



# Challenges and Barriers to Success among Apprentices

Prepared for  
Adult Basic Education Association

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# Executive Summary

The Adult Basic Education Association (ABEA) is the adult learning network in Hamilton, Ontario. They help people plan for their educational goals and prepare for apprenticeship training. ABEA wanted to understand the challenges and barriers that pre-apprentices, apprentices and recent journeypersons face through the apprenticeship journey.

We conducted research in 2 parts. First, we talked to experts in the apprenticeship field to learn about possible challenges that apprentices may face in their training. We used these ideas to create interview questions and prompts. Then we asked pre-apprentices and apprentices about their experiences and challenges during training. Due to challenges attracting participants, our group of apprentices was smaller than planned. The group didn't include recent journeypersons. Without these participants we couldn't explore challenges around the Certificate of Qualification (C of Q) exam.

We interviewed 18 people, including 6 pre-apprentices and 11 apprentices in training levels 1 to 3.

## **Common Challenges**

1. Logistical and Financial Challenges
  - a. transportation
  - b. tools expenses
  - c. extended childcare costs
  - d. lack of awareness of financial aid
  - e. registering for their apprenticeship
  - f. finding a sponsor
  
2. Barriers to Learning
  - a. learning disabilities

- b. the technical aspects of in-school training (e.g., mathematics)
  - c. lack of learning supports
  - d. different experiences for apprentices training under an individual employer or union
3. Workplace Environment and Culture
- a. adapting to unpleasant settings or workplace banter
  - b. gender-based discrimination
  - c. interpersonal difficulties during on-the-job training

### **Potential Supports**

- a. mentorship programs
- b. creating more academic learning supports
- c. improving access to financial supports
- d. targeted interventions for underrepresented groups

We hope that these recommendations will support apprentices by highlighting different needs throughout the training journey.

### **Recommendations**

1. Further explore the challenges and barriers of the Certificate of Qualification (C of Q) or Red Seal exam.
2. Get support from the Ministry of Labour, Immigration, Training and Skills Development (MLITSD) to better utilize regional learning networks and Literacy and Basic Skills (LBS) programs to provide
  - a. more resources for existing programs
  - b. opportunities for new and innovative programs, services and supports

# Infographic

 **Adult Basic Education Association**  
Hamilton's Connection to Lifelong Learning

 **McMaster University**

 **Office of Community Engagement**

## Challenges and Barriers Faced by Apprentices

We found challenges and barriers faced by apprentices. Our aim was to better understand how adult education programs can help apprentices succeed.

### Research Methods

We held focus groups with apprenticeship experts to identify challenges and barriers.


We interviewed 18 apprentices to understand the challenges and barriers experienced during different stages of training.

 **in-school learning**


 **on-the-job training**

 **preparing for the certifying exam**


### Key Challenges Identified

 **Finding a sponsor**


- lack of sponsors willing to train
- harder for those without personal contacts in the trades

 **Navigating the system**


- limited supports available
- information and training opportunities are hard to find

 **Finances**

- lack of income during in-school learning
- high cost of supplies, tools, transportation and childcare


 **Transportation**


- unreliable public transit
- long commute times
- transportation costs

 **Literacy and numeracy**


- highest reported skills gap in math
- other skills gaps in literacy, test-taking and memorization
- few accommodations for diverse needs

### Suggested Supports

 increase awareness and accessibility of learning supports and resources.

 provide more financial support and build awareness of existing supports

 build opportunities for mentorship support

 personalize support for diverse groups like women, newcomers and people with learning difficulties

# Key Terms

<b>Apprentice</b>	Apprentices work in a trade and learn skills through on-the-job and in-school technical training. An experienced worker (journeyman) supervises apprentices during on-the-job training.
<b>Certificate of Qualification (C of Q)</b>	Apprentices become qualified skilled trades workers or journeymen by passing the C of Q. To do this, apprentices must pass the qualifying exam determined by the province or governing body.
<b>In-school training (In-class training)</b>	In-school training is a period of apprenticeship training in a classroom setting. It covers the theory of the trade. Apprentices must successfully complete the in-school training to move on to the next level of their apprenticeship and/or certification. In-school training makes up about 15% of an apprenticeship training program.
<b>Journeyman</b>	A journeyman is a skilled worker who has completed an apprenticeship program and the C of Q or equivalent (depending on the trade).
<b>Literacy and basic skills (LBS)</b>	An LBS program provides reading, writing, math, digital, soft skills and other skills upgrading. These programs help people reach their education, training and employment goals and/or achieve greater independence.
<b>On-the-job training</b>	On-the-job training is learning the skills of the trade on the job site. Apprentices are supervised by an experienced worker or journeyman.
<b>Pre-apprenticeship training</b>	Pre-apprenticeship programs are training programs funded by the Ministry of Labour, Immigration, Training and Skills Development (MLITSD). They prepare eligible people for a career in the skilled trades. Pre-apprenticeship programs are less than 52 weeks and often provide <ul style="list-style-type: none"> <li>• certifications</li> </ul>

	<ul style="list-style-type: none"><li>• safety supplies or equipment</li><li>• a paid work placement</li></ul> <p>Organizations offering these programs may also help participants find an apprenticeship after the program.</p>
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# Introduction

## Background and Context

Apprenticeship is a learning pathway for a career in the skilled trades. It includes a combination of technical and experiential learning. Apprenticeships involve practical, hands-on training and classroom-based learning. Apprentices gain skills in the trade as they work with experienced tradespersons. There are over 140 skilled trades in Ontario. Each of these trades falls into 1 of 4 sectors.

1. Construction (like construction worker and electrician)
2. Industrial (like welder)
3. Motive Power (like automotive service technician)
4. Service (like hair stylist or cook)

The Adult Basic Education Association (ABEA) is the adult learning network in Hamilton, Ontario. They offer educational pathway planning to help adults reach their educational goals. ABEA was established in 1983. They help people explore options and create plans to

- build their literacy and numeracy skills
- overcome barriers to education and training
- achieve personal and professional growth

ABEA helps people to explore local educational and training pathways. They also work with employers to address workplace skills and training needs.

ABEA supports people entering or currently enrolled in apprenticeship programs to be successful in their

- in-class training
- on-the-job experiences
- certification of qualification (C of Q) exam.

In 2022 and 2023, The Ministry of Labour, Immigration, Training and Skills Development (MLITSD) provided increased funding for ABEA. This was to increase connections and referral partnerships between apprenticeship stakeholders and Literacy and Basic Skills (LBS) programs.

## Purpose and Objectives

The Adult Basic Education Association (ABEA) wants to better serve pre-apprentices, apprentices and recent journeypersons. They want to understand what challenges apprentices face in their apprenticeship journey, with a focus on those related to learning. Based on brief background research, these may include

- access to information to understand and navigate apprenticeship training pathways, including how to apply for programs and find a sponsor/employer
- educational history, including prior learning challenges
- personal needs, including supporting dependents and finding childcare
- mental or physical health, including depression, anxiety and mobility challenges
- discrimination, including sexism and other discrimination faced by underrepresented groups
- financial barriers, including the cost of training, tools, materials and transportation

The research findings may point to barriers within the apprenticeship system and structure. It may also highlight other “pain points” in the apprenticeship journey.



## **The overall research question is**

“What challenges and barriers do apprentices face on-the-job, during in-school training and/or while preparing for and writing the certificate of qualification (C of Q) exam?”

## Report Structure

The report begins by explaining how we completed focus groups and interviews. Then we explain the findings. We finish with some key takeaways for Adult Basic Education Association (ABEA) and their partners to consider.

# Methodology

## Overview

We conducted an exploratory qualitative study in 2 phases. This means that we gathered information and summarized it to find common themes. In phase one, we led 2 focus groups with key stakeholders. This was to identify potential challenges and barriers during the apprenticeship journey. Details from these focus groups helped us write our interview guide. In phase 2 we interviewed pre-apprentices, apprentices and recent journeypersons to learn about their personal stories. This included challenges and barriers during in-class training, on-the-job training and/or while preparing for the certificate of qualification (C of Q) exam. We describe each of these 2 phases in more detail below.

### Phase 1: Mapping pain points in the apprenticeship journey and building the interview guide

We brought together a group of key apprenticeship stakeholders and led 2 virtual focus groups. The first group had 6 stakeholders and the second group had 2. The goal was to find any challenges and barriers linked to apprenticeship training. The stakeholders included professionals within ABEA’s network, including

- pre-apprenticeship and apprenticeship program staff
- Literacy and Basic Skills (LBS) instructors
- members of the Learning Networks of Ontario (LNO) Apprenticeship Committee
- labour market experts
- employment specialists

We prepared a facilitation guide for a discussion on the challenges and barriers that apprentices may face during their training journey (**Appendix 1**). We noted challenges during

- a. on-the-job training
- b. in-school or class training
- c. preparing for or writing the Certification of Qualification (C of Q) exam

First, we asked stakeholders to reflect on the challenges and barriers in each part of the apprenticeship journey. Then we led a group discussion to share their thoughts. We asked questions to better understand and then summarized the main ideas.

After each focus group, the researchers and the Adult Basic Education Association (ABEA) team discussed the findings and completed summary notes. We identified the major challenges and barriers discussed in the focus groups. We used these insights to build our interview guide. ABEA reviewed the first draft and gave feedback for the final copy.

## Phase 2: Interviews with apprentices at different stages in the journey

In the second phase of the research, we conducted semi-structured virtual interviews with current apprentices. This means that we built an interview guide with different questions based on their personal experiences and training level. We did this to better understand the challenges and barriers experienced at each stage of the journey. We used an interview guide to shape our interviews (**Appendix 2**). We edited the guide after trying it with a few participants. The updated guide included more questions about

educational challenges and supports (**Appendix 3**). We chose 1 to 1 interviews with participants instead of focus groups. We did this because the barriers or challenges discussed may be personal or sensitive. Participants might feel uncomfortable sharing these details in a group setting.

We used email to book interviews with most of our participants. ABEA contacted apprenticeship programs and stakeholders to recruit interviewees (**Appendix 4**) including

- pre-apprenticeship and apprenticeship training programs
- apprenticeship Training Delivery Agents (TDAs)
- employment services
- skilled trades unions
- regional learning networks
- other stakeholders

The Adult Basic Education Association (ABEA) also shared information about the study on their

- social media accounts (Facebook, Twitter, LinkedIn, Instagram)
- Literacy and Employment Partners Newsletter
- Literacy Networks of Ontario (LNO) Apprenticeship Connection newsletter

In later phases, ABEA staff and the research associates shared information with their personal networks to recruit friends and family members who may be eligible and interested. ABEA also recruited participants at in-person events and outreaches with pre-apprenticeship programs.

We recruited 18 participants for interviews. Interview participants included

- people currently enrolled in pre-apprenticeship or apprenticeship training
- journeypersons who completed their certificate of qualification (C of Q) exam in the past 12 months

First, we focused on recruiting participants who lived or worked within Hamilton. We later expanded our reach to include participants from surrounding regions. Participants received a \$25 gift card in exchange for their time.

A member of the research team and an ABEA staff member led the interviews together. We analyzed the interviews using content and inductive thematic analysis of the interview transcripts<sup>1</sup>. These methods supported our research questions. We reviewed each transcript to identify, organize and categorize common themes. We also compared findings across 3 sub-groups to find similarities and differences. To rate the intensity of each challenge, we analyzed how severe participants rated it and counted the number of people who identified the challenge area. We analyzed the data using an online software called Taguette. 2 researchers independently coded each transcript.

ABEA did a plain language audit of this research report to ensure the use of simple language and shorter sentences.

## Limitations

The main challenge was recruiting interview participants. First, we shared a link to the Google Form on social media for potential participants to sign up. We received a lot of responses. We reviewed the answers and found that many were fake. They were either computer-generated or possible scammers. We updated the contact form to include more free-text questions. This helped us detect fake responses. We also started using email as the main form of contact for potential interviewees. These updates helped decrease fake responses but may have led to selection bias<sup>2</sup>. This also made it challenging to reach our target sample size.

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<sup>1</sup> Content analysis is identifying specific challenges and issues that arose from our interview questions or probes. Inductive thematic analysis is identifying themes directly from the data without imposing pre-existing theories or categories.

<sup>2</sup> Selection bias happens when a sample is not random or doesn't reflect the general population. Selection bias can affect the overall result of a study, especially with a smaller sample.

We also had challenges identifying all the fake respondents. We scheduled and started several interviews with people who weren't eligible for our study. We used the opening questions in our interview guide to determine if the participant was eligible. We did this by asking specific questions about their

- trade
- apprenticeship level
- sponsor or employer
- identifying information

We compared their responses to responses on the contact form. Based on these opening questions we decided whether to continue with the interview or not.

## Findings

### Phase 1: Mapping pain points in the apprenticeship journey and building the interview guide

In the open-ended focus group discussions, apprenticeship stakeholders explored challenges and barriers faced by apprentices. We used the Google application Jamboard to brainstorm ideas on a virtual whiteboard (**Appendix 5**). Our group discussion expanded on these ideas. Here is a summary of the challenges and barriers we discussed.

#### **1. Transportation**

Apprentices often need to find their own transportation to training. This includes in-class, on-the-job and other training locations. Public transit isn't always a good option for apprentices. It can be unreliable or bus stops might be far from job sites. It was also mentioned that some training programs, like pre-apprenticeships, might offer transportation supports. Many apprentices rely on their own cars, but the cost of parking, gas and insurance adds up.

## **2. Literacy and numeracy skills**

Apprentices have a range of educational backgrounds with their own unique set of skills and challenges. Some apprentices completed high school and post-secondary education. Others had difficulties in school because of learning challenges or disabilities. Some returned to school as mature students to complete their high school diploma or equivalent.

### **Learning differences**

Some apprentices need learning accommodations for things like learning styles, disabilities, physical limitations and more. Instructors might not have the resources to meet each apprentices' unique learning needs.

### **Test-taking**

Apprentices write the Certificate of Qualification (C of Q) exam after they complete 3 levels of in-school training. The group noted that exams aren't always the best way to show an apprentice's skills. Some apprentices think this is an unfair way to measure their abilities on the job. This can lead to anxiety and pressure. Some apprentices even end their training journey because of the exam.

## **3. Communication barriers**

Language and communication barriers affect apprentices who speak English as a second or additional language. Newcomers or immigrants to Canada might have education or experience in the trades from their home country, but not in Canada. Newcomers must complete an apprenticeship in Canada to become certified and work in the trades. Language barriers can make this difficult.

## **4. Finding a sponsor**

Apprentice training can be different based on their employer or sponsor. Training may also differ based on the type of sponsor. For example, this can be an independent employer or a union. Employers might not know what skills they need to teach

apprentices at each level. This is also called the training standard. Employers might not connect training standards from in-class learning with apprentice's on the job training.

## **5. Apprenticeship pathways**

Apprenticeship training pathways can be confusing. There are many ways to complete an apprenticeship and each apprentice's journey is unique. Barriers to starting an apprenticeship are common. Many future apprentices don't know which pathway to take or where to go for help. Apprentices often start their journey by themselves and are not aware of the supports available.

### **Mentorship**

Mentorship is important for the skilled trades. This includes formal mentorship through an employer or sponsor. It can also be informal mentorship through other personal connections. Mentors offer support and guidance through the apprenticeship journey. Mentorship is also offered through an experienced journey person, but this isn't always available.

## **6. Finances**

Apprentices often have no source of income during their in-class training. Some apprentices work part-time or on contracts during this time. They're encouraged not to work so they can focus on school. Some apprentices might not be eligible for Employment Insurance (EI) during this time, or don't have enough time to get benefits before school starts. Apprentices may also work more than one job during their training journey. This can add more challenges and barriers.

## **7. Discrimination**

People who identify as female may face discrimination during the training journey. This can include gender stereotypes, sexism and misogyny.

## **Parenting**

Women and single parents also face added barriers. Childcare is costly and can lead to financial strain for apprentices. These apprentices might also take time off from training to care for a sick child. This can lead to challenges with their employer.

## **8. Substance use**

Some apprentices struggle with substance use disorders or need mental health supports during their training. Resources to cope with mental health challenges are not always available, accessible or known to apprentices.

We used these challenges and barriers to create interview questions and prompts for our interview guide (for Phase 2).

Phase 2: Interviews with apprentices at different stages in the journey

## **Participant demographics**

We interviewed 18 study participants (Table 1) including

- 6 pre-apprentices
- 12 apprentices

The most common trades among apprentices were

- construction craft worker (5)
- plumber (2)
- carpenter (2)
- electrician (2)
- automotive service technician (2)

One apprentice was preparing for the Certificate of Qualification (C of Q) exam. None had completed the exam. This made it difficult for us to learn about challenges with the



C of Q. 11 participants lived or worked in Hamilton. 17 participants completed high school.

**Table 1. Interview Participant Characteristics** (total participants = 18)






Characteristics	Number (%)
<b>Stage of apprenticeship</b>	
<b>Current apprentice</b>	
Pre-apprentice	6 (33.3%)
Level 1	4 (22.2%)
Level 2	5 (27.8%)
Level 3	2 (11.1%)
Unknown	1 (5.6%)
<b>Journeyman</b>	0 (0.0%)
<b>Trade</b>	
Construction craft worker	5 (27.8%)
Plumber	2 (11.1%)
Carpenter	2 (11.1%)
Electrician	2 (11.1%)
Automotive service technician	2 (11.1%)
Ship fabrication/repair	1 (5.6%)
Millwright	1 (5.6%)
Drywall taper/finisher	1 (5.6%)
Motive power technician	1 (5.6%)
General machinist	1 (5.6%)
<b>Location</b>	
Live or work in Hamilton	11 (61.1%)
Live or work outside of Hamilton	7 (38.9%)
<b>Education before Apprenticeship</b>	
Completed high school	17 (94.4%)
Did not complete high school	1 (5.6%)

## Main Findings

We found common challenges and barriers in the apprenticeship journey. We also found a common way to support apprentices which was through mentorship. We compared these challenges across 4 phases of the apprenticeship journey.

1. starting and registering
2. in-school training
3. on-the-job training
4. preparing for the Certificate of Qualification (C of Q) exam

Table 2 uses colour to rate challenges and barriers. Here is an explanation of what each colour means.

Red		severe challenges experienced by many participants
Orange		severe challenges experienced by few participants or small challenges experienced by many participants
Yellow		small challenge experienced by few participants
Green		things that may support or lessen the challenge(s)
White		doesn't apply to the stage of training
Grey		challenges with the C of Q exam <sup>3</sup>

The greatest challenges experienced by many participants (those in red) include

- transportation
- literacy and numeracy skills
- finding a sponsor
- finances

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<sup>3</sup> We cannot rate severity based on the experience of one apprentice.

**Table 2. Summary of challenges and barriers by training stage**

	Stages of apprenticeship training			
	Starting and registering	In-school training	On-the-job training	Preparing for the C of Q exam
Transportation			Red	
Literacy and numeracy skills		Red		
Learning differences		Orange	Yellow	
Test-taking				Grey
Communication barriers			Yellow	
Finding a sponsor	Red			
Workplace culture			Orange	
Apprenticeship pathway	Orange			
Mentorship			Green	
Finances		Red	Red	Grey
Discrimination			Orange	
Social interactions		Yellow	Orange	
Individualized support		Yellow	Yellow	
Self-doubt		Yellow		

The next section describes the challenges in Table 2 in order of severity (high to low) and the number of apprentices.

## Starting and registering for an apprenticeship

### **Finding a Sponsor**

We identified finding an employer or sponsor as a challenging part of the apprenticeship process. Participants explained the ways they found training opportunities online (like job boards and social media). Apprentices that didn't have a personal contact in the trades had more difficulty finding an employer or sponsor than those who had personal contacts (4 participants).

One plumbing apprentice compared the difficulty of finding an employer to discovering a "gold mine" (Participant #7). A general carpentry apprentice shared that he had challenges finding employment even when job postings stated, "no experience required". This apprentice felt that there was a disconnect between job postings and the hiring process. Electrical apprentices faced the same challenges. One electrical apprentice said, "I probably put out over 100 different resumes and only one company finally reached out to me" (Participant #18). An automotive technician apprentice shared that the process was unpredictable. "I just kept applying to as many apprenticeships that came up on [indeed.com] as I could" (Participant #19).

Challenges finding a sponsor can also lead to challenges completing an apprenticeship. Participants who left carpentry programs said it was due to

- a lack of employers willing to support apprentices
- the competitive nature of the trades
- a lack of incentives for companies to invest in apprentices

One participant said, "There are no companies that want to sign you up...it makes it extremely competitive to get into a company that will value [pushing] you through the schooling" (Participant #7).

## **Apprenticeship Pathways**

A few participants found the administrative parts of starting an apprenticeship challenging. This included

- finding an employer or sponsor
- registering with the Ministry of Labour, Immigration, Training and Skills Development (MLITSD)
- starting the apprenticeship training

5 participants described this process as easy. 1 participant described it as straightforward, and 1 participant said it was accessible. 3 participants described the registration process as time consuming. This included the time needed to visit different locations to complete paperwork. The most common challenge among participants was finding information. 4 participants were confused about where to find information for applications and other paperwork. This could be for things like identification numbers of high school credits.

3 construction craft apprentices faced a lot of challenges with online applications because of

- unclear educational requirements
- difficulty accessing information

Participant #10 explained that “it wasn’t...obvious where the information was...it was difficult to ask somebody for help”. 2 automotive technician apprentices faced challenges registering for training because the information was unclear and difficult to understand. Participant #19 said that “sometimes finding the information can be...confusing”.

## **Mentorship**

Some participants had mentors that helped them by giving them information about

- apprenticeship training
- forming connections

- facilitating job-seeking

## In-school Training

### **Literacy and numeracy skills**

Apprentices found learning technical terms challenging during in-school training. Many apprentices identified math as the most difficult subject (7 participants). Apprentices from the following trades identified math as a challenge

- construction craft worker (3 participants)
- plumber (1 participant)
- electrician (1 participant)
- automotive service technician (1 participant)
- carpenter (1 participant)

Apprentices who completed up to high school explained that they needed more time to understand technical concepts (2 participants). One participant, who didn't complete high school, shared the following.

"I could [kind of] tell, just with a pace that everybody else was working, that I was [kind of] falling behind [because] I wasn't sure [which] shortcuts I could take and... what I did to combat that would be just either... work harder in other ways that I knew confidently or... go and chat with someone who knew exactly what they were talking about..." (Participant #15).

Some apprentices knew of people who withdrew from training because the material was too difficult. One person explained, "[The] most important reason...is they weren't able to get... good grades...So they weren't able...to pass that particular [course] or particular program" (Participant #9).

### **Finances**

Some participants explained that they struggled with money during the in-school training portion. Travel costs and childcare were some of the major barriers. One apprentice

was concerned over the high daily commuting cost. “It’s costing me \$40 a day to drive here...but it is a barrier because I could be using \$40 on food or paying a bill” (Participant #10). Participants also commented on the limited income during in-school training. “We had 2 different guys who were in school and that was pretty rough for them because they had a whole family to feed” (Participant #6).

One plumbing apprentice had difficulties with earning less when he was laid off to complete in-school training. “So the way it works for us is every time you go to school you have to be laid off” (Participant #6). Some participants were also forced to go into debt because of the high training costs and lost wages. “That put me into more debt because I had to go get a loan so that I could pay for it because it required taking time off work and I just couldn’t do it on a minimum wage paycheck to paycheck” (Participant #18).

### **Learning differences**

3 participants shared their challenges with the fast-paced learning in the in-school training. One participant explained, “I’ve kind of had a little bit of trouble kind of catching up and understanding the college teaching process...” (Participant #2). One plumbing apprentice said that the coursework was overwhelming. “When they start, they do throw a lot at you, the first couple of weeks” (Participant #6). Some apprentices shared that sitting in a classroom and focusing on tasks for too long was difficult (4 participants). “This subject wasn’t necessarily difficult, but sitting down, just like sitting for a long time was awful. I always love like just working physically doing stuff. The subjects itself weren’t too hard – staying there was” (Participant #3).

2 apprentices identified having a disability. They reported that it was the cause of their learning differences. The disabilities identified were autism and Attention-Deficit/Hyperactivity Disorder (ADHD). One participant explained how their disability impacts some academic skills, such as test-taking.

“And [the instructor] was like, I’m getting you guys prepared. That’s why I give you only an hour to do this many questions. Because in theory, that’s how much time you would have on the [Certificate of Qualification] C of Q. And that does stress me out a little bit, to be honest. [...] Like I said, I’m working with the ADHD diagnosis. I’m hoping I don’t have to have a time restriction when I do the C of Q” (Participant #20).

Apprentices who were enrolled in a pre-apprenticeship or college program found that the in-class training was a big learning curve (4 participants). Participants with university experience also noted the stress of the fast-paced training (2 participants).

### **Interpersonal dynamics**

Social interactions also impacted the in-school training experiences. 2 participants explained that clashing personalities created stressful moments. “Some personalities don’t mesh. Some people argue and [are] like sandpaper against sandpaper” (Participant #2).

### **Individualized support**

According to 2 apprentices, there wasn’t very much support from instructors during the in-class portion. They thought the lack of support was due to

- large class sizes
- poorly engaged teaching styles
- limited feedback from instructors

“It’s a lot of people in a class when you have one teacher and an assistant... It’s just been frustrating and a real challenge” (Participant #19).

### **Self-doubt**

For some participants, adapting to a new training environment was emotionally challenging at first. Some apprentices said they felt nervous and stressed at the early stages of training. 4 pre-apprentices shared their feelings of self-doubt. “Just the nervousness some mornings... But after pushing through that, actually getting into class and getting into the motion of everything, it is comfortable” (Participant #2).



## On-the-job Training

### **Transportation**

Participants said they paid out of pocket for all transportation expenses like traveling to job sites (7 participants). Some participants came from rural areas. Driving 2 hours a day was common for them. 3 apprentices agreed that having a car made their lives easier. But having a car also came with some drawbacks because of the cost of gas and maintenance.

### **Finances**

Finances were another barrier for many participants (9). The cost of tools and transportation contributed to money concerns. Childcare was also another concern for some apprentices. One apprentice disclosed that they paid extra for extended childcare. “Daycare opens up at [a specific time], and the majority of job sites want you on-site for [an earlier time]” (Participant #17).

### **Workplace culture**

Once apprentices find an employer or sponsor, they need to navigate their new work environments (8 participants). One carpentry apprentice talked about working in different locations like an insulation plant. They described the insulation plant as “not the cleanest, most pleasant place” (Participant #14). Another apprentice shared that they’re still getting used to their new work environment. “Learning the workplace banter and getting used to that, it’s still kind of taking a while to get used to” (Participant #15).

### **Discrimination**

2 electrical apprentices experienced gender-based discrimination during on-the-job training. Naturally, this experience impacted their work environment in a negative way. A female apprentice described feeling undervalued. “As soon as you hear the term ‘female’ apprentice, you’re completely ignored as someone of value” (Participant #18). Another female apprentice shared how they were treated differently based on their gender, but were not openly discriminated against.

“I don't know what it is, but it's a bunch of old men, and I am a young girl who comes in, so usually they don't have the same kind of sauce with me, so fights that they've gotten in with other millwrights they're just avoiding with me, which is quite nice to be honest and unexpected, too.” (Participant #3).

### **Interpersonal dynamics**

Many participants mentioned interpersonal challenges during the on-the-job training (6 participants). 6 participants described their co-worker's attitudes as intimidating, aggressive, unsupportive and judgmental. “It's not outright discrimination. [...] But when you cluster a bunch of [...] tradesmen together, it feeds off each other, and it just is not a very positive atmosphere” (Participant #7). This participant also described how co-workers often used racist, derogatory and judgemental language on jobsites. These behaviours appeared to be normalized, “you kind of just try and get through it” (Participant #7).

One female apprentice shared how “it's easier to get rid of one woman that's causing problems than to change an entire crew of men” (Participant #4). So, there aren't many consequences for discrimination or hostile actions.

### **Self-doubt**

An apprentice shared that some people dropped out of millwrighting because the work was challenging and unpredictable (1 participant). While in training, some apprentices said that they were overwhelmed (2 participants) and stressed (4 participants). Some apprentices even felt unsuited for the job (3 participants). “Not everybody is meant for this specific apprenticeship... Every situation is different... people get incredibly frustrated and not sure where to go” (Participant #3).

### **Communication barriers**

Language barriers and a fast-paced work environment can make it difficult to integrate into the workplace culture. 2 international students explained that language barriers made it difficult to learn and form connections.

### **Individual Support**

2 apprentices explained that at the end of their training it was difficult to find experienced tradespeople. As a result, these apprentices struggled to find job placements and mentorship opportunities.

### **Learning differences**

Level one apprentices had difficulties with machinery (3 participants). These apprentices also explained that getting used to the workplace is not an easy task (2 participants).

Preparing for the Certificate of Qualification (C of Q) Exam

\*these challenges are based on the perspectives of one individual

### **Test-taking**

One participant explained that it's difficult to find affordable resources to prepare for the C of Q exam. They said they spent \$9,000 on a course that didn't prepare them enough to take the exam.

### **Finances**

An apprentice shared their struggle to manage expenses and work while studying for the exam.

## **Key Takeaways**

### Comparing the Findings of Phase 1 and Phase 2

Figure 1 lists the barriers mentioned by stakeholders in focus groups compared to those identified by apprentices. The findings from the focus group and the interviews have similarities and differences. The focus groups and interviewees both discussed the costs of

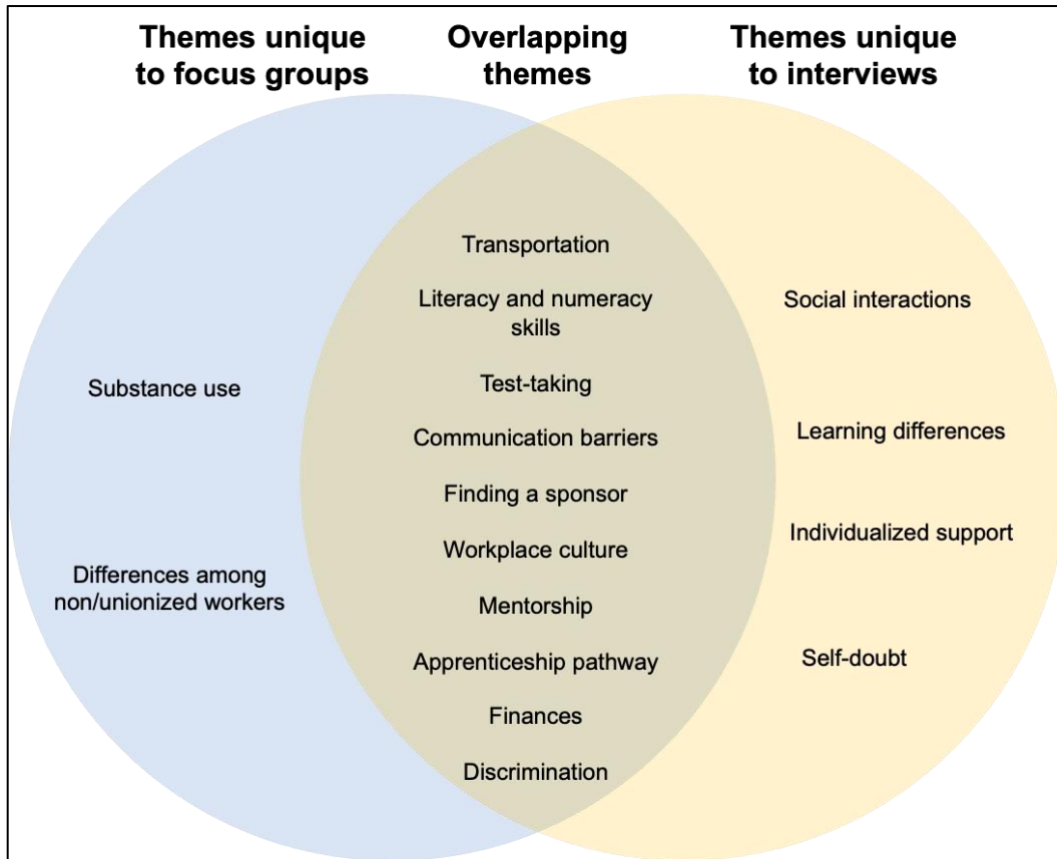
- transportation
- safety equipment
- tools

The cost of tools is particularly difficult for apprentices beginning their training. Both groups discussed the challenges of finding employers and sponsors. They also shared their concerns with the administration and coordination of apprenticeship programs.

There are some themes from Phase 1 that didn't come up as issues in the interviews. The focus groups suggested that apprentices may struggle with preparing to write the Certificate of Qualification (C of Q) exam. We only interviewed one participant who could discuss the exam. As a result, we can't draw any meaningful conclusions about preparing for the exam.

We didn't have participants from certain trades so we can't confirm challenges about specific trades. The focus groups expected that apprentices enrolled in the same trade would have similar experiences and challenges. We didn't ask participants whether their sponsor was part of a union. As a result, we can't compare the experiences of apprentices who worked in unionized and non-unionized environments. None of the participants disclosed any challenges with substance use.

One thing that only came up with participants was the challenging social interactions with peers and co-workers. These challenges appeared in both in-school and on-the-job training. Social interactions were not discussed during the focus group sessions.



**Figure 1. Comparing challenges and barriers identified in focus groups and interviews**

**Alt Text**

The image shows two intersecting circles. The first is labelled Themes Unique to Focus Groups. The second is labelled Themes Unique to Interviews. The two circles overlap and highlight a third category labelled Overlapping Themes. Each category highlights different findings.

The circle labelled Themes Unique to Focus Groups lists the following

- substance use
- differences among non-unionized and unionized workers

The circle labelled Themes Unique to Interviews lists the following

- social interactions
- learning differences
- individualized support
- self-doubt

The third category labelled Overlapping Themes includes

- transportation
- literacy and numeracy skills

- test-taking
- communication barriers
- finding a sponsor
- workplace culture
- mentorship
- apprenticeship pathway
- finances
- discrimination

## Intervention Areas

We found different challenges in our interviews. We've pulled together these findings into 3 key intervention areas to set up next steps.

### **1. Logistical and financial challenges**

Participants mentioned challenges with transportation and money. Many financial barriers impacted participants in-school and on-the-job including

- need for a personal car
- transportation costs
- long commute times
- costs of equipment and tools
- extended childcare

Most participants didn't know about financial aid. They didn't get a lot of guidance from their employers. This may mean that there's limited information being shared about financial supports for apprentices. This could be for things like basic living expenses during their training.

Participants also commented on the process of registering for an apprenticeship and getting a sponsor. For some participants this process was easy. But others really struggled. A small number of participants said that the process was very difficult. A common source of confusion was identifying the educational requirements needed and accessing information about their application. It's difficult to determine if these

difficulties are because of low digital literacy skills or if the application process is poorly designed. We would need to follow future apprentices through the application process to fully understand where people have difficulties.

Some participants said that they struggled to find a sponsor. This may mean there's a need to include better career supports like counselling and workshops into the apprenticeship process. It's also important to highlight resources like job boards that list employers searching for apprentices.

## **2. Learning Challenges**

Many participants had difficulties with technical concepts during their in-school training. Those without a high school diploma or with a learning disability struggled to memorize concepts and take tests. Several of these participants said they didn't know about learning supports or accommodations available. Some participants saw students dropping out because of difficulties with schoolwork. This might point to a larger systemic issue that needs to be addressed.

Learning experiences on-the-job were different depending on the employer. There were some differences among participants when their employer was connected to a union. Many participants explained that employers didn't know about training standards. This created a disconnect between in-class and on-the-job learning. There likely needs to be more consistency between the in-school and on-the-job training.

## **3. Workplace environment and culture**

The interviews outlined many unique challenges in the workplace environment and culture. Some participants had a hard time adapting to workplace environments because of location or workplace culture. 2 electrical apprentices said that they experienced gender-based discrimination. They explained that they felt undervalued, disregarded and were treated differently because of their gender. There were concerns about

- negative social interactions

- aggressive attitudes
- judgemental behaviours
- normalized racist and derogatory language

## Suggested Supports

We've discussed a few barriers shared by apprentices across the apprenticeship journey. It's beyond our area of expertise to make specific recommendations for interventions and next steps. Adult Basic Education Association (ABEA) and its partners will need to decide what to do next. More research may be needed to understand the issues we've discussed and how common they are. We have included some ideas for possible solutions that can with further discussion.

### **Mentorship**

Participants identified mentorship as an important part of learning throughout all training stages. Almost everyone said that having a knowledgeable and supportive mentor helped them get through their training. Mentors motivated participants to pursue an apprenticeship and became a source of support. Some participants had their first experience in the trades through their mentors. Many participants explained that their mentors made the apprenticeship journey easier to navigate. In some cases, mentors helped apprentices find sponsorship or employment at their companies. Mentorship programs can improve the training experience. This is especially true for people who don't have pre-existing connections in the trades. Mentorship programs may also be very helpful for newcomers who may need support adjusting to new workplace environments.

### **Academic Supports**

Learning supports like instructors and peers played important roles in apprenticeship training. Apprentices found one-to-one meetings with instructors very valuable. They discussed learning accommodations like additional time for test-taking. Some apprentices mentioned the lack of additional supports like tutors for trade-specific



content. These resources can help apprentices prepare for tests or the Certificate of Qualification (C of Q) exam. Although Literacy and Basic Skills (LBS) programming offers skills upgrading, not many people know about these services. Some apprentices reported having learning disabilities or challenges that need accommodations. They also disclosed that accommodations weren't made available or known to them.

### **Financial Support**

Most participants had difficulties getting financial assistance. This could be grants, loans and Employment Insurance. They mentioned the personal cost of completing an apprenticeship and the limited income during in-school training. This highlighted a need for additional financial supports. Many participants explained that they didn't know about financial aid resources. They also reported that employers didn't provide a lot of guidance. Creating a resource about all financial supports available will help apprentices navigate financial challenges. More information about potential training costs will help apprentices prepare for future expenses. Examples of these are equipment costs and transportation fees.

### **Targeted Support for Underrepresented Groups**

Some of the groups that faced unique challenges during the interviews include

- women
- international students
- people out of high school for many years
- people who didn't complete high school

Women experienced gender-based discrimination and had challenges balancing parenting responsibilities with training demands. Creating gender-specific mentorship programs can help create a connection to role models and supports. Providing childcare assistance may help to create a more accessible training environment. One way to reduce gender-based discrimination is to implement policies and training that focus on diversity and inclusion.

The main challenges among international students include

- language barriers
- cultural adaptation
- being unfamiliar with the Canadian apprenticeship system

Offering language classes alongside training could help improve communication skills. Creating an orientation program for newcomers could be helpful. It could assist them to become more familiar with the Canadian apprenticeship system and cultural norms. Creating networking opportunities might also be helpful for international students. This might help them connect with peers and other professionals in the field.

For participants who attended school years ago, getting used to an in-school environment is difficult. An apprentice suggested that refresher courses in core subjects like math and literacy would help with re-entry into school. Counselling for career guidance would also be helpful. Participants who didn't complete high school had challenges with foundational academic skills. To address these gaps, it's essential to create greater awareness about upgrading programs that can build literacy and numeracy skills for the trades. Apprenticeship programs can also offer trades-specific tutoring opportunities. These can help apprentices that need additional support during in-school training.

## Conclusion

We found that apprentices face many challenges at the different stages of their training. Some of these challenges are

- technical
- academic
- financial
- personal

Including learning supports to help apprentices through their different stages of training is key. Our small sample doesn't represent the experience of all apprentices. But the information we gathered can inform future research and conversations to develop apprenticeship programming. This work should target more participants who can discuss the Certificate of Qualification (C of Q) exam. This information could help us understand the challenges at this stage. In addition, we highlighted possible ways that learning networks and Literacy and Basic Skills (LBS) programs across Ontario can further support apprentices.

# Appendices

## Appendix 1 – Focus Group Facilitation Guide

Item	Description	Facilitator
1. Introductions (5 minutes)	<ul style="list-style-type: none"> <li>• Thank you for attending this focus group and supporting our research project, “Challenges and Barriers to Success Among Apprentices.” This project is being led by the McMaster Research Shop and ABEA.</li> <li>• Facilitators introduce themselves</li> <li>• Attendees provide brief introductions about their role/organization as it pertains to apprenticeship training</li> </ul>	Research associate #1
2. Overview of Research Project (5 minutes)	<p>The Research Shop provides an overview of the project</p> <ul style="list-style-type: none"> <li>• Rationale - ABEA wants to support people entering or currently in apprenticeship programs to be successful in their in-class training, on the job, and with their final certification of qualification exam. To best serve pre-apprentices and apprentices, ABEA need to better understand their individual stories. This will help us thematically identify barriers or challenges they face and how LBS can provide appropriate interventions or advocacy to support their success.</li> <li>• Objective Our project aims to identify challenges and barriers encountered during the apprenticeship journey. The overall research question is - What challenges and barriers do apprentices face on-the-job, during in-school training, and/or while preparing for and writing the certification of qualification exam?</li> </ul> <p>Methodology:</p> <ul style="list-style-type: none"> <li>• This exploratory qualitative study will be conducted in two parts.</li> <li>• First, we will seek the opinions of key stakeholders – in this focus group! – to identify some challenges and barriers. Insights from this focus group will inform the development of an interview guide.</li> </ul>	ABEA & research associate #2

	<ul style="list-style-type: none"> <li>• Then, we will interview individuals currently or previously enrolled in apprenticeship training programs to understand their individual stories. Our exploratory findings may point to structural and systemic barriers, as well as other “pain points” in the apprenticeship journey.</li> </ul>	
<p>3. Overview of the Focus Group Activity (5 minutes)</p>	<ul style="list-style-type: none"> <li>• Today, we will be mapping the apprenticeship journey and identifying pain points (challenges and barriers) along this journey.</li> <li>• “Pain points” may include - educational history; literacy or numeracy challenges; learning challenges/disabilities; mental or physical health; or self-efficacy.</li> <li>• <b>Are there any questions before we begin?</b></li> <li>• We will be using a JamBoard to begin our discussion today. Can everyone please open the link in the chat?</li> </ul>	<p>Research associate #2</p>
<p>4. Mapping the apprenticeship journey (40 minutes)</p>	<ul style="list-style-type: none"> <li>• Begin with an open discussion - Let’s begin with a brainstorm. At the top of your mind, what are some challenges or barriers that apprentices may encounter during their training journey? <b>(Add ideas to Jamboard)</b> <ul style="list-style-type: none"> <li>○ Give participants ~5 minutes to complete this activity. After responses appear, the facilitator will ask participants if they would like to expand on any items they listed.</li> </ul> </li> <li>• Focus on different points in the apprenticeship journey - What are some challenges and barriers that impact different points in the apprenticeship journey? <ul style="list-style-type: none"> <li>▪ On-the-job training</li> <li>▪ In-school/class training</li> <li>▪ While preparing for and writing the certification of qualification exam</li> </ul> </li> <li>○ Go one-by-one to discuss challenges/barriers that are unique to each of the three stages.</li> <li>○ Use the organization feature in Jamboard to group based on when/where these challenges/barriers occur in the apprenticeship journey.</li> </ul> <ul style="list-style-type: none"> <li>• Probing questions to encourage discussion</li> </ul>	<p>Research associate #1</p>

	<ul style="list-style-type: none"> <li>○ Do you think challenges/barriers are different for... <ul style="list-style-type: none"> <li>▪ Those completing trades in different sectors? (for example, construction, industrial, motive power, service)</li> <li>▪ Those who started their apprenticeship via different pathways? ( Traditional route, union or industry approved training, post-secondary certificate or diploma programs, pre-apprenticeship programs, Ontario Youth Apprenticeship Program)</li> <li>▪ Those who completed pre-apprenticeship programs?</li> </ul> </li> <li>○ What are some skills that pre/apprentices may find challenging to develop or strengthen? (such as, communication, creativity and innovation, problem solving, reading, digital literacy, collaboration, adaptability, writing, numeracy)</li> <li>○ What are some factors that may affect the completion rates of apprenticeship training? (such as, personal or family issues, financial constraints, competing jobs)</li> </ul>	
<p>5. Debrief and closing (5 minutes)</p>	<ul style="list-style-type: none"> <li>● Provide an opportunity for attendees to share any final thoughts, ask questions about the project, etc.</li> <li>● Thank attendees for their participation.</li> </ul>	<p>Research associate #2</p>

## Appendix 2 – Interview Guide (Version 1)

Thank you for participating in our study and joining this interview today!

I am \_\_\_[name]\_\_\_ from the Adult Basic Education Association (ABEA) and I am joined by \_\_\_[name]\_\_\_ from McMaster University. We are conducting this study to better understand the apprenticeship journey from current apprentices and recent journeypersons.

As you may know, ABEA is an adult learning network in Hamilton, Ontario. They work with people to explore their educational options and develop educational plans to help people reach their goals. ABEA supports people entering or currently enrolled in apprenticeship programs.

To better serve pre-apprentices, apprentices, and journeypersons, ABEA wants to understand what challenges are faced in the apprenticeship journey.

We're interviewing you today to learn more about your experiences and to understand what challenges and barriers you may have faced as an apprentice. ABEA will use this information to explore ways that adult education programs can better help apprentices.

The research team at McMaster University is a neutral (third-party) entity conducting this study. Your identity will remain confidential from your apprenticeship instructors and program staff, employers, and others. We will only be using your personal information (your name and email address) to coordinate this interview and send your honorarium after the interview.

Over the next 30 minutes, we'll be asking you a few questions about your experiences.

**Do I have your consent to begin the interview and record your responses?**

### Section A - Introductions/Overview

1. To begin, I would like to learn about **where** you're at in your apprenticeship journey.
  - a. Can you tell me about the apprenticeship you are pursuing?
    - i. (Prompt) What is your skilled trade?
    - ii. (Prompt) Are you a pre-apprentice, apprentice in level 1 training (or level 2 or 3), or nearing the end of training and preparing for the certification exam?
  - b. Did you complete your Grade 12 diploma or equivalent? How long were you out of high school before beginning your apprenticeship?
    - i. What were your favourite subjects?
    - ii. Were there any subjects that you found difficult? If so, why were they difficult?

- iii. Did you have any learning challenges or require extra help in school? (For example, resource class, Individual Education Plan or IEP, special testing, etc.)
    - c. Did you take any trades courses in high school?
      - i. (Prompt) If so, which ones? (e.g., woodshed, shop)
      - ii. Did you find them valuable for your current apprenticeship?
    - d. What made you interested in the trades?
      - i. (Prompt) What motivated you to pursue an apprenticeship?
    - e. What stage of your apprenticeship journey are you in?
      - i. (Prompt) Have you completed...
        - 1. In-school training? **If “no,” skip section B.**
        - 2. On-the-job training? **If “no,” skip section C.**
        - 3. Certification of qualification exam? **If “no,” skip section D.**
          - a. **Note: If “yes,” start with section D and then go through sections B and C if there is time.**
2. I understand there are many ways to start an apprenticeship. Can you tell me about how your journey started?
- a. (Prompt) Where did your journey begin? For example, did you complete the Ontario Youth Apprenticeship Program, a pre-apprenticeship program, a post-secondary certificate or diploma program, union or industry-approved training, or did you directly connect with an employer?
  - b. How did you learn about the requirements for your apprenticeship program?
    - i. Did you meet these requirements originally?
      - 1. (Prompt) If not, how did you eventually meet them?
    - ii. Did you have a family member, friend, or other mentor who previously completed an apprenticeship and was able to offer guidance?
3. I'd like to talk about your experience registering for an apprenticeship with your local apprenticeship office.
- a. Were there any pieces of the registration process you found challenging?
  - b. Did you register online or in-person?
    - i. If online, how would you rate the level of difficulty of the online application process? (For example, easy, manageable, or difficult)
      - 1. (Prompt) Why did you choose this rating?

## Section B: In-school training

4. Let's talk about the in-school training of your apprenticeship.



- a. Was in-school training readily available for your trade?
    - i. (Prompt) How did you find (or learn about) this training program?
  - b. How did you find travel to and from your training?
    - i. (Prompt) Did you need to travel far? Did you have any difficulties finding transportation?
    - ii. (Prompt) Did you commute in a personal vehicle or use public transportation?
  - c. Did you require any accommodations to attend in-school training? (e.g., learning supports)
    - i. Did you feel like your accommodation needs were taken care of?
  - d. Overall, how did you find the in-school training experience? E.g., easy, moderate, difficult?
    - i. Were there any pieces of the training that you found difficult? If yes, what were they?
    - ii. In general, did you experience any educational challenges or barriers during this time? If so, what were they?
5. Are there any skills you didn't have or feel like you needed to get better at during your in-school training?
- a. (Prompt) This could be things like communication, reading, writing, numeracy/math, or digital technology skills.
  - b. Did you feel that you were prepared for your in-school training? If no, why not?
  - c. How would you rate the level of difficulty of the in-school training? For example, easy, manageable, or difficult. Why did you choose this rating?
  - d. Did you upgrade any of your skills before starting in-school training? If so, in what ways?
  - e. Are you aware of adult education programs that can help you review and prepare for apprenticeship training?
6. Are there any other challenges or barriers you experienced during in-school training? If so, what were they (if you feel comfortable sharing)?

### Section C - On-the-job training

7. I'd like to learn more about the on-the-job portions of your training. How did you find an employer or sponsor?
- a. Did you contact a guidance counsellor, college, Employment Ontario, unions or trade associations, local companies, or search online?

- b. Who were your mentors during on-the-job training? For example, was there a journey person that you worked with closely/directly?
    - i. (Prompt) How effective were they in your training?
  - c. Did you require resources to be successful with on-the-job training? For example, tools, childcare, or transportation.
  - d. Was your employer/sponsor knowledgeable about the training standards and learning expectations for your trade?
8. How did you learn about expectations on-the-job? This could be things like what to wear, what to bring, what “on time” means, or how to communicate with co-workers.
- a. (Prompt) Did you experience any communication barriers on the job?
9. Overall, how did you find your on-the-job training experience?
- a. Did you experience any other challenges or barriers during on-the-job training, if any?
    - i. (Prompt) Have you faced any discrimination while on-the-job? (e.g., based on your sex/gender, age, race/ethnicity, newcomer status, language skills) disability?

#### **Section D: Certification of qualification exam**

10. Let's discuss your experiences with the certification of qualification exam. Can you walk me through your experience preparing for and writing this exam?
- a. How did you prepare for the exam?
    - i. (Prompt) What test prep was available, if anything?
  - b. How did you find balancing test prep with working or completing in-class training?
    - i. (Prompt) Did you find it easy or hard? What were the challenges? What strategies did you use?
11. Have you ever required accommodations with test-taking (e.g., in high school)?
- a. Were you able to use these supports/resources for the certification of qualification exam?
12. Did you experience any other challenges or barriers while preparing for or writing the exam? If so, what were they?

## Section E - General questions/Conclusion

13. Do you know of anyone that has dropped out of their apprenticeship program?

- a. (If yes) From your perspective, were there any reasons why that person/those people dropped out before finishing?

14. If you're comfortable sharing, what financial resources supported you through your apprenticeship? For example, aside from money you earned while on-the-job, did you receive any grants or other support from the government?

- a. Did you face any financial hardships or challenges during your apprenticeship?
  - i. (Prompt) Did you ever require a second (or multiple) job(s) during your training to supplement your income?

15. Aside from what we already discussed, did you experience any other challenges or barriers during your apprenticeship journey?

- a. Were there any difficult or stressful moments that you can remember? If so, what were they (if you feel comfortable sharing)?

16. Thank you for sharing your experiences with me so far. Before we wrap up, do you have any final thoughts or comments?

Thank you very much for participating in this interview. I will turn off my recording now.

## Appendix 3 – Interview Guide (Version 2)

### Section 1A – Introduction/Overview

Topic	Question	Prompt
Apprenticeship background	What apprenticeship program are you in?	What is your skilled trade? For example, welder, electrician, hairstylist, etc.
	What level are you in your apprenticeship?	Pre-apprentice? Apprentice? (or level 2 or 3), or nearing the end of training and preparing for the certification exam?
	Why did you decide to do an apprenticeship?	
	What is the highest level of education you completed before starting your apprenticeship?  (If didn't finish high school) We're interested in learning about the journeys people take to starting an apprenticeship. If you're comfortable, would you mind sharing why you didn't finish high school?	For example, did you finish high school? A college degree? A university degree? A certificate or diploma?
	How difficult did you find your high school classes? For example: not difficult, a little bit difficult, very difficult  (If hard) – what was difficult about your classes?	What was your favourite subject in high school?  What was your least favourite subject in high school?  Did you struggle with a particular subject?  Did you ever need an Individual Education Plan (IEP), access to a resource room, special testing?

	<p>Did you take any trades courses in high school?</p> <p>(if yes) - Do you feel like the trade courses helped you prepare for your current apprenticeship? If no – were trades courses offered at your high school? Would you have taken trades courses if they were available?</p>	<p>Some examples of trades courses include – woodshop, shop.</p>
	<p>When did you start your apprenticeship?</p> <p>How much time was it between when you finished school and started your apprenticeship?</p> <p>(If more than a year) What did you do in the [time] between finishing school and starting your apprenticeship?</p>	<p>E.g., did you get any credits from school? Upgrade any of your skills?</p>

### Section 2A – Apprenticeship stages

Stage	If no	If yes
In-school training	Skip Section B – In-school training	<a href="#">Continue to Section 3A</a>
On-the-job training	Skip Section C – On-the-job training	<a href="#">Continue to Section 3A</a>
Certification of qualification Exam	Skip Section D - Certification of qualification exam	<a href="#">Skip to Section D</a>

### Section 3A – Starting and Registering for an Apprenticeship

Topic	Question	Prompt
Starting an apprenticeship	How did you get into your apprenticeship program?	<p>Did you:</p> <ul style="list-style-type: none"> <li>• Complete OYAP</li> <li>• Complete a pre-apprenticeship</li> </ul>

	How did you find an employer or sponsor?	<ul style="list-style-type: none"> <li>• Complete a secondary certificate or diploma program</li> <li>• Complete union or industry-approved training</li> <li>• connect with an employer</li> </ul> <p><b>Did you get help from a...</b></p> <ul style="list-style-type: none"> <li>• guidance counsellor</li> <li>• employment Ontario</li> <li>• union or trades organizations</li> <li>• local companies</li> <li>• online</li> </ul>
	How did you learn about the educational requirements for your apprenticeship program?	Ex. Courses/credits needed, grades required, etc.
	Did you meet these requirements at the time? (If no) How did you eventually meet them?	
	Did anyone help you register for your apprenticeship program? If so, who?	
Registering for an apprenticeship	Did you find any parts of the registration process difficult? If so, which parts and why?	
	Did you register online or in-person?	<p>If online – how would you rate the difficulty of the online application process? Easy, manageable or difficult.</p> <p>Ask why they gave this rating.</p>

**Section B – In-School training**

**\*Skip if they have not completed in-school training**

Topic	Question	Prompt
In-school training	Was in-class training available for your trade?	Was it difficult to find a training program? How did you learn about this training program?
	Tell me about your in-class training: -Where was it? -How often was it? -Was it online vs. in-person vs. hybrid?	
	How did you find travel to and from your training?	Did you need to travel far?  Did you have any difficulties finding transportation?  Did your employer help you with transportation?
	How did you find the in-school training experience? Easy, moderate or difficult?	Where there any parts of the training you found difficult? (Get them to elaborate)
	Did you need any help during your in-school training? If so, what help did you get (if anything)?	For example, did you get any learning supports? (ex., tutor, access to a resource room, support through accessible learning services (if completed through a college like Mohawk), after hours support from an instructor, support for learning disabilities/challenges, etc.) Do you believe your accommodation needs were met?
	Did you do anything to help you prepare for your in-school training? If so, what did you do?  Were you aware of any programs that can help you prepare for apprenticeship training?	Did you upgrade any of your skills? If so, what?  For example, adult education programs, credit programs, targeted training.

	Did you experience any other challenges or barriers during your in-school training?	What were they? *if they feel comfortable sharing
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**Section C - On-the-job Training**

**\*Skip if they haven't completed on-the-job training**

Topic	Question	Prompt
	Tell me a bit about your on-the-job training. What did that look like for you?	How much training and/or support did you receive?  Did you have a mentor? (If yes) Was your mentor helpful?
	Was your employer/sponsor knowledgeable about the training standards and learning expectations for your trade?	
	How did you learn about the job expectations?	This could be things like what to wear, what to bring, what "on time" means, or how to communicate with co-workers.  Did you ever feel like you weren't meeting the job expectations? (If yes, get them to elaborate)  Did you experience any communication barriers on the job?
	Overall, how did you find your on-the-job training experience?	Were there any parts of the job or training that was hard for you? (If yes, get them to elaborate)  Have you faced any discrimination while on-the-job? Based on your sex/gender, age, race/ethnicity, newcomer status, language skills) disability?



## Section D – Certification of qualification Exam

\*Journey persons only, skip otherwise

Topic	Question	Prompt
Certification of Qualification Exam	Can you walk me through your experience preparing for and writing the certification of qualification exam?	How did you prepare for the exam?  Did you use any test preparation programs or services?
	How did you find balancing test prep with working or completing in-class training?	Did you find it easy or hard?  (If hard) What were the challenges?  What strategies did you use to help you prepare for your exam?
	Have you ever required accommodations with test-taking (maybe in high school)?	Were you able to use these supports/resources for the exam?
	What other challenges or barriers, if any, did you experience while preparing for or writing the exam?	

\*If there is time go through Section B and C

## Section E – General Questions/ Conclusions

Topic	Question	Prompt
General Questions and Conclusion	Do you know of anyone that has dropped out of their apprenticeship program?	(If yes) From your perspective, were there any reasons why that person/those people dropped out before finishing?
	If you're comfortable sharing, what financial resources supported you through your apprenticeship?	For example, aside from money you earned while on-the-job, did you receive any grants or other support from the government?
	Did you ever require a second (or multiple) job(s) during your training to supplement your income?	If yes – was this during the in-class training? Did you seek out any financial supports?

	<p>Aside from what we already discussed, did you experience any other challenges or barriers during your apprenticeship journey?</p>	<p>Were there any difficult or stressful moments that you can remember? If so, what were they (if you feel comfortable sharing)?</p> <p>Is there anything that stands out as being particularly challenging during your apprenticeship journey that you wish you had help with?</p>
	<p>Are there any supports you'd like to see in place for apprentices?</p>	<p>Do you have any suggestions that could make this process easier?</p>
	<p>Thank you for sharing your experiences with me so far. Before we wrap up, do you have any final thoughts or comments on your apprenticeship journey?</p>	

Note: Highlighted cells were prioritized to be asked during interviews.

## Appendix 4 – Interview Recruitment Email

Hi \_\_\_\_\_,

Please share this email with apprentices and journeypersons who may be open to sharing their experiences.

\*\*\*

Adult Basic Education Association (ABEA) is the adult learning network in Hamilton. We're working with the McMaster Research Shop to explore common challenges and barriers faced by apprentices. This research will help us identify ways to support apprentices in Ontario through adult education programming.

Interviews will be in July 2023 for around 30 minutes using Zoom.

The 1st 30 participants will get a \$25 virtual gift card.

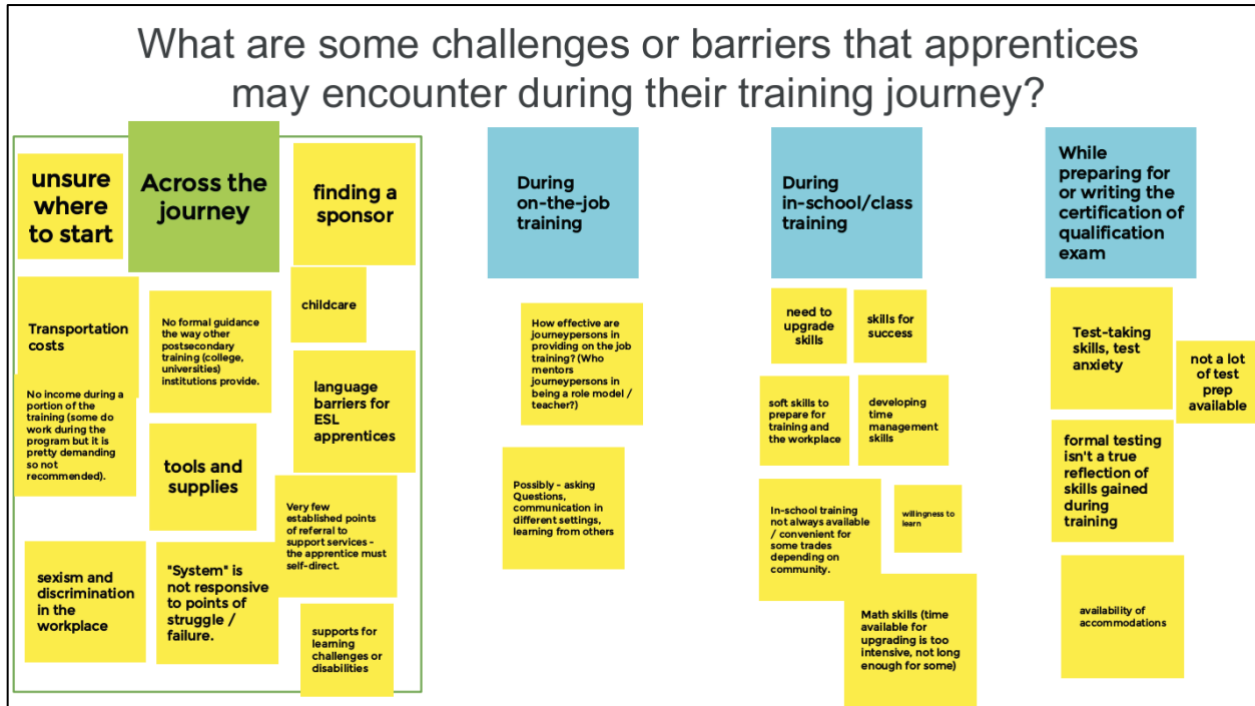
If interested, please [complete this form](#) to connect with us.

If you have any questions, you can reach us via email ([correirh@mcmaster.ca](mailto:correirh@mcmaster.ca)), phone (905-527-2222 ext. 3), or text (289-275-1685).

Participation is entirely voluntary. Any information shared during the interview will be kept strictly confidential. The data collected will be used solely for research purposes and will be anonymized to ensure privacy.

## Appendix 5 – Jamboard Visuals

### Jamboard generated during Focus Group #1:



### Jamboard generated during Focus Group #1

A graphic with the title “What are some Challenges or barriers that apprentices may encounter during their training journey?” The graphic shows a board that is divided into four categories including

- Across the journey
- During on-the-job training
- During in-school/class training
- While preparing for or writing the certificate of qualification exam

Each category lists possible challenges identified by focus group number 1. The challenges identified in the across the journey category, in no particular order, include

- unsure where to start
- finding a sponsor
- transportation costs
- no formal guidance the way other post-secondary training (college and universities) institutions provide
- childcare
- no income during a portion of the training (some do work during the program but it is very demanding so not recommended)

- tools and supplies
- language barriers for ESL apprentices
- sexism and discrimination in the workplace
- system is not responsive to points of struggle/failure
- very few established points of referral to support services – the apprentice must self-direct
- supports for learning challenges or disabilities

The challenges identified in the during on-the-job training category, in no particular order, include

- how effective are journeypersons in providing on the job training? who mentors journeypersons in being a role model/teacher?
- possibly asking questions
- communication in different settings
- learning from others

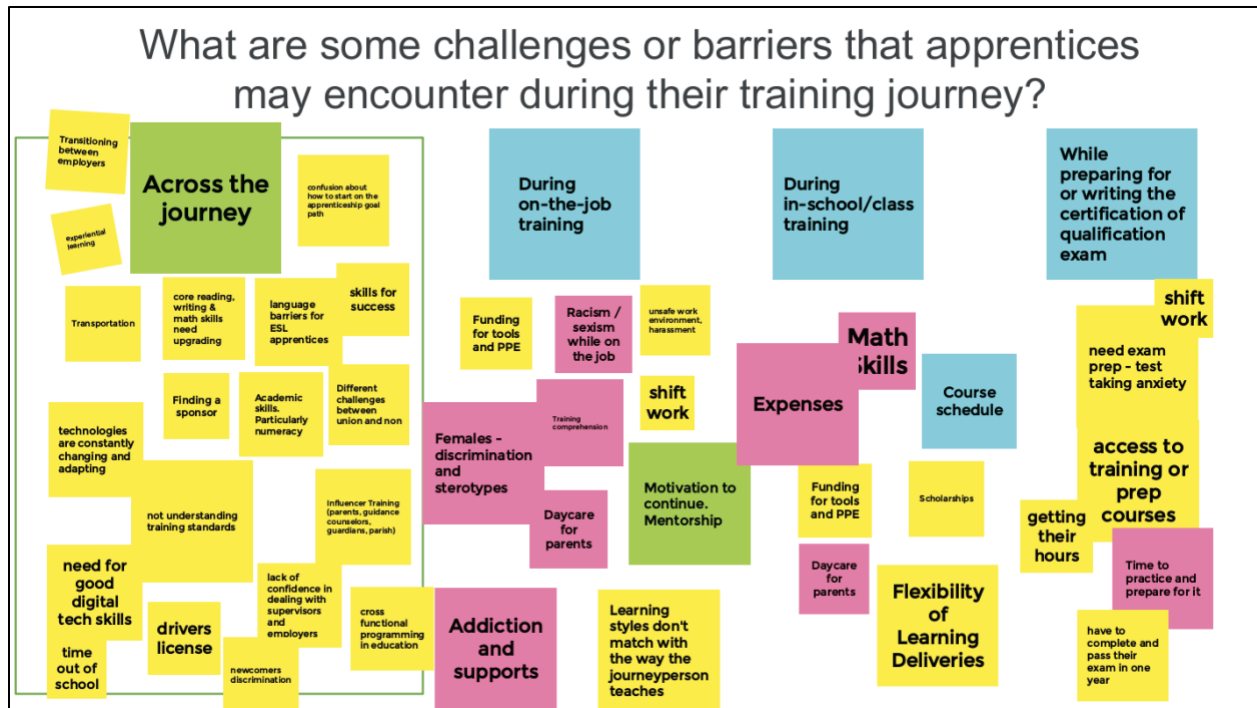
The challenges identified in the during in-school/class training category, in no particular order, include

- need to upgrade skills
- skills for success
- soft skills to prepare for training and the workplace
- developing time management skills
- in-school training not always available/convenient for some trades depending on community
- willingness to learn
- math skills (time available for upgrading is too intensive, not long enough for some)

The challenges identified in the preparing for/or writing the certificate of qualification exam category, in no particular order, include

- test-taking skills
- test anxiety
- not a lot of test prep available
- formal testing isn't a true reflection of skills gained during training
- availability of accommodations

**Jamboard generated during Focus Group #2:**



**Jamboard generated during Focus Group #2:**

A graphic with the title “What are some Challenges or barriers that apprentices may encounter during their training journey?” The graphic shows a board that is divided into four categories including

- Across the journey
- During on-the-job training
- During in-school/class training
- While preparing for or writing the certificate of qualification exam

Each category lists possible challenges identified by focus group number 2. The challenges identified in the across the journey category, in no particular order, include

- transition between employers
- experimental learning
- confusion about how to start on the apprenticeship goal path
- transportation
- core reading, writing and math skills need upgrading
- language barriers for ESL apprentices
- skills for success
- technologies are constantly changing and adapting
- finding a sponsor
- academic skills – particularly numeracy
- different challenges between union and non-union environments

- not understanding training standards
- influencer training (parents, guidance counsellors, guardians, parish)
- need for good digital tech skills
- time out of school
- driver's license
- newcomers discrimination
- lack of confidence in dealing with supervisors and employers
- cross functional programming in education

The challenges identified in the during on-the-job training category, in no particular order, include

- funding for tools and personal protective equipment (EPP)
- racism/sexism while on the job
- females discrimination and stereotypes
- training comprehension
- daycare for parents
- addiction and supports
- unsafe work, environment, harassment
- shift work
- motivation to continue mentorship
- learning styles don't match the way the journeyperson teaches

The challenges identified in the during in-school/class training category, in no particular order, include

- expenses
- math skills
- course schedules
- funding for tools and personal protective equipment (EPP)
- daycare for parents
- scholarships
- flexibility of learning diversities

The challenges identified in the preparing for/or writing the certificate of qualification exam category, in no particular order, include

- shift work
- need exam prep
- test anxiety
- access to training or prep courses
- getting their hours
- time to practice and prepare for it
- have to complete and pass their exam in one year