Opening the Door to Trades: Pathways to Inclusive Apprenticeship Opportunities

Final Report

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SHAWN DE RAAF | NAOMI FRASER | LILY KAUFMANN | LINDSAY THACKERAY

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For more information on SRDC, contact

Social Research and Demonstration Corporation
55 Murray Street, Suite 400
Ottawa, Ontario K1N 5M3
613-237-4311 | 1-866-896-7732
info@srdc.org | www.srdc.org

Vancouver Office
890 West Pender Street, Suite 440
Vancouver, British Columbia V6C 1J9
604-601-4070

Remote offices:
Alberta, British Columbia, Manitoba,
Ontario, Quebec, and Saskatchewan
1-866-896-7732

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Funded by the Canadian Association for Supported Employment (CASE) Innovation Lab, supported by the Government of Canada's Sectoral Initiatives Program (SIP).

INTRODUCTION

Across Canada there is a critical need for skilled trades workers, including in British Columbia where 85,000 new skilled trades job openings are expected in the next ten years, significantly outpacing the number of journeypersons. Fostering inclusive economic growth by supporting people and families and expanding opportunities for education and training is a key priority of the Government of British Columbia (Government of BC, 2022). There is a growing recognition in the skilled trades that inclusive pathways to apprenticeship for equity-deserving groups traditionally under-represented in these roles will be essential to address this critical labour shortage in the coming years.

The *Opening the Door to Trades: Pathways to Inclusive Apprenticeship Opportunities* project established an innovative partnership with the Social Research and Demonstration Corporation (SRDC), Community Living BC (CLBC), SkilledTradesBC, service providers, and others to research, develop, and design inclusive apprenticeship opportunities for people living with disabilities. The project aimed to understand the interests of people living with disabilities to discover, learn, and work in the skilled trades, and to explore current supports, promising practices, opportunities, and gaps across British Columbia. The project also aimed to bring partners together to uncover opportunities and design solutions for addressing barriers in the skilled trades. A key goal of the project was to map out potential partnerships, supports, and identify the enabling conditions that would create pathways to inclusive apprenticeship opportunities in the future.

The project explored the opportunities for inclusive apprenticeships for people living with disabilities broadly, as well as people engaging with community living services in British Columbia specifically. CLBC is a Crown corporation in British Columbia that supports adults with a developmental disability, and adults diagnosed with fetal alcohol spectrum disorder or autism spectrum disorder, and who have significant limitations in adaptive functioning (CLBC, 2023). This report includes consideration of the experiences of people living with intellectual and developmental disabilities (IDDs). According to the Centers for Disease Control and Prevention, intellectual disability is present when an individual is limited in their ability to learn at an "expected level and function in daily life." By contrast, developmental disability has a broader meaning that describes the presence of an intellectual disability, physical disability, or both (Centers for Disease Control and Prevention [CDCP], 2022).

PROJECT BACKGROUND

An estimated eight million Canadians aged fifteen and older identify as a person with one or more disabilities. The most recent Canadian Survey on Disability found that 62 per cent of working-age adults (25 to 64 years of age) with disabilities were employed, compared to 78 per cent of working-age adults without disabilities (Statistics Canada, 2023a).

In addition to the employment gap, there is a disability wage gap in Canada. Among employees aged 16 years and older, Canadians living with disabilities are reported to earn 21 per cent less than those without disabilities (Statistics Canada, 2019). The wage gap was most apparent for individuals living with a cognitive disability, who earned an average of 53 per cent of the mean income for individuals without a disability (Statistics Canada, 2019). In British Columbia, 22 per cent of working age adults eligible for disability assistance reported income in 2022-2023, and 61 per cent of adults supported by CLBC services reported being employed for one year or more (CLBC, 2023).

With respect to the skilled trades, people with disabilities are under-represented in apprenticeship programs in Canada. In 2015, the National Apprenticeship Survey found that only 3 per cent of respondents reported a disability that was present since they registered for their apprenticeship program (Statistics Canada, 2015). In the survey, a higher proportion of those that discontinued their apprenticeship program had a disability at the time they started their apprenticeship or reported a disability at the time the survey was conducted, compared to those surveyed who completed their apprenticeship (Statistics Canada, 2015).

One way to enhance employment and income for individuals with disabilities may be through inclusive apprenticeship opportunities in the skilled trades. The project partners recognized the need for more engagement with the supported employment sector and with people with lived experience to understand the level of interest and preparedness of people with disabilities to pursue careers in the trades. They also recognized the need for engagement with the province's apprenticeship system — including employers and training providers — to identify promising practices and approaches, including trades exploration, essential skills training, and apprenticeship and technical training in new and inclusive ways.

With funding received from the Canadian Association for Supported Employment's Innovation Lab, supported by the Government of Canada's Sectoral Initiatives Program (SIP), the research was designed to explore existing practices and new possibilities for supported employment services in the skilled trades in the BC context that could be applied to other provinces and territories. Partners saw the potential to address employers' workforce needs through new approaches and partnerships with the supported employment sector to enable job seekers with disabilities to explore, train, and gain work experience in the skilled trades in the province.

Research objectives

A key goal of the project was to lay the foundation for future work to engage with employers, training providers, and service providers and to identify opportunities for longer-term collaboration on inclusive apprenticeships, ultimately resulting in a pilot project to test in a separate project after this research. The project activities were designed to achieve those overall goals, as well as the following research objectives:

- Understand the current interest, level of preparedness, and awareness of people with disabilities to pursue a career in the skilled trades;
- Explore the current state of the supported employment sector to facilitate training and employment opportunities in the skilled trades, including promising practices, needs, opportunities, and gaps;
- Learn what kinds of design elements (including policies, practices, tools, and required technologies) are accessible and effective for people with disabilities that could be applied to an inclusive apprenticeship pathway;
- Understand employers' and training providers' capacity to support inclusive apprenticeship pathways and identify opportunities to further build that capacity through partnerships with the supported employment sector; and
- Lay the foundation for future work to test inclusive apprenticeship pathways in a pilot project by engaging with employers, training providers, and supported employment providers to identify opportunities for long-term collaboration and testing.

Project Advisory Committee

An advisory committee was established with twelve representatives, including the members of CLBC, SkilledTradesBC, service providers, and government representatives, that included the original group of individuals who identified the need for this research (see Table 1). Throughout the project, the committee provided guidance on the overall direction of the project, advising on the research plan and monitoring progress, and providing support for project activities, including recruitment of interviewees and focus group participants.

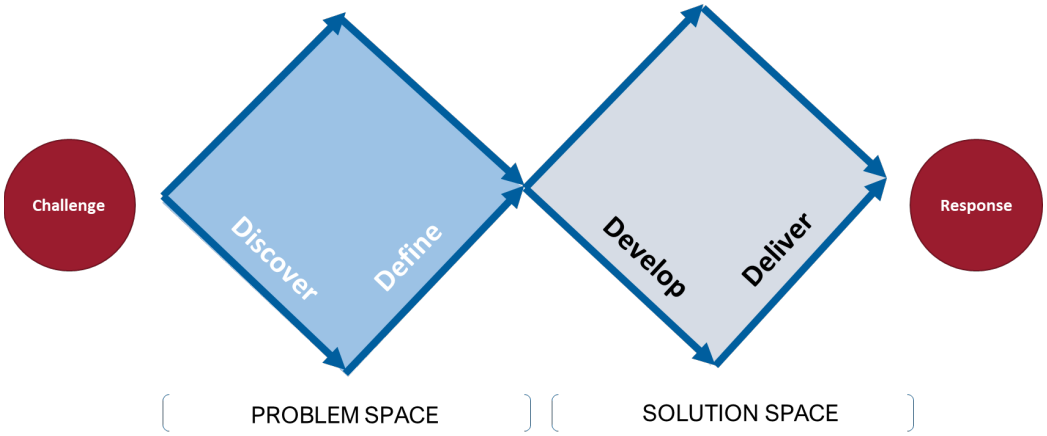
Table 1 Project Advisory Committee

Advisory Committee Member	Title	Organization
Annette Borrows	Manager, Employment and Community Development Services	Community Living British Columbia
Lori Skinner	Research and Innovation Lead, Service Delivery Projects & Process Improvement	Community Living British Columbia
Jerry Stanger	Director, Strategic Operations	Community Living British Columbia
Seema Tripathi	Director of Employment & Innovative Services	UNITI
Arden Duncan Bonokoski	Executive Director	STEPS Forward BC Initiative for Inclusive Post Secondary Education
Dan Collins	Chief Executive Officer	Inclusion Langley Society
Gillian Rhodes	Chief Operating Officer	SkilledTradesBC
Tara Fong	Director, Trades Inclusion & Access	SkilledTradesBC
Juliana de Souza	Manager, Equity Programs	SkilledTradesBC
Laura Jean Paddock	Director, Operational Policy and Inclusive Employment	Ministry of Social Development and Poverty Reduction, Government of British Columbia
Jay Marchant	Director, Integrated Services and Program Improvements Employment and Labour Market Services Division	Ministry of Social Development and Poverty Reduction, Government of British Columbia
Cordelia Willams	Director, Targeted Workforce Skills Training	Ministry of Post-Secondary Education and Future Skills, Government of British Columbia
Cameron Ferrie	Director, Employer Training	Ministry of Post-Secondary Education and Future Skills, Government of British Columbia

RESEARCH ACTIVITIES

Research activities in this project were organized according to a design process model adapted from the "Double Diamond" framework for innovation (Design Council, n.d.), outlined in Figure 1. Since this project sought to lay the foundation to test potential solutions in a pilot project, the "Double Diamond" was an ideal problem-solving framework to allow the project team to refine and improve ideas based on research insights, moving from an exploration phase of the research to iterate towards solutions by validating and refining ideas throughout the project.

Figure 1 Double Diamond (Design Process Model)



Discover: Gain a deep understanding of the barriers to inclusive apprenticeships, promising practices, and service delivery needs.

In this phase, research activities included a review of the research literature and environmental scan of promising practices, models, and other considerations to identify the key elements of inclusive apprenticeship pathways for the skilled trades in British Columbia. This research phase also included engagement activities with other interested and affected parties, including consultation meetings with employers, apprenticeship services and supports, and provincial government representatives. The research team also held engagement sessions with supported employment service providers as well as job seekers with disabilities to introduce these individuals to the research and recruit interest for them to participate in subsequent phases of the research.

Define: Validate initial research findings and define the specific challenges and opportunities for consideration of inclusive apprenticeship pathways and approaches.

This research phase included additional interviews and focus groups to validate and further refine key priorities. In total, three focus groups were held with fifteen job seekers with disabilities, and interviews were conducted with seven post-secondary training institutions and ten service providers. Some individuals who wished to explore ideas of interest did not want to engage in a formal research interview. Instead, these conversations were used as consultation meetings, which either helped to establish initial context for a follow-up interview or were used broadly to validate initial findings. In total, three interviews or consultation meetings were conducted with employers, four with government representatives, four with apprenticeship services and supports, and three with high schools that provide career exploration programs for students with disabilities.

Recruitment posed significant challenges throughout the project. Despite initial plans to leverage project partners' networks, engagement was more limited than anticipated, and connections to both apprenticeship services and employers within the skilled trades were difficult to establish. For skilled trades employers and apprenticeship services willing to engage in the research, most preferred to do so on a consultative basis only, providing background information and off-the-record perspectives, rather than participating in a research interview.

Additionally, there was difficulty in identifying and engaging with job seekers who had an interest in the skilled trades, which further hindered recruitment efforts. The research benefitted from partnerships with service providers to connect with job seekers for the focus groups. However, some service providers were unable to locate interested participants after several attempts, while other service providers approached declined to assist, citing an ethical conflict to not engage the people they supported in research activities.

To address these recruitment challenges, the research team designed and deployed two additional surveys to support the research. The first survey aimed to better understand the status of job seekers engaged with employment services who may be exploring, training, or pursuing employment in the skilled trades. A key aim of the survey was to help establish an understanding of the scale and scope of potential job seekers with disabilities interested or actively pursuing training in the skilled trades in the province. The survey was distributed via advisory committee members and other partners to service provider networks resulting in 29 responses from service providers. A second survey targeted potential employers to gauge and recruit their interest in the research. Again, the research team relied on advisory committee members and partners to distribute the survey to potential employers — especially ones who may have had existing relationships with supported employment services. However, only

three employers responded. Given this low response, employer survey results are not included in this report to maintain respondents' confidentiality.

Develop: Explore and generate solutions through inclusive design workshops to facilitate continued partnerships and collaboration.

The research team facilitated four workshops that aimed to address design challenges based on the research findings. Design challenges are questions or problems requiring a creative approach. The design workshops conducted in this phase focused on generating practical, yet innovative, ideas that meet the needs of the target beneficiaries — including people with disabilities, their families, employment support workers, skilled trades employers, and training organizations. Each workshop included four to six participants, organized around one central design challenge. Participants included advisory committee members, as well as individuals who were recruited to represent the perspectives of various training providers, employers, and other service providers in the province. While the research aimed to actively involve job seekers with disabilities, several challenges impacted their participation in the design workshops. Many job seekers preferred to participate in focus groups that focused primarily on their employment interests and initial exploration of skilled trades roles. Recruitment via email was also a challenge, and the research team relied on local service providers to follow up with participants in person. Some potential participants were unable to engage due to the demands of their current employment and the lack of release time to participate. Given the strict timelines of the project, including the limited window to hold the workshops, alternative timelines and formats were not pursued.

Deliver: Consolidate and communicate project findings for ongoing exploration and partnership development.

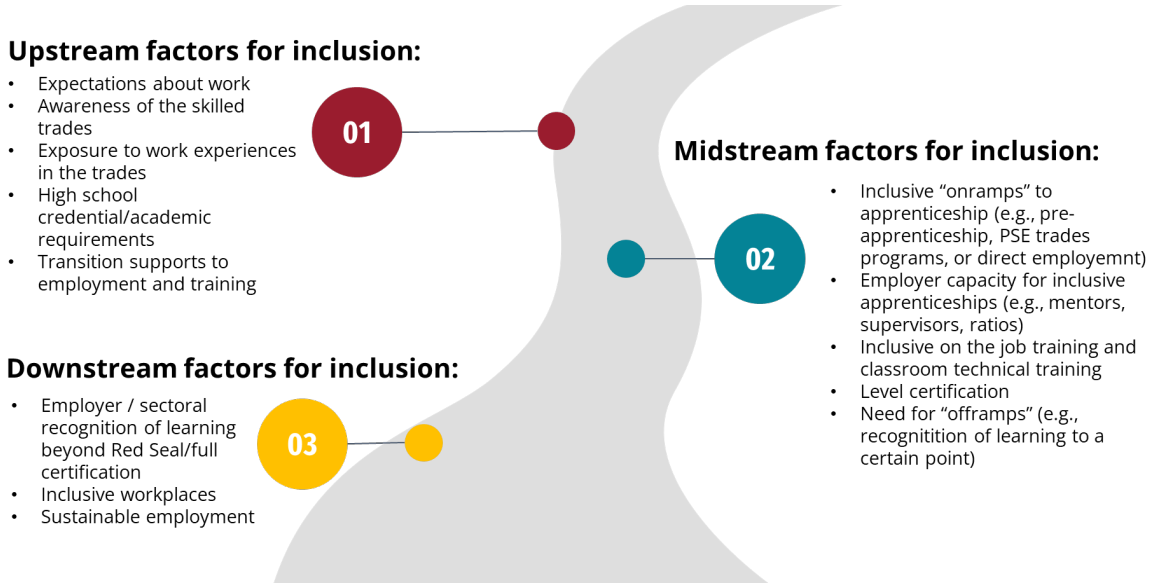
Ideally, a "Double Diamond" framework for problem solving includes a pilot phase to test solutions and continue to iterate and refine ideas. Since the project timelines could not accommodate a separate testing phase, the deliver phase focused on consolidating findings to provide the necessary groundwork for continued partnerships and exploration of a potential pilot project. Final research activities in this phase included reporting back to the advisory committee with the final project report and sharing results with partners and individuals who participated in and contributed to the research.

PROJECT FINDINGS

INTRODUCTION

Project findings below first present an overview of apprenticeship pathways and existing supports for people living with disabilities in British Columbia. With that context established, findings are structured into three key areas as summarized in Figure 2 below: upstream, midstream, and downstream factors, which are each essential to creating inclusive, sustainable pathways into the skilled trades for people living with disabilities.

Figure 2 Project findings summary: apprenticeship pathway

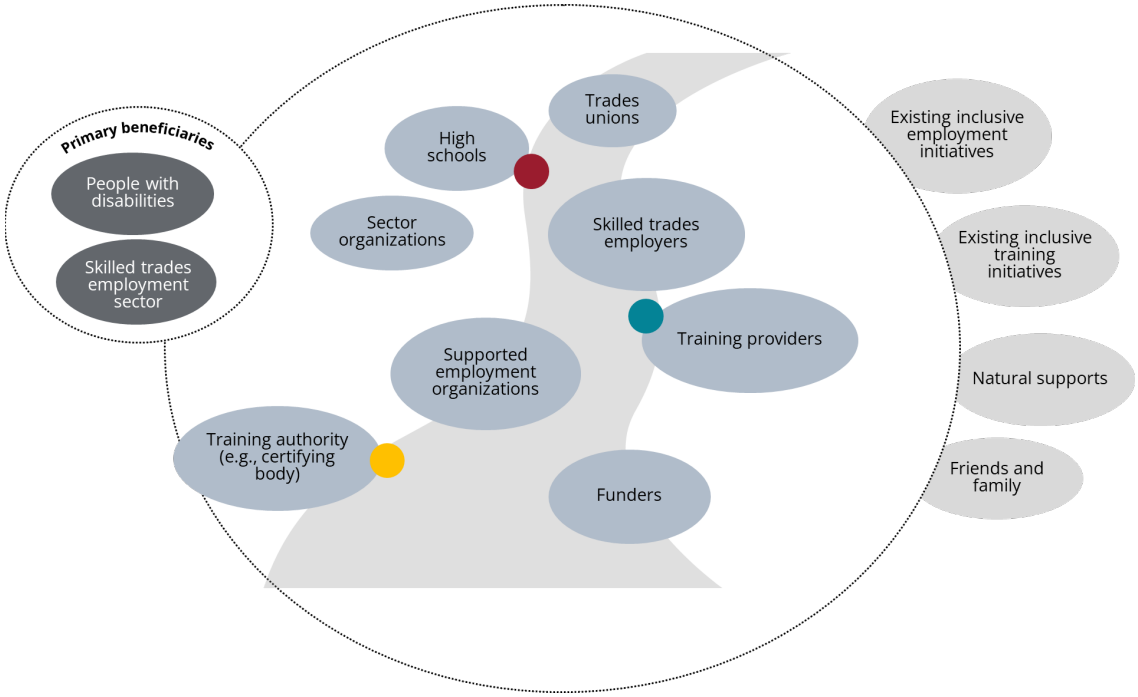


- **Upstream factors** focus on entry points into apprenticeship pathways. This includes raising awareness of the skilled trades as a viable career for people living with disabilities, shifting expectations about work, and building the capacity of supported employment specialists to support discovery in these job roles.
- **Midstream factors** directly relate to training, including pre-apprenticeship programs, technical training, and on-the-job learning. Factors also include recognizing learners' progress and skills, as well as developing partnerships between training providers and employers to ensure that individuals have employment prospects following training.

- **Downstream factors** influence long-term employment. This includes ensuring employers are ready to provide safe, accessible, and inclusive work environments. Downstream factors also include recognition of learning and skill development along apprenticeship pathways.

Throughout apprenticeship pathways, there is an ecosystem of actors that are necessary to engage and support job seekers with disabilities. As discussed below, inter-sectoral collaboration amongst these actors will be necessary to address structural barriers throughout, align supports and inclusive practices, and ensure long-term, sustainable employment for individuals with disabilities. Figure 3 summarizes this ecosystem according to upstream, midstream, and downstream factors for inclusion:

Figure 3 Ecosystem of actors



APPRENTICESHIP PATHWAYS & EXISTING SUPPORTS

In Canada, provinces and territories are responsible for administering their own policies and professional recognition for skilled trades apprenticeships. In general, apprenticeships are a model of vocational training in the skilled trades that combines paid, on-the-job training under the supervision of a certified journeyperson. This is combined with learning in a classroom setting, often referred to as technical training or "block training." While requirements vary, on-the-job training typically accounts for 80 per cent of time spent in an apprenticeship, while classroom training typically accounts for the remaining 20 per cent (Statistics Canada, 2022). Depending on the province or territory, a typical apprenticeship program can require that the apprentice completes several levels towards a certificate of qualification, finally resulting in a provincially recognized certification or a Red Seal Endorsement. The Red Seal Program establishes common, national assessments and certification standards to support interprovincial recognition and mobility of journeypersons in specific skilled trades (Canadian Council of Directors of Apprenticeship [CCDA], 2024).

Under the responsibility of the Ministry of Post-secondary and Future Skills and the authority of the *Skilled Trades BC Act*, SkilledTradesBC is the Crown Corporation that administers British Columbia's skilled trades training system, in partnership with training providers, employers, and industry partners. To become an apprentice in the province, individuals must find an employer and sponsor and register with SkilledTradesBC. There are nearly 90 skilled trades in British Columbia, of which 48 are Red Seal trades in sectors as diverse as construction, hospitality, forestry, mining, and telecommunications, among others (SkilledTradesBC, 2024a). In addition, the province now requires that for seven electrical and mechanical trades, an individual is either a registered apprentice or a certified journeyperson to work in these areas (SkilledTradesBC, 2024b).

Existing supports for people with disabilities

Provincial government supports

In British Columbia, the Ministry of Social Development and Poverty Reduction oversees supports and services for people with disabilities, which includes support for their training, assistive technology and supports, and employment assistance (Government of BC, 2024). WorkBC, the employment service and resource for employers and job seekers in the province, offers a range of programs and services to support people with disabilities find jobs, explore careers, and improve skills. WorkBC employment services can help people with disabilities access Assistive Technology Services, as well as navigate financial assistance programs. WorkBC Apprentice Services provides additional supports for registered apprentices that are EI eligible

while attending technical training in the province (e.g., living supports, transportation, dependent care, and accommodations) (WorkBC, 2024a; WorkBC, 2024b).

WorkBC also provides support for people seeking trades employment and connects people to pre-apprenticeship training programs sponsored by SkilledTradesBC, including those that specifically meet the needs of equity-deserving groups (WorkBC, 2024a, SkilledTradesBC, 2023). In addition, the Youth in Trades program, jointly supported by the Ministry of Education and Child Care and SkilledTradesBC combines grade-level courses with student training plans and paid work experience to begin an apprenticeship while completing a secondary school diploma (SkilledTradesBC, 2024c). Through Workforce Development Agreement funding, SkilledTradesBC worked with service providers to offer a range of pre-apprenticeship programs and services in 2022-2023, which included three programs for people living with disabilities that were completed at the end of March 2023 (SkilledTradesBC, 2023).

CLBC works closely with government and community partners to identify and remove barriers to employment for the individuals they support. Individuals can choose to access employment supports through a local CLBC service provider or WorkBC Centre. Service providers work with individuals to find and keep work using approaches that recognize their unique skills and abilities. This may include supported employment (i.e., partnership between a service provider, a job seeker, and an employer to match employer needs with individual skills) or customized employment (i.e., developing a job specific to an individual's skills) (CLBC, 2018).

Nationally, the Government of Canada provides income tax credits for registered apprentices, including additional tax credits for people with disabilities (SkilledTradesBC, 2024d). In addition, the Canadian Council on Rehabilitation and Work offers a range of employment services, including the Supporting Red Seal Trades program for registered apprentices to access additional financial supports, facilitate access to accommodations in technical training and on-the-job, and provides individualized support to address learning and employment needs (CCRW, 2024).

Training providers and supports

A wide variety of public colleges and universities offer trades programming in British Columbia. These providers have accessibility services for students to receive accommodations and supports. Douglas College, College of New Caledonia, Okanagan College, and Vancouver Community College offer adult basic education, career exploration, and industry-specific or vocational training programs that are designed for people with disabilities and, more specifically, people living with IDDs (see Appendix for details).

Additionally, Kwantlen Polytechnic University (KPU) offers the Including All Citizens Pathway (IACP). The IACP began as a pilot program in 2016, supported by community partners such as Inclusion BC and Inclusion Langley Society. The goal was to explore the possibility of the full

inclusion of students with IDDs into university courses for credit and on an equal basis. In other words, the IACP not only emphasizes fully inclusive admissions and instructional design where students learn alongside their peers, students graduate with a recognized and fully transferable Faculty of Arts Certificate. The pilot demonstrated that for-credit post-secondary education was possible for students with IDDs and that instructors could be mentored and supported to transform their classrooms to be fully inclusive and accessible to a wide range of learners. Opportunities to expand the IACP model into KPU's Faculty of Trades and Technology were explored as part of this project and are detailed in our findings below.

STEPS Forward, a non-profit organization in British Columbia, partners with eleven post-secondary institutions across the province to include students with IDDs who do not meet admission requirements to be included in the mainstream programs of study of their choice. Inclusion facilitators work in collaboration with the campus to include each individual student in their program of study, the social life of the campus, and to develop careers, including paid work. In collaboration with instructors, students complete modified coursework in introductory and advanced courses and are recognized with a "certificate of completion". STEPS Forward's aim is not to "normalize students' with intellectual and developmental disabilities, but to make their participation in post-secondary education the norm." (STEPS Forward, 2024).

In addition, SkilledTradesBC recognizes approved non-public training providers to deliver skilled trades training. Some of these providers offer accommodations services on request, but many may not have the student support services and resources available at public post-secondary institutions. However, some supports do exist. For example, SkillPlan is a non-profit organization that provides programs and resources for construction-based trades, with a focus on foundational skills gaps, addressing learning challenges, and delivering industry-specific training programs to help workers succeed in technical training and on the job. In collaboration with SRDC as the research and evaluation partner, SkillPlan is currently testing a support model for apprentices and pre-apprentices with learning disabilities in the unionized construction trades across Canada (SkillPlan, 2024).

How do other jurisdictions support inclusive apprenticeships?

Alberta
Inclusion Alberta collaborates with Alberta post-secondary institutions to offer fully inclusive opportunities for students with IDDs (Inclusion Alberta, 2024). Recently, they have been supporting students access trades training programs. While students participate in all aspects of the program of study, including assignments and assessments, they are not registered apprentices. Inclusion Alberta students do not receive credits or the associated credentials as they are not taking the program for credit (Inclusion Alberta, 2024). Instead, their participation in rich post-secondary experiences is designed to enable them to achieve outcomes that will allow them to contribute to the workforce within a related area.

United States
Federal programs like Ticket to Work (TTW) administered by the Social Security Administration support people with disabilities reach their employment goals (United States Department of Labour [USDL], 2020). A federal report also recommended improving administrative connections between TTW and apprenticeships and the government has issued guidelines to enhance apprenticeship inclusion for people with disabilities (USDL, 2020).

United Kingdom
The UK's Disabled Apprentice Network connects individuals with disabilities in apprenticeships (Disability Rights UK, 2023). Apprenticeship support for individuals primarily comes from the Access to Work Scheme, offering accommodations and services (Disability Rights UK, 2024). Disability Rights UK annually publishes guides on navigating these supports. Additionally, the UK government provides a supported internship program as part of the National Disability Strategy, offering structured work-based study for 16 to 24-year-olds with disabilities, supported by a job coach, lasting six months to one year (Government of the UK, 2022).

Australia
The Australian federal government's Disability Australian Apprentice Wage Support (DAAWS) program incentivizes employers to hire apprentices with disabilities by providing funding (Australian Government, 2023a). It also offers tutorial, interpreter, and mentor services for apprentices (Australian Government, 2023b). Additionally, the Ability Apprenticeship program aims to help people with disabilities secure public sector employment (Australian Government, 2023c).

UPSTREAM FACTORS FOR INCLUSION

Awareness and exposure amongst job seekers with disabilities

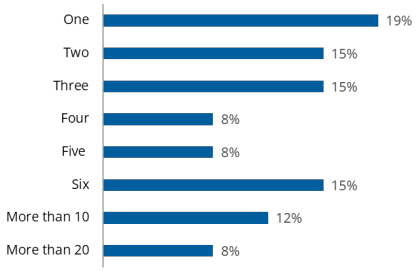
Early exposure to employment opportunities is important for young people to set expectations, explore career pathways, and develop pre-employment skills and experience. Research has found that youth with IDDs who were employed upon completing high school were more likely to have positive job retention and earnings (Wehman et al., 2014). Research has also emphasized the vital role of transition programs for youth with disabilities, emphasizing early involvement, family support, workplace exposure, and ongoing assistance in the workplace, including job coaching and mentoring (Little, 2012; British Council, 2018; Hanson et al., 2022). In British Columbia, employment interventions for youth with IDDs have demonstrated positive impacts, such as increased employment knowledge and more paid and unpaid work experience (Hole et al., 2022).

As noted earlier in this report, the research team experienced challenges finding job seekers actively pursuing skilled trades roles or service providers supporting registered apprentices living with disabilities in the province. To gain a clearer understanding and quantify the current interest in the skilled trades among job seekers with disabilities in British Columbia, the research team distributed a survey to provincial service providers through the project partners' networks. A total of 29 service providers, working with approximately 450 job seekers on average annually, responded to the survey. Most survey respondents (93 per cent) reported that over the past year they had supported at least one individual in exploring, training for, or securing employment in the skilled trades. The most common skilled trades sectors mentioned were in Tourism and Hospitality (e.g., baker, cook), Automotive (e.g., technicians, mechanics), and Construction (e.g., electricians, carpenters, bricklayers).

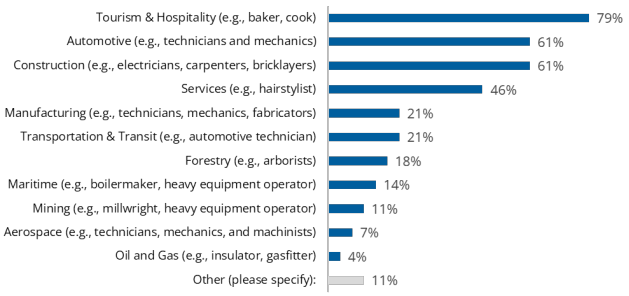
Survey responses suggest that approximately 160 — or 35 per cent — of job seekers with disabilities working with service providers who responded to the survey were currently exploring careers in the skilled trades. However, service providers identified several vocational roles outside the official skilled trades categories in the province (e.g., film and television, fine woodworking, warehousing). This may indicate a broader lack of awareness about the specific roles and requirements within the skilled trades among service providers, a topic that is explored further in the downstream factors for inclusion section below.

Figure 4 Job seekers exploring, training, and finding employment in the skilled trades

How many job seekers with disabilities have you assisted exploring, training, or finding employment in the skilled trades in the last 12 months?



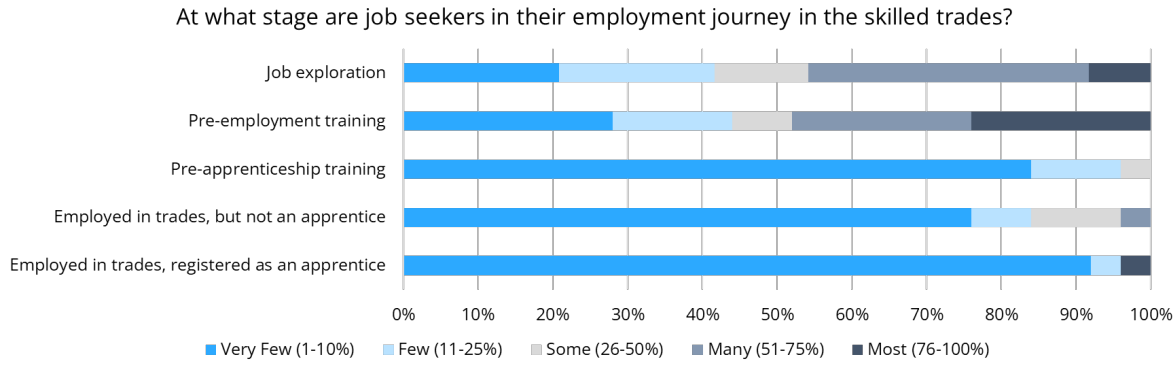
In what sectors/job roles have job seekers expressed an interest working in the skilled trades? Select all that apply.



*Other job roles indicated may not be skilled trades, i.e., Film & TV, Fine Woodworking, Warehousing

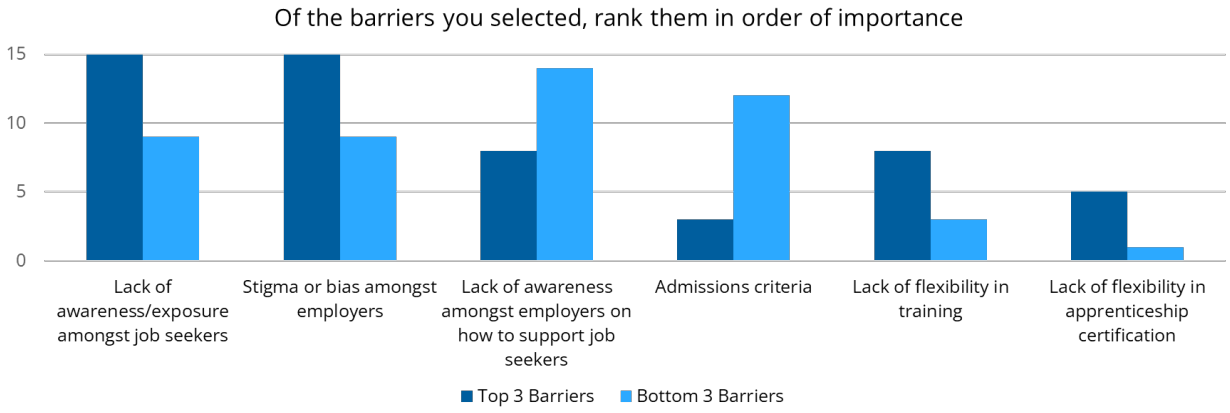
Service providers responding to the survey indicated that nearly all the job seekers they supported were in the early stages of their employment journey (i.e., job exploration and pre-employment). Service providers indicated that very few job seekers were either training or employed in a skilled trades-related role, and very few were currently employed in the skilled trades or registered as an apprentice.

Figure 5 Job seeker journey



Service providers responding to the survey confirmed that job seekers they work with face multiple barriers exploring, training, or accessing employment in the skilled trades. When asked to rank the most significant barrier, they indicated both lack of awareness and exposure to the trades amongst job seekers, followed by stigma and bias amongst employers.

Figure 6 Top ranked barriers to the skilled trades



In the focus groups conducted for the project, many job seekers had some employment experience or were currently employed. For those currently or previously employed, experiences included vocational roles that could potentially indicate an alignment with the skilled trades (e.g., food services roles, working in a warehouse) as well as several non-skilled trades-related experiences (e.g., retail, working in sports and recreation).

All focus group participants were working with employment specialists to explore employment opportunities and indicated that they were still in the early stages of their journeys (e.g., either looking for work or looking for a better job). While many indicated a potential openness to learning more about skilled trades pathways, only half of the fifteen participants indicated an interest in a specific skilled trades pathway (e.g., welder, plumber, cook, hairstylist). Other focus group participants indicated a variety of career interests outside of skilled trades roles (e.g., photography, security and surveillance), as well as roles that have other regulated entry to practice requirements but are not categorized as skilled trades in the province (e.g., early childhood educator or veterinary technologist/technician).

For those focus group participants with an interest in a specific skilled trades pathway, they reported that their exposure to potential trades careers was either through a family member or a high school learning experience, such as a shop class where specific skills were introduced (e.g., woodworking, metalwork):

> *"I've been trying to lean more about the trades, and I have become more interested in plumbing as my older brother has been plumbing for quite some time and is very promising. He's developed a steady career and if he were to lose his current job, he'd have work the next day. And that sounds like a great opportunity. I'd love to pursue that, seek that more, but I'm just trying to figure out where to start, how to continue and how to be as successful as I can in that."* (Focus Group 1 Participant)

In cases where a specific trade of interest had been identified, focus group participants were still exploring how to initiate next steps to better understand job roles and training requirements. In general, participants were currently identifying their interests, understanding how these might align with future employment opportunities or careers, what skills and qualifications were required, or how to move beyond work experiences that involved routine and repetitive tasks or jobs with minimal entry requirements:

> *"Well, I'd like to earn some money. I like a sense of independence. I'd like to get my hands and feet outside of the house a lot more often than I do. A nice car would also be pretty cool."* (Focus Group 1 Participant)

> *"I'm having to rethink what kind of jobs right now…. [I'm] kind of going back to the drawing board for work."* (Focus Group 3 Participant)

In interviews with service providers, many interviewees highlighted the lack of opportunity for youth with IDDs to explore careers in the skilled trades to establish career goals and expectations for employment. Some also highlighted that youth with IDDs leaving high school are yet to be of age to qualify for community living supports and therefore face a transition gap, which impacts their transition into post-secondary education and employment. They indicated that the job seekers they worked with often had a limited view of potential employment opportunities or had not yet specified goals for their career development:

> *"I think a lot of people come in without specific goals. Many of them want to work, but they don't really know what that means or what it looks like."* (Interview #10 – Service Provider)

Career exploration for students living with disabilities

In British Columbia, most school boards (67 per cent) provide career exploration programming, including opportunities to support trades exploration. However, only three districts were identified that offer career programming open to students pursuing a School Completion ("Evergreen") Certificate. In the province, an Evergreen Certificate recognizes that students have met the goals of their Individual Education Plan, but this is not an equivalent to the Certificate of Graduation (Dogwood Diploma), which is the standard diploma for students that complete provincial graduation requirements. Interviews with service providers confirmed that in general, most job seekers they work with come through Evergreen experiences.

Some focus group participants indicated they benefited from the experience of being in a vocational learning experience that cultivated their interest in the trades (e.g., cafeteria class, woodworking class), but only two of the fifteen focus group participants noted that they had an experience of attending a trades exploration program. For one of these participants, the trades

exploration program left a neutral impression, and they could not recall specific details. Another participant indicated a more positive experience where they benefitted from the learning:

> *"It was really interesting because they just talked to us about what types of tools they use… and how to build houses… And I built a doghouse… they put us in groups to work with each other… So, they kinda taught us well how to work with other people and work together to build something."* (Focus Group 2 Participant)

In interviews with service providers, many re-iterated the need to provide these types of learning experiences to young people, particularly in the skilled trades, to cultivate an awareness of the variety of jobs available, as well as the importance of developing critical pre-employment and foundational skills necessary to succeed in the workforce:

> *"You can't just flick the switch at 19 years old [where] people are going to have that drive for employment and have the skills and abilities and all of that… They should absolutely have the opportunity that we had when we were young."* (Interview #2 – Service Provider)

Design workshop: Creating opportunities for trades exploration

The first workshop centered on addressing key research findings with respect to job seeker awareness and exposure to the skilled trades, centered around the following design challenge: ***"How might we address lack of awareness/exposure and preparation for job seekers with disabilities to enter the skilled trades?"***

Towards an improved discovery process

As workshop participants were led through a series of facilitated exercises to explore solutions to the design challenge, they emphasized the importance of building on service providers' knowledge and expertise to lead job seekers through an effective discovery process. They highlighted that service providers require deeper knowledge and understanding of skilled trades pathways to help job seekers effectively navigate potential opportunities and supports. To do this, it would be ideal for employment specialists to have training, understand options, and cultivate relationships with the apprenticeship training system and employers to make better recommendations for job seekers:

> *"If I had my way, I would have a series of training happening for the employment specialist. It cannot be a 'one-off' because of the nature of how these employment services are. We would have to have something which is more sustainable."* (Awareness Workshop Participant)

Workshop participants noted that there were several existing avenues for building this capacity and understanding how to connect with skilled trades employers. Ideas included having SkilledTradesBC present at a meeting of the provincial Supported Employment Advocacy Network (SEAN) and finding champions within the trades system to support capacity building initiatives. One workshop participant also identified the need for stronger collaboration between CLBC service providers and WorkBC. Employment Specialists could continue to support the employment discovery, as WorkBC has the capacity to connect job seekers living with disabilities to specific skill training opportunities, resources, and supports:

> *"I think it's a win-win situation because if the employment services are able to take that discovery piece and then tell [WorkBC]… 'hey, we have come with this discovery… this is where you could help us with the skills, trades, training, and helping [job seekers] with the funding. That would be bingo… if we can take that element of helping us with the skills training, that that would be the key there. So definitely that can be explored."* (Awareness Workshop Participant)

Skilled trades exploration and exposure

Workshop participants emphasized the need for trades exploration initiatives that offer diverse opportunities to engage with — and learn about — different skilled trades. They emphasized the importance of career exploration as well as helping job seekers with disabilities understand whether a career in the skilled trades — and in which specific trades — is a good fit.

> *"In an ideal state, the job seeker would have opportunities to connect with or observe what types of occupations are in trades, whether that's in person, through the workplace, or towards connections with employers."* (Awareness Workshop Participant)

Participants noted that awareness and exploration initiatives should offer hands-on experiences, such as observing skilled trades in action, workplace tours, and connecting with employers and journeypersons to gain a deeper understanding of the expectations, tasks, and requirements of various skilled trades jobs. Participants highlighted the importance of job seekers becoming familiar with worksites and roles, which could also include real-world and simulated environments, videos, and testimonials from others.

Awareness of the skilled trades could also be augmented by mentoring programs from trades organizations or unions, information sessions about skilled trades post-secondary programs, and exploration opportunities such as "try a trade for a day" events, which would help job seekers understand whether the trade was aligned with their interests and preferences for work.

Additionally, workshop participants emphasized the importance of allowing high school students with disabilities to explore the skilled trades through employer presentations, as well as dedicated exploration programs, helping them make informed career decisions at a younger age. They saw the need for improved touchpoints into exploring the skilled trades from early on — including with teachers, family members, or others in the community — as well better supports to transition youth with disabilities from high school into employment and further education and training.

From short-term employment outcomes to longer-term milestones

Workshop participants highlighted that while career exploration and awareness is crucial, navigating a career in the skilled trades is a long-term proposition with many milestones along the way. In other words, outcomes for any pilot project should not be centered around achieving employment in a skilled trades job. Instead, participants saw the need to articulate milestones towards longer-term outcomes. Success could be defined in terms of the number of job seekers gaining exposure to the trades through short-term work experiences, or the number of job seekers who advance towards some kind of training (e.g., pre-apprenticeship programs).

They emphasized the need for a holistic approach to create sustainable pathways into skilled trades for a diverse range of job seekers. They noted this is often challenging in the current funding structure of programs to support employment for people with disabilities, where the focus is on employment outcomes. Given that apprenticeship training spans several years, requiring both on-the-job experience and in-class learning, as well as meeting certification standards, participants emphasized that while increasing awareness and exposure is important, fostering collaboration between supported employment organizations and the apprenticeship system is a longer-term endeavor.

MIDSTREAM FACTORS FOR INCLUSION

Inclusive training and customized supports

While skilled trades apprenticeships adhere to program standards and skills requirements, there is growing acknowledgement in other jurisdictions that more flexibility and individualized support are important for inclusion and successful outcomes (Welsh Government, 2018). For example, inclusive apprenticeship project findings in both the US and UK emphasized the importance of customization and individualized approaches to accommodations as key components of success (Kuehn, et al., 2021; Disability Rights UK, 2024; Council of State Governments, 2021).

Interviews conducted for this project highlighted several barriers when it comes to inclusion in apprenticeships and technical training in British Columbia. Interviews with service providers noted that the job seekers they work with may not be able to work a standard work week, nor maintain a full-time course load when it comes to technical training. Interviewees emphasized that job seekers require modifications in training and noted that standardized apprenticeship requirements are too "rigid" for people living with IDDs—both in terms of admissions requirements and in terms of the lack of accommodations and modifications to course content and modes of training delivery:

> *"They have identified some barriers as to why [people living with IDDs] can't do traditional education… Some need scribes, some need more time to process the information and need extra help with that… There needs to be some flexibility and variance in what or how long the course can take."* (Interview #2 – Service Provider)

Research findings also identified there is a lack of understanding how other intersectional identities, including race, gender, sexual orientation and age impact individuals' experiences of disability (Stienstra, 2013; Quinlan, 2018; First Nations Health Authority [FNHA], 2023). For example, the ongoing legacy of colonialism and structural discrimination impacts social determinants of health of many communities — especially Indigenous communities that experience higher rates of disability in Canada than non-Indigenous people (Statistics Canada, 2023b; FNHA, 2023). Indigenous organizations have emphasized that some disabilities such as fetal alcohol spectrum disorder are connected to intergenerational trauma and colonization (FNHA, 2023). Both the literature review and interview findings highlighted the need for culturally safe and trauma-informed approaches when considering inclusive training approaches.

Prior research also demonstrates the importance of autonomy and choice, where allowing individuals to choose work based on their strengths and interests leads to better results (Raley et al., 2020). For youth with IDDs, emphasizing self-determination — through problem-solving, decision-making, and self-advocacy — played a key role in successful transitions to employment (Traina et al., 2023). In skills training and apprenticeships, promoting learner autonomy and offering diverse options was also found to improve outcomes (USDL, 2020). Other key strategies to promote success in post-secondary education and apprenticeship programs include the following: establishing high expectations for employment with job seekers; engagement in inclusive approaches that emphasize collaboration and shared vision; and learning opportunities where students with disabilities learn alongside their peers (Taylor et al., 2022; Hanson et al., 2022; Papay & Griffin, 2013).

Many interviewees and focus group participants emphasized these considerations as well:

> *"[Students] are more successful at school when they're learning about something that they're personally really interested and connected to… That's one of the valuable pieces about supporting people… It's been really important to individually look at that for each student, which is where I think it's important for students to just be included in the regular places, in post-secondary institutes where there's other peers learning to do the same thing."* (Interview #7 – Service Provider)

> *"I feel like some of the most important things when it comes to finding a job is finding something that is interesting to you and is something that you will be motivated to do."* (Focus Group 1 Participant)

While many interviewees noted that both training content and delivery would require adjustments, modifications, and additional supports, some interviewees highlighted that tailoring programs to the specific needs of people with disabilities, including customized curriculum, work practicums, and support systems, could be an effective approach. Based on their experience, specialized programs could also accommodate smaller cohorts, a different cadence of repetition and assessment, and extended delivery periods to allow for more breaks:

> *"This was very evident, especially when we were doing the technical [training] that there was a really mixed group… So how do you adjust those levels and… provide them support?... It has to be smaller groups… you cannot have bigger groups… and then the testing has to be done very, very differently… and repetition was key"* (Interview #6 – Service Provider)

Other interviewees argued that inclusive apprenticeship opportunities should not result in specialized programs, but that people with IDDs should be fully included in mainstream training classes, employment, and the community. They argued for an approach where learners should

be integrated into existing trades training programs, involving an inclusion facilitator that could work with other partners to address barriers and modify content and delivery as needed for the individual:

> *"We tend to have special paths for people with disabilities… That's not inclusive. Inclusion is not creating this parallel path for someone… belonging means that path is the same and then you might make some extra supports or modification, but the path needs to be… coherent, model coherent, and that's what people relate to."* (Interview #8 – Service Provider)

Training provider capacity for inclusion

While interviewees held different views with respect to the benefits of training programs specifically tailored around the needs of people with disabilities, they did agree on the importance of increasing training providers' capacity for accessibility and inclusion.

Interviewees shared that there are many instructors that have positive intentions but are unsure of how to support students with disabilities. Some training providers named challenges within existing programs, such as viewing disability through a medical model (i.e., locating disability within the individual, requiring medical diagnosis, rather than addressing societal barriers) or limited capacity to address a variety of student learning needs. Some advocated for a system in which accessibility and inclusion are offered to all learners without requiring a disclosure of disability.

Some interviewees highlighted that without institutional support, instructors might be resistant to incorporating more inclusive teaching and learning methods (e.g., resources associated with generating new training materials, implementing inclusive training approaches). Instructor time and capacity (e.g., to learn and implement inclusive training approaches) also needs to be supported. Some highlighted that trades instructors do not work in the same ways other post-secondary instructors do (e.g., they tend to have higher course loads and less flexibility for individual student supervision or additional support) and are governed by collective agreements. These conditions would impact any additional time allocated for their training and development:

> *"You're working with tradespeople as instructors and they may or may not be coming with any kind of education theory, background, that sort of thing… Also, our collective agreement means that if you're teaching for 25 to 30 hours a week, when does that training happen?* (Interview #16 – Training Provider)

One approach for supporting training provider capacity is through Universal Design for Learning (UDL), which has the potential to address learner variability, autonomy, and choice (Booth et al., 2018; Center for Applied Special Technology [CAST], 2020; Canadian Apprenticeship Forum

[CAF-FCA], 2021). UDL offers a framework for inclusive teaching and learning by embedding flexibility and support into educational design, ensuring that classrooms remain inclusive for all learners, regardless of ability or disability, to the greatest extent possible (CAST 2018; Booth et al., 2018; Christopher, 2020). Implementing UDL in apprenticeship training involves creating a learning environment that emphasizes flexible content delivery, may incorporate diverse learning technologies, and provides for collaborative learning activities. While UDL is being incorporated by some training providers in British Columbia (SkillPlan, 2024) others may require professional development and ongoing support to integrate UDL effectively (Brewer & Movahedazarhouligh, 2021). Where UDL has been supported, interviewees noted that instructors benefitted from having institutional resources and specialists to help them incorporate UDL strategies and approaches, while ensuring accessibility:

> *"[There's a] continuous dialogue, workshops that are offered, even reaching out…. [Having a] sounding board and an opportunity to kind of look within and see, okay, what is another way to do this?"* (Interview #4 – Training Provider)

Recognition of learning

Beyond designing training programs for greater accessibility and inclusion, many interviewees also noted that the current system of skilled trades certification leads to an "all or nothing" definition of success, which is defined as either achieving a Red Seal Endorsement or Certification of Qualification in the province. In addition, certification exams administered by SkilledTradesBC are multiple choice, and although there are a range of accommodations and supports in place to assist exam completions, interviewees still found this format to be limiting for job seekers and students with disabilities. In addition, interviews with training providers shared that because training is provincially regulated, they have limited opportunities to make testing more accessible:

> *"Almost everything in traditional apprenticeship is multiple choice tests… anybody in education knows that that's the least effective way to see if someone has gained knowledge… [but] that's how SkilledTradesBC and the interprovincial Red Seal program assess because it's the easiest thing to mark and it's the best thing for anybody to write."* (Interview #16 – Training Provider)

As most focus group participants were in the early stages of the employment discovery process and not actively pursuing training or certification, individuals emphasized that important factors and preferences for training included programs that offered a degree of flexibility and that they had a "proven track record" for ensuring students found employment following the program. Other key considerations were with respect to program cost, length, and proximity to home since transportation was considered a major barrier. In addition, two focus group participants

had experience with vocational certification (e.g., forklift operator, commercial driver's license) and expressed the value of being able to showcase their abilities to employers through certification, which also helped to shifted perspectives about their disabilities:

> *"You get all these tickets and credentials and then it helps him to demonstrate his capabilities to people better… this idea totally changes their minds. So, it's nice to be able to build those credentials and have those tickets in your wallet to show your capabilities."* (Focus Group 2 Participant through a support worker as interpreter)

In interviews and consultations, trades employers and apprenticeship services and supports (including with journeypersons) noted that skilled trades adhere to a model of "progressive credentialing" where apprentices move through sequential learning and skill development towards full certification (e.g., Level 1, Level 2, etc.). Registered apprentices face limited attempts at each certification level. If an apprentice fails their technical training, they must retake the training, which has implications for their employers due to the time commitment required to be off work and in the classroom. Individuals can challenge the certification exam with two attempts before being required to re-take technical training. There are also limits on financial supports for apprentices to complete technical training. Currently, maintaining an apprenticeship indefinitely is unlikely, as employers may not have the capacity for supervision, especially where there is a requirement to maintain apprentice to employer ratios, and apprentices may not be able to bear the costs of technical training after multiple attempts.

In interviews and consultations, individuals in the skilled trades, including apprenticeship services, training providers, and employers, expressed the importance of maintaining the high standards and full scope of practice of trades certifications. Many did not want to see the qualification "carved up." However, rather than viewing fully credentialed journeypersons as the only measure of success, they saw an opportunity to "offramp" learners who may not complete their full certification and would be working in roles that did not require a full scope of work through certification. Within this existing system, they acknowledged that there are many instances within the skilled trades that do not require full certification as a condition to perform certain roles, but there were still implications about how this could be done on a system-wide level:

> *"What [is] out there for the variables around that particular path [when] you cannot get a ticket as an electrician unless you do absolutely rigidly step… It's the implications… [of] not being able to do some pieces of work that's expected on the apprenticeship path."* (Interview #8 – Service Provider)

Likewise, some training providers shared the that the "block training" structure of skilled trades technical training (e.g., sets of shorter courses, modular, and cumulative learning) is an

opportunity to design inclusive training approaches to recognize learning that would result in employment with a partial scope of practice. While many acknowledged that this opportunity currently exists, others saw it as highly dependent on individual employers and their workforce needs.

Design workshops: Inclusive training and certification

Two workshops centered on addressing key research findings with respect to inclusive training and certification of learning, centered around the following design challenge: ***"How might we design inclusive technical training programs for trades that integrate individuals with disabilities alongside their peers while ensuring that their unique learning achievements and skills are recognized and valued?"***

Supporting learners on a 'normative pathway'

A first workshop explored this design challenge from a variety of perspectives, where some participants focused on the need for specific supports and customized training for the job seekers they worked with. Others argued strongly for full inclusion of job seekers along a 'normative pathway' within the standardized or mainstream training for skilled trades apprenticeships, reflecting commonly accepted steps in a process that align with established norms, rather than creating training specifically around the needs of job seekers with disabilities.

Workshop participants then explored how the inclusion of job seekers within a 'normative pathway' of training and skilled trades certification would require integrating accessible services and supports within existing systems and ensuring appropriate supports are present throughout the learning process. For example, this would mean that job seekers would not be referred to separate "disability supports" but that these supports would be present in the 'normative pathway' itself. They saw a need to first address the deficit medical model of disability within the skilled trades and training, moving beyond specialized adult education. For these participants, success of any program should be judged to the extent to which job seekers and learners have an equivalent experience to their non-disabled peers:

> *"A measurement indicator could be how many students follow that normative pathway, so that students aren't sort of swept up into the special education models and so there's not a need for accessing specialized supports as students go through their training."* (Inclusive Training Workshop Participant)

Building on the STEPS Forward model for inclusive post-secondary education, several participants noted that there could be a role for an inclusion facilitator who supports the individual learner, modifies course content as required, and contributes to building instructors'

overall capacity to incorporate inclusive approaches in the classroom. Some participants also noted that micro-credentials could be introduced into skilled trades training approaches to recognize student progress outside full certification. Others also emphasized that there was an opportunity to recognize students' overall experience within the training as a certificate of completion. This would be an alternative to meeting the strict learning outcomes or skills requirements of certification:

> *"Students receive certificates of completion in their program of study for their institution, but they're non-credentialed, which allows for flexibility."* (Inclusive Training Workshop Participant)

While the desire to not separate students into specialized programs was raised repeatedly, other participants held the view that allowing students to experience success through modified programs could create confidence that supports further success in training or on the job. For example, they saw that specialized programs for women in the trades or those specific to Indigenous learners were not only successful because they were designed to specifically address barriers for these equity-deserving groups, but also created a safe and supported environment for people under-represented in skilled trades roles:

> *"I understand the desire not to segregate, but at the same time I'm not sure that, you know, I think there could be some challenges with traditional trades programming delivery."* (Inclusive Training Workshop Participant)

While participants diverged on these perspectives, they did agree that it would be difficult to introduce a pilot training model that was fully inclusive, without addressing key elements of awareness and capacity across training providers, service providers, and employers. For some participants, this meant beginning with addressing employment specialists' awareness of resources available to support job seekers within their training. Others felt that more work was required to build on the existing culture of inclusion in the skilled trades, with further outreach and relationship-building with employers. It was noted that there were many examples of mentoring and individualized supports for individuals in the skilled trades who have not followed a traditional pathway to employment:

> *"There is this history of including adults that don't necessarily have some of the academic criteria of high school degrees. And there's this long history of figuring out how to include adults in trades training, and that culture of including adults and supporting them."* (Inclusive Training Workshop Participant)

Extending the Including All Citizens Pathway at Kwantlen Polytechnic University

A second workshop was held in partnership with KPU to explore this design challenge within the context of potentially extending the Including All Citizens Pathway (IACP) model. Central to the IACP is to design educational experiences that are fully inclusive and do not require additional modifications or adaptations:

> *"There are no curricular changes. We do not adapt or modify what we are teaching. All learning outcomes remain the same for all students. It's all about transforming the way that we teach…All the supports are built right into our teaching pedagogy and within the classroom environment."* (IACP Workshop Participant)

Participants recognized an opportunity to extend the IACP model into KPU's Faculty of Trades and Technology, focusing on trades foundation programs, which are already recognized by the apprenticeship system and employers. Trades foundation programs are pre-apprenticeship pathways for individuals with little to no experience to gain the knowledge and skills required to begin a successful career in the trades:

> *"We found that employers are much more open to looking at somebody who has done a foundations course because they've learned the skills in-house, so to speak."* (IACP Workshop Participant)

Given the existing support of KPU for the IACP model, participants also highlighted that there is an established admissions pathway with the Office of the Registrar, addressing a first barrier for individuals who may come through Evergreen certificate experiences and lack the formal diploma-level criteria for entry. Next, participants explored the potential of introducing inclusive instructional design into trades foundation programs. It was noted that trades faculty have more teaching-intensive roles than other faculty, limiting availability for supporting students outside of the classroom. To address this, participants found that it would be important to ensure that instructors have release time (i.e., paid time supported by the institution) to increase their capacity to learn and apply inclusive teaching methods. The IACP model already incorporates teaching release time and mentorship to build instructors' capacity for inclusion. Therefore, participants explored opportunities to bring together the IACP team (consisting of the Lead Advisor on Disability, Accessibility, and Inclusion, instructors, and educational support personnel) and skilled trades advisors to introduce these approaches into trades training. Participants also saw that because trades training tends to focus on one topic or learning outcome at a time, this could potentially accommodate a diversity of learners and could lead to inclusive instructional design. All felt that the goal was to ensure that all learners had the same learning outcomes and the required skills upon program completion.

While workshop participants were enthusiastic about the potential to explore the extension of the IACP into foundational trades training programs, they noted areas that required further exploration. First, they highlighted that student financial assistance and funding for students with disabilities is often difficult to navigate and access. In addition, while SkilledTradesBC provides a variety of exam accommodations through its Assessments and Completions team, introducing alternative forms of assessment would likely be a long process and require national coordination.

Finally, many saw the need to engage job seekers in "trades samplers" where job seekers could explore a variety of skilled trades roles within a safe and supportive environment prior to engaging with a foundations-level training program. To address these broader issues, participants agreed that ongoing collaboration between service providers, training, institutions, employers, and communities would be important to support sustainable outcomes.

DOWNSTREAM FACTORS FOR INCLUSION

Accessible and inclusive workplaces

Focus groups with job seekers with disabilities explored their considerations and preferences with respect to employment and training. Across the three focus groups, one of the most common considerations participants identified was transportation, emphasizing accessibility by public transportation and proximity to their homes as priorities. The opportunity for flexible hours and part-time work was another common preference, although some participants were looking for full-time work. Many — but not all — participants also shared that they preferred lower-stress and slower-paced positions over fast-paced, high-stress roles:

> *"I'm kind of interested in doing some of the slow work, just concentrate on what I'm doing and whatnot."* (Focus Group 2 Participant)

While individual preferences for full-time, part-time, fast-paced, and slow-paced work varied, participants agreed on the importance of finding a supportive employer, and highly valued relationships with inclusive colleagues and supervisors. Several participants voiced that they do not want to have to hide that they have a disability when looking for work and preferred employers and teams who looked past their disability and saw them as a colleague:

> *"Certain employers they can have certain stigma or stereotype about disabilities in general. They may not have this open, or they may not have this in a manner that's super aggressive, but it can affect how you're treated as an employee… I don't want to have to hide the fact that I have a disability just to have a better chance of getting a job."* (Focus Group 1 Participant)

Focus group participants also expressed how negative past employment experiences informed their preferences for work going forward. Some expressed caution regarding disclosing their disability if they felt that colleagues and supervisors were not inclusive:

> *"I think relationships with boss and co-workers. That's a bit of a gray area depending on what the job is. I've had experience with bosses, didn't go very well… but also, I didn't disclose. So, it was very like, gray."* (Focus Group 1 Participant)

Awareness and capacity for disability inclusion: Skilled trades employers

A key factor for successful employment outcomes for job seekers with disabilities is employers' disability confidence (i.e., the ability to understand, include, and support people with disabilities). However, stigma, negative attitudes, and stereotypes continue to be key barriers for people with disabilities, impacting their inclusion in training and employment (Health Canada, 2022). Research has found that people with IDDs face increased stigma compared to people with other disabilities (Burge et al., 2007; Segall & Campbell, 2014; Brewer & Movahedazarhouligh, 2021). For example, one survey found that nearly half of employers (46 per cent) reported that the nature of work at their business was too difficult to hire individuals with IDDs (Riesen & Oertle, 2019).

While employers are legally required to accommodate employees with disabilities in Canada and in other jurisdictions, many still hold the misconception that accommodations are expensive or challenging to implement. For example, one study found over half of employers reported that uncertainty about the costs of accommodations was a limiting factor for recruiting people with disabilities; in another, employers raised concerns about the financial cost of inclusive employment (Heron et al., 2020; Fischer & Kilpatrick, 2023). In interviews, service providers shared that many employers they work with continue to see disability inclusion as a potential threat to the bottom line:

> *"The truth is, is that on your team, in your employment, you want what's easy, what's efficient… you don't want things to be difficult and slow you down and get in the way. And accommodation is still seen with that sort of stigma…With disability, uniqueness is not valued. It's seen as a bit of a threat."* (Interview #14 – Service Provider)

Service providers also highlighted the challenges job seekers have experienced in accessing accommodations and adjustments — including flexibility and time off — which are often stigmatized within the skilled trades. Some perceived that these workplace cultures were "old school" or "machismo" that valued showing up above all else:

> *"I've spoken to another employer that admitted like he was an older guy and he's like, 'I come from old-school thoughts and ideas of, you know, you don't ever take a day off. You never call in sick. You're working 10 hours a day, 5 days a week'."* (Interview #11 – Service Provider)

Additionally, service providers conveyed that some employers are not open to supported employment solutions (e.g., job carving, job coaches on site, customized solutions), which has limited the extent to which they have been able to develop partnerships. Some shared that employers are also reluctant to navigate current support systems, such as wage subsidies and training grants for employee skills training (e.g., BC Employer Training Grant among others). They conveyed that many employers are feeling overwhelmed and under-resourced, to the point where any extra work (e.g., paperwork, setting up the process) can be intimidating or perceived as a "burden":

> *"You're like, 'This is a creative solution to your problem'. They're like, 'I don't have the capacity for a creative solution right now'."* (Interview #14 – Service Provider)

Employers may also struggle to support apprenticeships in general due to capacity constraints and financial risks. Some skilled trades employers may be reluctant to invest in apprentices since there is a risk they might leave for other opportunities before completing their training. Skilled trades employers may also face pressure to maintain apprentice-to-journeyperson ratios, or may require fully certified journeypersons to meet workforce demands:

> *"Typically, with apprentices we would be hiring people that have, you know, kind of at least a year in… It's a requirement of us to have in most cases… we need that Red Seal."* (Interview #5 – Skilled Trades Employer)

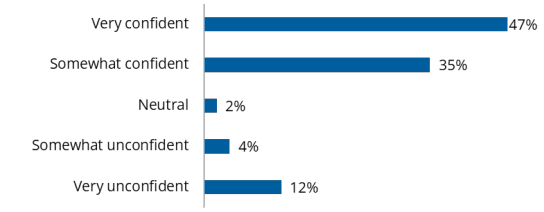
Awareness and capacity on skilled trades pathways: Service providers

Service providers can play an important role in supporting both employers and individuals with IDDs pursue inclusive and accessible apprenticeship and employment opportunities. However, supported employment professionals reported limited awareness and connections with skilled trades employers and apprenticeship services in the province. In the service provider survey, less than half (43 per cent) of respondents indicated that they currently offered information on apprenticeship programs and supports. In addition, only 47 per cent of respondents felt "very confident" supporting job seekers with disabilities in the skilled trades and 16 per cent either felt "somewhat unconfident" or "very unconfident".

Figure 7 Current supports and confidence

What types of supports or resources do you currently offer to support jobs seekers with disabilities in the skilled trades?

How confident do you feel in your ability to support job seekers with disabilities in the skilled trades?



In interviews, many service providers shared that they have a limited understanding of the apprenticeship system, the types of careers available in the skilled trades, skill requirements, job opportunities, and knowledge of work site environments. Additionally, many were unclear on the distinction between skilled trades that require apprenticeships as compared to other vocational jobs that may require certification but are not designated skilled trades in the province (e.g., warehousing, various roles in film and TV, fitness instruction, etc.):

> *"We don't know anything about trades, so we would need a lot of knowledge around the expectation of the job. We probably need some tours. We need to meet with employers. We really need to understand what our participants would be expected to do if they were going to go into this field"* (Interview #13 – Service Provider)

Other interviewees shared that they tend to focus on placing job seekers within sectors where they have a strong understanding of job requirements and employment opportunities, and where they have an existing relationship with employers:

> *"Part of it is the fact that we just tend to … focus on those things that have been traditional in terms of what folks might have done. And those are the areas that are, you know, like the kitchen food thing, the cleaning thing, the retail thing."* (Interview #12 – Service Provider)

In the service provider survey, many respondents identified a variety of resources on the skilled trades would be helpful to build their awareness, including information or a directory of accessible skilled trades employers in the province; skilled trades training programs, including programs with flexible or adapted training options; funding opportunities (e.g., tuition grants, financial support, subsidized programs); and information about accommodations to support employment and training in the skilled trades. In interviews, service providers further emphasized the need for resources or contacts to help them better understand training and employment opportunities in the skilled trades:

> *"Just someone to be able to call who just knows the trades world. Knows the different trades and knows about the different level certifications that you can get.... I don't know someone who has a basic knowledge about all the trades, the schooling involved, funding opportunities… I feel pretty out of my own… I don't know who to talk to... The thing is, we're launching to this new sector, new thing. It doesn't seem like there are that many people that have that experience."*
> (Interview #11 – Service Provider)

Beyond resources to build awareness, there is a need to build capacity and relationships between supported employment professionals and employers in the skilled trades. Service providers interviewed voiced uncertainty around how to initiate these relationships, as there are not yet established networks for service providers to engage with skilled trades employers in the province. Interviewees voiced concerns with respect to where to begin to build momentum, interest, and capacity to better support people with IDDs in the skilled trades. Some noted the importance of creating champions that can accumulate and distribute knowledge on how to best support people with IDDs, in addition to establishing inclusive training programs.

Lessons learned from other inclusion initiatives in the skilled trades

Existing initiatives supporting equity-deserving groups in skilled trades can potentially inspire inclusive employment solutions for people with IDDs. Many interviewees noted that these programs have served as a foundation to enhance employer readiness to be more inclusive, which could be extended to people with disabilities.

For example, the Skilled Trades Employment Program (STEP) helps connect job seekers with construction jobs in British Columbia. They offer career coaching, resume writing, interview skills, employer connections, and additional supports such as financial assistance for eligible candidates. A key component of STEP's mandate is to foster equity, diversity, and inclusion within the skilled trades and to remove barriers for people who are under-represented, including youth, women, members of the 2SLGBTQIA+ community, Indigenous, racialized, and recent immigrants to Canada. They work closely with construction employers to place candidates in apprenticeships and career opportunities (STEPBC, n.d.).

As another example, the BC Centre for Women in the Trades (BCCWITT) provides a variety of programs to connect apprentices, skilled workers, and employers, while promoting gender inclusion in the skilled trades. Some of their programs, such as the Careers Program, provides individualized support to employers and to jobseekers. Other initiatives, such as their Bystander Training, are more focused on shifting the culture of employers to be more inclusive and embrace gender diversity (BCCWITT, n.d.).

Construction trades in the province also have established initiatives to support inclusion of other equity-deserving groups. For example, construction unions are involved in Community Benefits Agreements (CBA), which aim to ensure communities in the province receive long-lasting benefits from public investments into major infrastructure projects. The objectives of the CBA includes workforce development through priority hiring of Indigenous peoples and other equity-deserving groups, as well as supporting training and apprenticeships more generally (BCIB, 2023). BC Infrastructure Benefits (BCIB) works with contractors, unions, project owners, and training organizations to employ skilled trades workers on public infrastructure projects with priority hiring of under-represented workers (BCIB, 2023). Another example is the is the Enhanced Inclusion and Development Agreement (EIDA) which can be implemented on provincial capital infrastructure projects. The objective of the EIDA is to provide financial support and incentives to contractors and their sub-contractors for certain activities that assist them in achieving community benefits objectives, including supporting the inclusion of equity-deserving groups in employment (Infrastructure BC, 2024).

Currently in these initiatives, people with disabilities are grouped in broadly with other equity-deserving groups (i.e., there are no specific targets to hire people with disabilities). In information-gathering consultations with these and other initiatives in the apprenticeship system, many conveyed that when they are encountered with a situation in which an individual discloses a disability, they provide the necessary accommodations and refer these individuals to available supports. However, some also shared concerns around implementing supported employment approaches (such as job coaching, job carving, and other customizations) due to worksite safety, business models, and employers' workforce needs. In general, there was an acknowledgement that many skilled trades employers lacked an awareness of how to support people with disabilities, and that many apprentices are reluctant to disclose a disability to their employer:

> *"A lot of apprentices don't disclose their disabilities [at work] …[Many] prefer to deal with that disability, with that information on their own rather than seek support from the employers. And that would go as well with mental health issues…they felt that in some way, [disclosing] would jeopardize their careers."* (Interview #9 – Apprenticeship Services)

Consultations and interviews noted that successful inclusion initiatives in the skilled trades are led by journeypersons, who understand the work and can generate buy-in. Sharing personal success stories from both employers and employees of equity-deserving groups has helped reduce stigma and foster inclusion in the skilled trades. Emphasizing a strengths-based approach, addressing cost concerns, and engaging skilled trades unions with existing inclusion frameworks were also identified as key strategies.

Design workshop: Building bridges between employers and service providers for inclusive employment

The fourth and final workshop centered on key research findings with respect to addressing mutual awareness and understanding between skilled trades employers and service providers, expressed in the following design challenge: "***How might we bridge the gap between service providers and skilled trades employers by enhancing mutual understanding about how people with disabilities can meet employers' labour force needs?"***

Building relationships and awareness

Workshop participants explored different ways to build relationships between service providers and skilled trades employers, sectoral organizations, and apprenticeship services. Participants noted that employers are well-placed to raise awareness regarding their job roles and workforce needs through formal and informal methods, such as presentations to service providers, site visits, and one-on-one conversations. Participants noted that the first step in exploring employment for job seekers is understanding the employer's specific skill needs and jobsite realities:

> *"So, before we start the training, going to an employer and saying, 'This is what we're trying to do, what would you like to see in your worker'?"* (Inclusive Employment Workshop Participant)

Like views expressed in the first workshop (addressing awareness and exposure amongst job seekers) participants also highlighted the need to train employment specialists on the basics of apprenticeships and skilled trades employment in the province. Employment specialists need to be well-informed about the job and training requirements, existing supports, and how to navigate the apprenticeship system:

> *"I would like to see some more structured training for the employment specialists, but I would also like to see that the training is being informed by the employers as well."* (Inclusive Employment Workshop Participant)

Workshop participants saw opportunities for two-way learning. While learning about work realities from employers, service providers can likewise provide employers and sectoral organizations information to build their disability confidence and awareness of supported employment models. Engaging employers was seen as a central piece of successfully supporting people with IDDs in the skilled trades and creating employment opportunities. Much of the work that service providers can do to support successful outcomes is to build the disability confidence of employers.

Supporting disability inclusion in the skilled trades

Workshop participants emphasized that building employers' disability confidence is key to creating inclusive environments that focus on the strengths of people with disabilities, not their limitations. They noted that this confidence develops by shifting from a "risk mindset" to a "curiosity mindset" when hiring people with IDDs. Given the limited capacity of many skilled trades employers (especially small businesses) participants noted that this shift would require accessible, low-cost opportunities for employers to build their awareness and knowledge of supports.

Workshop participants suggested that it was also important to integrate the business case for hiring people with disabilities into disability awareness training. Some saw opportunities to build on existing practices in the skilled trades, such as accommodating workers who sustain injuries on the job. Employers' experience with return-to-work plans for injured employees could be a starting point for building disability confidence and openness to accommodating employees with disabilities. Additionally, engaging employers who are already open to hiring equity-deserving groups in the trades or who have personal experiences with disability may help initiate these conversations:

> *"I know from other projects is a lot of inclusive employers, they might not self-identify themselves, but they have a family member or a loved one. They understand the context of disability and can help. Yeah, just plant those seeds of change within their organizations."* (Inclusive Employment Workshop Participant)

Workshop participants suggested learning from inclusion initiatives of other equity-deserving groups such as women and Indigenous workers using similar approaches to shift employer attitudes and workplace culture could also be effective for people with disabilities. As with other workshops, participants also cited the importance of the practice of mentorship in the skilled trades and noted that many existing inclusion initiatives focused on equity-deserving groups have a mentorship component.

Workshop participants suggested identifying smaller starting points and working towards milestones towards disability inclusion within the sector, rather than focusing initially on employment. This included offering "lower stakes" ways to engage with inclusion initiatives for employers that are not yet ready to offer apprenticeships or hire individuals with IDDs. Workshop participants noted that while many employers may not be ready to support apprentices or workers with disabilities, they may be able to make other steps to engage with individuals with IDDs. For example, employers can provide career exploration opportunities (e.g., partnering with high schools, job tours or job shadowing opportunities to promote understanding of job requirements), and participate in disability awareness training.

"[I'm] not here asking you to hire someone or take on a four year [apprentice]. I'm just wondering if you might have an hour to have a cup of coffee with us or can we come to a tour, or are you willing to share your journey?" (Inclusive Employment Workshop Participant)

LESSONS LEARNED

INTER-SECTORAL PARTNERSHIPS & SYSTEMS CHANGE

While the goal of this project was to identify and address specific design challenges with the view to eventually pilot more inclusive apprenticeship pathways in a subsequent project, participants emphasized that an important first step would be to build inter-sectoral partnerships between supported employment providers, skilled trades employers, and the apprenticeship system. Rather than viewing the need for a specific pilot project, many workshop participants saw a need for broader systems change. They called for a holistic approach to inclusion of people living with disabilities in the trades, addressing upstream, midstream, and downstream factors as interconnected. Workshop participants underscored the importance of system-wide coordination, knowledge sharing, and collaboration across sectors. Both workshop participants and interviewees stressed that success should be redefined beyond immediate employment outcomes for people with disabilities, focusing instead on long-term strategies for inclusion, accessibility, and sustainable employment:

> *"If you really want to make it work… there needs to be that thinking of at each stage, what is working, what is not working, and looking at it from the perspective of the employer, looking at it from the perspective of the trainer, looking at the individual, and the support system… It can not work unless all of them are together on it."* (Interview #6 – Service Provider)

As a starting point, the research highlighted opportunities for inter-sectoral coordination between supported employment providers, training providers, employers, regulators, and sector representatives to align their roles, their needs, and how they might collaborate going forward. Research findings highlighted that job seekers, their support networks, employers, and training providers are still in the early stages of understanding one another. The awareness gap is not limited to job seekers, but extends to those who provide support and guidance, such as employment specialists, who need to be informed about the various skilled trades to guide job seekers through opportunities and supports. Additionally, employers and training providers need to gain a better understanding of what inclusion could look like in the skilled trades:

> *"When, you know, the locus of the solution is on just one service provider, one instructor, one employment specialist. Instead of thinking of that, you know, system that really needs to also transform, create some of those connections."* (Awareness Workshop Participant)

Many individuals and organizations engaged in this research project also noted that the impetus for meaningful change is likely to come from commitment and leadership from those in the apprenticeship, skilled trades, and service provision sectors:

> *"You're going to need a lot of buy in from like trade associations and from employers and from training organizations… you'll have to get a lot of people on board."* (Interview #13 – Service Provider)

While industry can be potentially influenced through legislation (e.g., *Accessible Canada Act*, the *Accessible BC Act*), there are other policy mechanisms that can motivate inclusive employment. For example, the provincial government could act as a convenor of inter-sectoral roundtables to further explore and initiate partnerships prior to introducing a pilot project. Eventually, setting specific employment targets for apprentices and journeypersons with disabilities, and establishing more coherent and reliable funding for disability-focused skilled trades programs could contribute to change within the system:

> *"There's that really established funding for women in the trades. And the disability funding is a lot more patchwork… there isn't quite yet that blanket funding sources or funding pools."* (Interview #11 – Service Provider)

CONSIDERATIONS FOR NEXT STEPS

Given the need for broader awareness building and establishing relationships amongst all actors to support inclusion in the skilled trades, many organizations and individuals engaged throughout this project identified that young people with disabilities should be the primary focus. For example, workshop participants emphasized that youth transitioning from high school today have evolving expectations around work and inclusion, requiring dedicated career exploration programming to cultivate and support their interest in the skilled trades. Participants also argued that young people in an Evergreen Certificate pathway should not be excluded from the Youth in Trades program, and that it is essential to provide them opportunities for earlier exposure to trades opportunities, ensuring all students have access to career exploration experiences.

Potential interventions explored in the workshops mainly pointed to awareness and exposure, from foundational programs or "try a trade" initiatives, site visits, or other types of introductory experiences. Workshop participants also emphasized the importance of achieving pre-employment milestones towards sustained employment or eventually registering for an apprenticeship. Workshop participants also explored how to ensure that skilled trades learning outcomes remained consistent while designing for inclusion and avoiding a "special education" model. In both interviews and workshops, many participants noted that this requires balancing

the need for inclusive education with maintaining the rigor necessary for skilled trades certification, ensuring that training programs can accommodate diverse learning needs while upholding provincial and interprovincial standards.

For participants attending the workshop exploring the extension of KPU's IACP model into the Faculty of Trades and Technology, many saw the potential for this approach to address a number of these issues (i.e., for-credit learning, full inclusion, a recognized pathway into the trades). They also saw strengths of KPU having the existing institutional support to address admissions barriers, resources to train and mentor instructors to be more inclusive, and established connections with service providers in the community. With the Faculty of Trades and Technology at the table, there was also an entry point to further explore opportunities with employers and other actors in the skilled trades and apprenticeships in the province.

Finally, workshop participants emphasized that employers require simplified ways to navigate existing supports to accommodate employees with disabilities, and that they needed to be normalized and routinized prior to focusing on opportunities for employment. Above all else, participants argued that finding champions from within the skilled trades system to engage in further conversations about disability inclusion is essential, and that unions, industry, and other apprenticeship partners can lead the way in promoting inclusive hiring and training, and ultimately open the door to the trades for people with disabilities in British Columbia.

APPENDIX

Table 1 Post-secondary education, skills training, and trades exploration programs for people living with disabilities at publicly funded training providers in British Columbia.

Institution Name	Program Name	Certification(s)	Program Length	Description
College of New Caledonia	Trades exploration	First Aid and certification; 60 hours each for three trades, in-class and hands-on	12 weeks (part time)	Pilot project to help unemployed and underemployed individuals living with brain injuries explore trades occupations (carpenter, automotive service technician, and professional cook)
Douglas College	Basic Occupational Education – Electronics and General Assembly	Certificate; hands-on practicum component	Self paced	Designed for students who have a barrier to learning and/or employment
Douglas College	Basic Occupational Education – Food Services	Certificate; hands-on practicum component	Self paced	Designed for students who have a barrier to learning and/or employment
Douglas College	Basic Occupational Education – Retail and Business Services	Certificate; hands-on practicum component	Self paced	Designed for students who have a barrier to learning and/or employment
Douglas College	Career and Employment Preparation	Certificate; hands-on practicum component	16 weeks (full time)	Designed for students who have a barrier to learning and/or employment
Douglas College	Local Industry Skills Training – Electronic and General Assembly	Certificate; hands-on practicum component	32 weeks (full time)	Designed for students who have a barrier to learning and/or employment

Institution Name	Program Name	Certification(s)	Program Length	Description
Douglas College	Local Industry Skills Training – Food services	Certificate; hands-on practicum component	32 weeks (full time)	Designed for students who have a barrier to learning and/or employment
Douglas College	Local Industry Skills Training – Retail and Business Services	Certificate; hands-on practicum component	32 weeks (full time)	Designed for students who have a barrier to learning and/or employment
Kwantlen Polytechnic University	Including All Citizens Pathway (IACP)	Faculty of Arts Certificate with 30 academic credits that are fully transferrable	10 courses; 1 course per academic term	Inclusive post-secondary education certificate program designed to offer for-credit, fully inclusive courses for students with intellectual, developmental, and learning disabilities on par with their peers
Okanagan College	Apprentice hiring project	Apprenticeship (1st year)	1 year	Employer incentive to hire an apprentice who self-identifies within an equity deserving group (including people with disabilities)
Vancouver Community College	Career Awareness	Certificate; in-class and hands-on	38 weeks (full time)	Intended for adults with cognitive disabilities to explore employment options and gain practical experience. Includes classroom learning activities, three work placements and two planning meetings.
Vancouver Community College	Food service careers	Certificate; in-class and hands-on	38 weeks (full time)	Intended for adults with cognitive disabilities to explore employment options and gain practical experience. Includes 26 weeks of classroom training and 12 weeks of workplace experience placement.

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