evaluation and outcome metrics

To ensure the effectiveness of wraparound supports in digital skills programs, it is essential to incorporate robust evaluation metrics and outcome measures. These metrics provide accountability and offer

insights into what aspects of support are most impactful for equity-deserving groups.

Key outcome metrics for wraparound supports include the following:

- Participant retention and completion rates indicate that wraparound supports effectively address barriers, allowing participants to engage fully with training. It is important to track the percentage of participants who complete digital skills training programs compared to those who start.
- Employment and placement rates post-training directly indicate the program's success in translating skills training into meaningful employment outcomes. It is important to measure the percentage of participants who secure relevant employment or internships within six months of program completion.
- Participant satisfaction and well-being reflect the alignment of services with participants' needs, ensuring that supports are perceived as valuable and relevant. Regular surveys can assess participant satisfaction with various wraparound supports, such as child care, transportation, mental health services and career coaching.^{124, 125, 126}
- Skill proficiency gains indicate the effectiveness of the training curriculum, and wraparound supports in equipping participants with essential digital and professional skills. Assessments conducted before and after training programs enable the measurement of increases in core digital skills and professional competencies.¹²⁷
- Program accessibility and inclusivity

metrics ensure that programs are accessible to all equity-deserving groups and that the support provided addresses unique needs equitably. Monitoring demographic data ensures diverse representation in training programs, including gender, race and immigration status, and tracks enrolment and completion disparities among groups.¹²⁸

- Long-term career progression and retention help determine the program's long-term impact on participants' professional development and financial stability. It is important to track participants' career progress, including promotions, salary increases and retention within digital fields after training.¹²⁹

To implement these metrics effectively, training programs should institute the following:

- Data collection systems: Develop standardized data collection procedures and partner with educational institutions, non-profits and employers to gather consistent metrics.
- Regular reporting and transparency: Create quarterly or biannual reports to assess progress on key metrics, identifying areas for improvement.
- Continuous improvement: Use evaluation data to adapt and refine wraparound supports based on participant feedback.

To better understand the effectiveness and impact of wraparound supports, the next sections use the Advanced Digital and Professional Training (ADaPT) program to examine how wraparound supports in a digital skills training program can contribute to successful training outcomes for equity-deserving groups.



Case Study: ADaPT and its Variants

This section examines the Advanced Digital and Professional Training (ADaPT) program as a case study to assess the effectiveness and impact of wraparound supports in skills training programs. ADaPT, developed by the Diversity Institute at Toronto Metropolitan University, addresses Canada's growing digital skills gap, particularly for equity-deserving groups like women, Black youth, newcomers and racialized individuals. Since its inception in 2014, ADaPT has served as an employment-focused work-integrated learning (WIL) initiative, creating pathways into digital and professional careers for those from various academic backgrounds. The program offers intensive digital skills training and professional development, augmented by wraparound supports such as career coaching, mentorship and job placements.

The success and evolution of the ADaPT program have led to the development of several specialized variants tailored to the unique needs of its diverse participants. Recognizing that a “one-size-fits-all” approach does not work for everyone, these ADaPT streams provide targeted support to help participants overcome specific barriers and succeed in the workforce.

- ✓ **ADaPT for Newcomers:** A trauma-informed, culturally sensitive program designed to help newcomers and refugees bridge the skills gap and integrate into the Canadian labour market.
- ✓ **ADaPT for Career Changers:** A stream focused on upskilling individuals transitioning to new careers, emphasizing in-demand digital and professional skills employers seek.
- ✓ **ADaPT4Success:** A WIL program that blends skills training with real-time job experience, allowing participants to apply their newly acquired skills directly in the workplace.
- ✓ **ADaPT for Black Youth:** Supported by the Ontario Black Youth Action Plan, this stream is designed to support Black youth aged 15–29, focusing on developing the skills necessary for social and economic success.

ADaPT is uniquely designed to bridge the skills gap by addressing the needs of both learners and employers through a comprehensive, demand-driven approach.

For learners, ADaPT offers a comprehensive, flexible and demand-driven training experience designed to bridge the skills gap and prepare participants for success in the digital economy. The program caters to learners from various backgrounds, focusing on equity-deserving groups. ADaPT provides high-demand digital and professional skills training for these participants, addressing barriers such as limited work experience and a lack of professional networks.

Since its inception, ADaPT has continually refined its supports to address the evolving needs of equity-deserving learners, ensuring participants receive targeted assistance to successfully access and complete the program and enhance their employment outcomes. Figure 3 provides an overview of the type of supports provided across the ADaPT streams, organized by the dimensions of the career pathing model.

Figure 3

Wraparound supports provided by ADaPT and its variants.

Program Access		Program Completion		Employment Outcomes	
Encouraging user entry	Encouraging user entry	Navigating careers and systems	Assisting with economic and social barriers	Providing good content and good teaching	Sustaining support
Free transportation passes	Mentorship program with similar ethnic/ racial/ cultural backgrounds as learners	Work placements in fully paid positions	Ecosystem mapping of community resources to support newcomer resettlement	Instructors with similar ethnic/ racial/ cultural backgrounds as learners	Wage subsidies for meaningful employment
Complimentary lunches	Access to MentorCity, online mentoring platform	Employer information sessions	Access to InStage's mock interview and English practice tools	Consultations with employer partners for curriculum design and targeted skill development	Centralized hub for job postings and networking events
Access to loaner computers and Internet connectivity	1:1 coaching	Interview preparation, including employer-led mock interviews	Internal referrals to Scadding Court Community Centre for settlement services		Gamified networking checklist to support peer connection and skill application
	Peer-to-peer mentoring	1:1 and group coaching with a career counsellor or coordinator			EDI training for employers to improve workplace inclusivity and diversity in hiring
	Partnered with Women's Habitat for gender-based violence (GBV) support	Resume-building and review			
	Centralized hub for mental health and culturally informed trauma resources	Referrals to employers			

ADaPT and its variants have had a significant impact on learners and employers alike. Since 2020, more than 1,500 participants have completed the ADaPT program, surpassing its original target of 975 participant completions by 60.21%. The program completion rate stands at 80.26%, with a satisfaction rate of 88.89%. Moreover, 93% of participants since 2020 have self-identified as coming from diverse backgrounds, including women, Black youth and newcomers.¹³⁰

Women, who comprise 56.5% of ADaPT participants, have significantly improved across various skill areas through participation in ADaPT. Notably, women's perceptions of their proficiency in business finance increased by 2.93%, and their digital skills improved by 2%. Additionally, women's communication and career planning scores remained consistently higher than men's, indicating strong progress throughout the program.¹³¹

Newcomers and refugees represent 29.7% of ADaPT participants. ADaPT offers a tailored stream specifically designed for newcomers, which includes trauma-informed and culturally sensitive training. For example, when serving Afghan refugees, the program conducted ecosystem mapping to identify and verify community organizations and resources that could help participants' resettlement and worked with Afghan advisors and social workers to help newcomers navigate the complexities of integrating into a new labour market. When working with newcomers more broadly, ADaPT offers access to InStage, a mock interview simulation tool that allows participants to practise their English, alongside employer-led mock interviews to support their labour market integration. Newcomers have demonstrated notable improvement in several

key skill areas. The program's placement rate for newcomers is 83%, showcasing its effectiveness in integrating these individuals into the Canadian workforce. Newcomers benefit from wraparound supports, such as career counselling, resume building and mentorship, which help address their challenges, such as the lack of Canadian work experience and professional networks.¹³²

Often under-represented in the Canadian labour market, Black youth have also seen significant gains through ADaPT. Representing 15.6% of ADaPT participants, Black youth experienced a notable increase in digital skills facilitated by access to critical resources such as loaner computers and Internet connectivity. This is particularly important in an economy where digital literacy is increasingly crucial. ADaPT has also improved their career planning skills. The program's placement rate for Black youth is impressive, with 178 out of 227 participants securing job placements in 2024.¹³³

The program's curriculum covers technical and soft skills through live (synchronous) and self-paced (asynchronous) learning formats, allowing learners to engage with the material at their own pace. Key digital skills taught include HTML, CSS, quantitative methods using Excel, UX design and cybersecurity awareness, essential for roles in the ICT sector and beyond. In addition to technical expertise, learners also gain valuable professional skills, such as business writing, presentation skills and project management, ensuring they are well-rounded and ready for Canada's rapidly evolving labour market. Across all groups, ADaPT participants reported increased proficiency in essential skills (e.g., literacy, numeracy), thinking skills (e.g., decision

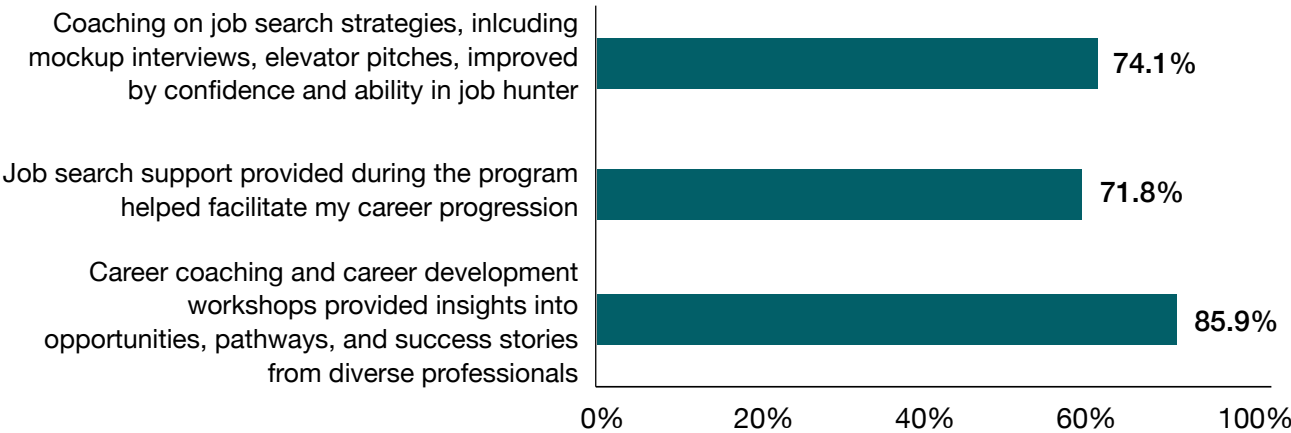
making, problem-solving) and interpersonal skills (e.g., communication, teamwork). The most significant increases were in technical skills (27%) and job search skills (16%). The program’s emphasis on competency frameworks, combined with pre- and post-testing, ensures that participants acquire new skills and gain confidence in their abilities. For example, women and racialized participants reported improved perceptions of their skill proficiencies by the end of the program.¹³⁴

ADaPT also offers essential wraparound supports to help participants confidently transition into the workforce, such as career development support from regional employers and career counsellors or coordinators, interview preparation and resume-building, mentorship, and access to a centralized hub for participants to be informed about new job openings and networking events. To support their transition into meaningful employment, ADaPT also works with employers to provide wage subsidies. This holistic approach ensures learners have the support they need to overcome challenges and succeed in their

careers. Moreover, the program’s curriculum evolves continuously, with new courses being added regularly based on labour market trends and employer feedback. Recent additions include AI fundamentals, green skills and inclusive customer service, ensuring participants remain competitive in the ever-changing job market.

Post-program survey results from ADaPT for Black Youth participants and ADaPT for Newcomers participants found that the wraparound supports provided by the programs were well received. Figure 4 shows the proportion of participants who indicated they “agreed” or “strongly agreed” when they were asked about their satisfaction with the programs’ career coaching services. The majority of participants agreed or strongly agreed that the ADaPT variants’ career coaching services improved their confidence and job-hunting abilities (74.1%), helped facilitate their career progression (71.8%) and provided insights into opportunities, pathways and success stories from diverse professionals (85.9%).

Figure 4
Post-program survey results for ADaPT for Black Youth and ADaPT for Newcomers.





On the employer side, ADaPT works closely with industry partners across sectors like technology, finance, government and non-profits, including institutions such as Dalhousie University, the University of Manitoba and companies like RBC and Walmart. These partners provide crucial input on curriculum development, ensuring that the training matches the specific skills employers seek in the job market. By emphasizing EDI, ADaPT helps employers diversify their workforce by tapping into broader and more diverse talent pools, including participants from equity-deserving groups. The program

also encourages employers to rethink traditional hiring practices by shifting the focus from formal academic credentials to competency-based assessments that prioritize practical skills. This approach broadens access to talent that may have been overlooked in conventional hiring processes.

Since 2020, over 1,000 employers have engaged with the program, benefiting from a steady pipeline of job-ready graduates. Furthermore, ADaPT has ensured job placements for 1,305 participants, which surpassed the original target of 1,239 placements by 5%. Employers have seen tangible benefits from hiring this diverse pool, with over 85% reporting improved business outcomes such as increased employee retention and greater workforce diversity.¹³⁶

Employers, particularly SMEs, report high satisfaction with ADaPT graduates, noted for their strong work ethic, adaptability and ability to apply digital skills in real-world contexts. The program's tailored training ensures that graduates possess the technical and professional skills needed to succeed in data management, project coordination or communication. Many employers have noted that ADaPT graduates exceeded expectations, contributing positively to team dynamics and business growth.¹³⁷



Recommendations

Enhancing wraparound supports in digital skills training programs is essential to ensuring that equity-deserving groups can fully engage with and benefit from these initiatives. These supports address participants' barriers, including financial constraints, mental health challenges and logistical issues, by providing holistic services tailored to individual needs. To maximize the effectiveness of these programs, changes must be implemented at the societal, organizational and individual levels.

Policy level

At the societal level, stakeholders in Canada's digital skills ecosystem include government agencies that fund and regulate national digital skills initiatives, provincial governments that tailor programs to local needs and public employment services that support career transitions through digital skills training.

- **Define and standardize wraparound supports:** Establish clear definitions of eligible wraparound supports, allowing for flexibility to meet individual needs. This standardization across federal and provincial levels will ensure that all program participants, regardless of region,

receive consistent support that caters to diverse needs.

- **Aggregated database of programs and supports:** Develop a national, searchable database of skills development programs and wraparound supports, organized by region, target audience and service type. This would enhance access to resources, allowing individuals and service providers to easily find relevant programs. User-friendly interfaces should be created to serve different users (e.g., trainers, advisors, job seekers) to navigate the system effectively.
- **Government support for wraparound programs:** Federal and provincial governments must expand funding for wraparound supports, such as child care, transportation and direct financial assistance. This should be through multi-year funding commitments that enable organizations to develop long-term support structures, providing consistent resources for participants as they progress through training and into employment.
- **Flexible funding and resource allocation:** Implement a funding strategy that allows



service providers the flexibility to allocate resources based on participant needs. Funding structures should enable tailored assistance by differentiating between core skills training and supplementary supports, ensuring that various programs can access appropriate resources without rigid funding restrictions.

- **Public-private partnerships:** Governments should encourage partnerships between employers, educational institutions and community organizations to develop integrated wraparound supports. Initiatives like ADaPT have demonstrated the success of such partnerships.
- **Coordination across government and donor levels:** Facilitate collaboration between federal, provincial and municipal governments and the donor community to streamline program access and improve awareness of services available across Canada. An integrated career guidance system accessible online would support individuals early in their careers and provide continuous resources.

Organizational level

At the organizational level, key stakeholders in the digital skills training ecosystem include educational institutions, private companies, SMEs, non-profit organizations and industry associations. These stakeholders collaborate to design, fund and implement digital skills programs, ensuring they are accessible to equity-deserving groups. They also provide training, mentorship, job placements and wraparound support like career counselling and financial assistance to help participants succeed in the digital economy.

- **Tailored wraparound supports:** Organizations providing skills training should clearly define eligible wraparound supports and use flexible funding to meet the diverse needs of participants. They should differentiate between core training components and supplementary supports to better align resources with individual requirements.
- **Sustainable financing and collaboration:** Organizations providing skills training should adopt a financing model that integrates multiple funding sources and partnerships with employers to ensure the continuity of wraparound supports. Funding should be allocated specifically for comprehensive wraparound supports, which might include financial assistance, child care, transportation and mentorship.
- **Inclusive program design:** Ensure that digital training programs, tools, platforms and resources are designed with accessibility and inclusivity, addressing the diverse needs of learners through wraparound supports. Engaging in co-

design with stakeholders and adopting inclusive, trauma-informed processes helps to tailor programs to the unique needs of equity-deserving groups. Extending these supports beyond the training period, ideally for at least six months, ensures sustained confidence and well-being among participants. Recognizing the intersectional needs of participants is critical for addressing barriers to employment and advancement effectively.

- **Enhanced navigation and cross-program collaboration:** Organizations providing skills training should develop user-friendly interfaces to facilitate navigation across various programs and supports, allowing trainers, advisors and job seekers to connect seamlessly. This will promote cross-referrals and collaboration among organizations to improve access and efficiency in service delivery.
- **Employer engagement:** Employers should partner with digital skills training programs to provide real-world job placements, internships and work-integrated learning opportunities for equity-deserving learners.
- **Clearly defined goals and evaluation frameworks:** Organizations delivering digital skills training programs should set clear goals and measure their progress by assessing participants' experiences with the program. Program evaluations should not only focus on immediate outcomes like job placements and program length, but also long-term impacts on individuals and their social or community needs. These



insights can be collected by various means like surveys/questionnaires or interviews, and they should guide improvements to program interventions and outcomes.

Individual level

Individual stakeholders in a digital skills ecosystem include learners and trainees, educators and trainers, career counsellors, and mentors. Together, these stakeholders create a supportive, learner-centred environment that fosters digital literacy and equitable access to career advancement.

Educators and trainers

- **Customize curriculum and provide support:** Design culturally responsive, accessible content, and create an inclusive environment by incorporating trauma-informed practices and offering flexible learning formats.
- **Pursue EDI training:** Undergo EDI training to deepen understanding of the needs and barriers equity-deserving groups experience to be better equipped to foster accessibility and inclusivity within the learning environment.

Career counsellors

- **Offer personalized and culturally competent guidance:** Use EDI and trauma-informed training to provide individualized advice that respects each learner's background and unique challenges, helping them build clear pathways to their goals.
- **Promote access to resources and networks:** Connect learners to targeted resources and industry contacts to support their professional growth, especially in sectors where equity-deserving groups are under-represented.

Mentors

- **Engage in EDI and cultural competency training:** Seek EDI and cultural sensitivity training to provide effective, empathetic mentorship that acknowledges the distinct experiences of equity-deserving learners.

- **Share industry knowledge and build connections:** Offer insights into industry trends, company cultures and career paths, and connect learners to networks that enhance their job prospects and professional growth.

Learners and trainees

- **Engage actively in training:** Take initiative in learning by utilizing available resources, seeking feedback and connecting with mentors to enhance growth.
- **Provide constructive feedback:** Share insights on lived experience, program effectiveness and areas for improvement with educators and program administrators to help refine and adapt training to better meet learner needs.
- **Set career goals and build networks:** Define clear career goals and participate in networking to connect with professionals and peers for guidance and opportunities.



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