

# Supporting Apprentices with Learning Disabilities and Differences

A project aimed at researching, developing, and testing innovative supports for pre-apprentices and apprentices with learning disabilities and differences in the construction trades.

## An innovative pilot project

The project was a collaboration between SkillPlan, a national leader in workforce development within the construction industry and the **Social Research and Demonstration Corporation (SRDC)**, an organization committed to innovation, experimentation, and evaluation to advance social policy. Additionally, the project received funding from the Government of Canada's Skills for Success program.

Aiming to foster successful outcomes in the skilled trades, SkillPlan developed and tested a support model—backed by research from the **Social Research and Demonstration Corporation (SRDC)**—designed to address the challenges faced by apprentices while aligning with the specific needs of training providers and apprenticeship programs.

The construction industry is a significant contributor to the Canadian economy, employing over 1.5 million individuals. Labour market forecasts anticipate a shortage of skilled workers in the next decade, driven by changing demographics and increasing demand for construction services.

The project showcased the distinctive potential of the support model, which integrated inclusive and accessible training supports with industry and trades expertise, thereby enhancing its relevance for apprenticeship training.



- Learning disabilities and differences are conditions that influence the perception and processing of information, thereby affecting foundational academic skills in reading, writing, and mathematics. These conditions frequently coexist with other issues related to attention and mental health.
- In Canada, approximately 10% of the population is affected by learning disabilities and differences, with research suggesting that this figure exceeds 20% among apprentices. Stigma, barriers to diagnosis, and a lack of awareness can result in apprentices not receiving the necessary support to succeed in their training.

# The SkillPlan Support Model

The support model was developed to acknowledge and cater to the varied needs of apprentices without depending on formal diagnoses or extensive assessments of their learning disabilities. Instead, it fosters an environment where individual needs are recognized and addressed in a learner-focused manner. Additionally, this model equips instructors and tutors with the necessary skills to assist those with learning disabilities and differences, using strategies grounded in **Universal Design for Learning (UDL)** to enhance accessibility and inclusion in training.



**Professional Development:** a training course and resources were developed for skilled trades instructors and tutors to build their awareness of learning disabilities and differences, signs of how they may appear in trades training contexts, and how to support learners with accommodations and inclusive teaching strategies.



**Intake Tools:** instead of a lengthy “assessment-first” approach, learner intake tools and simple screening techniques were used to understand learners’ histories, strengths, challenges, and needs. Summaries were provided to instructors to implement learner-centered supports in class or tutoring.



**Pre- and Post- Skills for Success Assessment:** trades-contextualized assessments of essential skills (i.e., reading, document use, and numeracy), were administered prior to training and following training. Patterns of assessment responses were reviewed to identify signs of potential learning disabilities, differences, or other learning challenges.



**Accommodations and Supports:** accommodations and supports were made available on a universal basis, and further support was tailored to individuals. Instructors received a summary of accommodations and supports for each training cohort, and these were reflected in student success and transition plans for apprentices to use going forward.



**Instructor/Tutor and Learner Resources:** additional supports offered to all learners included tutoring supports (virtual or in-person tutoring), and additional tools and resources were integrated into the Build Your Skills Learning Hub.

# Universal Design for Learning

**Universal Design for Learning (UDL)** is based on research that identifies three neurological networks that impact learning. UDL seeks to remove barriers, maximize accessibility, and improve teaching to address the diverse and varied ways in which people learn.

Affective Networks  
The “Why” of Learning



## Provide multiple means of Engagement

Affective networks monitor the internal and external environment to set priorities, motivate, and engage learning and behavior.

How will learners engage?

Recognition Networks  
The “What” of Learning



## Provide multiple means of Representation

Recognition networks sense and perceive information in the environment and transform it into usable knowledge.

How will learners perceive?

Strategic Networks  
The “How” of Learning



## Provide multiple means of Action & Expression

Strategic networks plan, organize, and initiate purposeful actions in the environment.

How will learners act on their understanding?

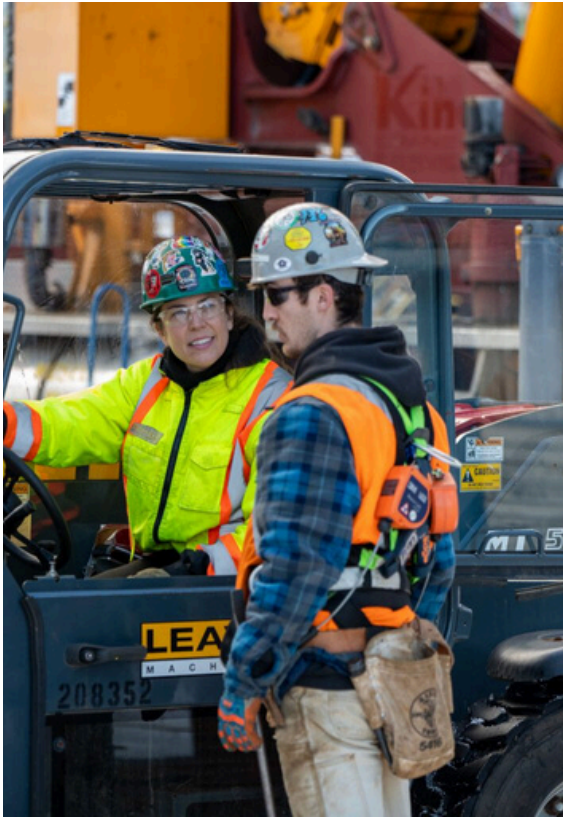
Source: cast.org

“It really, really works. Designing things from a [learner’s] perspective and trying to make things more accessible. It really works and works well for all learners across the board.”

Project focus group

In professional development, instructors and tutors have largely adopted UDL strategies, with 92% expressing a desire to learn more and 95% feeling motivated to implement them in their teaching. Similarly, apprentices and pre-apprentices shared positive experiences with UDL-based methods, with 91% agreeing that the courses provided a variety of learning strategies. When reflecting on their experiences, learners noted the significant difference a supportive environment made, where assistance was easily accessible and available. These results underscore the transformative effect of UDL in fostering inclusive, learner-centered settings.

# Design and Delivery



## Flexible and learner-centered approaches

A total of 1,459 pre-apprentices and apprentices were screened and provided with instruction and tutoring supports by trainers who received professional development on learning disabilities/differences and UDL supports.

## Professional Development

Over 100 instructors, tutors and other training providers received professional development and awareness training. Professional development played a critical role in building broader organizational awareness of learning disabilities and inclusive classroom environments. Increased understanding of learning disabilities and differences provided confidence for instructors and tutors to introduce supports.

## Tailored Partnerships

An important feature of the support model's design and delivery was built-in flexibility to ensure the model could be tailored to individual partner needs and contexts. Partners also highlighted that SkillPlan combined a practical understanding of what accommodations and supports are effective in a trades training context—an area where other organizations often lack the unique intersection of expertise.

## What Makes the Model Work for the Trades?

### UDL for Skilled Trades

Instructors and tutors found UDL effective in providing multiple ways to engage with material, such as hands-on activities, visual aids, and more learner choice options (e.g., task sequence, environment preferences).

### Importance of Timing

Timely intake information was important for instructors to deliver accommodations, UDL strategies, and individualized support. The pace of in-class instruction and time required to adapt resources required organizational buy-in to ensure effective implementation.

### Scaffolding supports

Teaching and learning strategies that combined guided tools while gradually promoting independent practice (known as “scaffolding”) was highlighted as key for longer-term apprenticeship success.

### Effective Communication

Communication with partners and stakeholders early on to let them know of the project, the goals, and implementation of tools is important. Personalizing engagement (for learners, partners, unions) was key for buy-in and creating conditions for success.