



Barriers to Participation for Women in the Skilled Trades

JUNE 30, 2024



Empowered by



Corporate
Training
Solutions

Table of Contents

EXECUTIVE SUMMARY	3
BACKGROUND	3
APPROACH	3
KEY FINDINGS	3
RECOMMENDATIONS	4
INTRODUCTION	4
POLYTECHNICS CANADA LITERATURE REVIEW	5
BACKGROUND RESEARCH	7
METHODOLOGY	8
PROGRAM ANALYSIS	8
DATA COLLECTION	8
EXISTING PROGRAMS & SERVICES	9
ENVIRONMENTAL SCAN	10
PROGRAM INVENTORY ANALYSIS	22
SURVEY FINDINGS	25
MULTIPLE-CHOICE FINDINGS	25
OPEN-TEXT RESPONSE FINDINGS	27
DISCUSSION	29
RECOMMENDATIONS	30
BEST PRACTICES	30
ADVANCE WOMEN IN SKILLED TRADES STRATEGIC ACTION PLAN	30
FINAL RECOMMENDATIONS	31
NEXT STEPS	32
CONCLUSION	33
REFERENCES	33
LIST OF TABLES	35
APPENDICES	36
APPENDIX A: IMPORTANT TERMINOLOGY & DEFINITIONS	36
APPENDIX B: SUMMARY OF ENVIRONMENTAL SCAN – ONLINE CANADIAN WOMEN IN SKILLED TRADES MENTORING RESOURCES	37
APPENDIX C: SURVEY QUESTIONS	39
APPENDIX D: SUMMARY OF MULTIPLE-CHOICE QUESTION SURVEY THEMES	42

Executive Summary

Background

The Corporate Training Solutions (CTS) team at Fanshawe has partnered with Polytechnics Canada to develop the ConnectHer Mentorship Program, a program intended to fill gaps in Canada's Red Seal Skilled Trades as well as encourage and support women and gender-diverse individuals entering the industry. The CTS team conducted background research, comprehensive document reviews, and collected data through surveys that fostered an understanding of the barriers for these equity-denied groups as well as their needs for succeeding in the trades. The overarching goal of this research and data collection was to obtain information that can be leveraged to tailor the ConnectHer Mentorship Program to identified needs, appropriately responding to the lack of diversity, equity, and inclusion (DEI) in the skilled trades and working to improve the broader industry culture.

This report highlights the findings from the research and presents best practices and recommendations based on these findings, which include current challenges, support needs, perceptions of the industry, and matters of building equity.

Approach

Research was conducted between 2023 and 2024, and consisted of the following:

- A comprehensive review of the literature
- Background research of the skilled trades
- An environmental scan of industry-related programs and services in Canada and the United States
- Identification and compilation of existing resources in a program inventory
- A comprehensive analysis of the program inventory
- Completion of online surveys

Findings from the background research and review, environmental scan, inventory analysis, and online surveys were compared. The CTS team identified differences, commonalities, and gaps, which were used to establish recommendations and next steps.

Key Findings

The following emerged from the research and analysis conducted by the CTS team:

1. The availability of training and educational opportunities increase success for women and gender-diverse individuals in the skilled trades or attempting to enter the skilled trades.
2. Mentorship and networking opportunities help reduce barriers to entry and retention.
3. Employers face financial and capacity barriers when hiring and providing trainings, aligning with participants' frustration with a lack of work opportunities and adequate safety training.
4. Participants face challenges with obtaining a work-life balance, further intensified by the lack of workplace accommodations.

-
5. Trades environments lack diversity and inclusion, demonstrating a need for cultural change in the industry.
 6. Opportunities exist to further understand and support the needs of gender-diverse individuals as not all experiences may align with women.

Recommendations

The following recommendations were developed in accordance with research findings:

1. Improve access to mentorship, training and education by establishing opportunity pathways.
2. Prioritize partnerships, advocacy and industry representation.
3. Encourage and establish inclusive workplace culture.

Introduction

The skilled trades are in high demand across Canada, and this demand is expected to increase in the following years (Government of Canada, 2023). According to the Government of Canada, an estimated 256, 000 apprentices will be needed by 2026 to meet employment demands in specific trade positions that include:

- Cook;
- Industrial electrician;
- Industrial mechanic;
- Painter and decorator; and
- Welder.

Despite the need for apprentices, women are still greatly underrepresented in the trades. As of 2022, less than 10% of workers in the skilled trades across Canada identified as women. Newfoundland & Labrador had the smallest percentage of women in the trades, making up only 4.1% of all workers, while Alberta had the highest percentage (8.6%) of women workers of any province or territory.

In response to the skills gap and clear gender gap in the industry, Fanshawe CTS has committed to developing the ConnectHer Mentorship Program in partnership with PolytechnicsCanada, with the intention of encouraging and supporting women as well as non-binary and gender-diverse individuals in pursuing a career in the skilled trades. Fanshawe CTS will also facilitate and consult a National Working Group, which consists of 15 institutions and organizations across Canada. The preliminary stages of this development involved conducting research about the current landscape of the skilled trades as well as gathering community feedback to help better understand the gaps and barriers currently faced when entering and remaining in the field. This report seeks to highlight and examine the experiences of these equity-denied groups to identify key areas and develop relevant recommendations that will inform the development and implementation of the mentorship program. The overarching goal is to determine how Fanshawe can aid women and gender-diverse individuals in their pursuit of careers in the skilled trades while simultaneously fostering a culture of diversity, equity, and inclusion (DEI) in the industry.

Polytechnics Canada Literature Review

Existing literature about the skilled trades offers a detailed perspective of the past and current experiences of women and gender-diverse persons in the industry. A literature review conducted by PolytechnicsCanada to gain an understanding of barriers women face when entering the trades as well as examine the resources available. The review involved a comprehensive assessment of mentorship programs and models in North America, particularly focusing on identified opportunities for improvement.

From the literature review emerged four key barriers faced by women in the skilled trades. The barriers included:

- 1) *Discrimination and harassment* – experiences of hostility in workplace as well as educational environments
- 2) *Lack of Programming* – a lack of mentorship programs, skill development, and early-education opportunities
- 3) *Lack of Supportive Structures*
- 4) *Industry-related barriers* – barriers that dissuade women from participating and prevent employers from hiring them

Discrimination and Harassment

According to the literature, non-traditional work and training environments have an ongoing issue with hostile cultures that are less welcoming to women. In these environments it is common for women to experience discriminatory hiring practices, unequal wages, and sexual harassment. While these are regular occurrences, women tend to refrain from voicing their frustrations with these incidents due to worries regarding job security; they fear raising these concerns will make them seem difficult to work with to colleagues and supervisors. Another issue they face related to job security are the stereotypes of women in the skilled trades, which often result in them working harder than their male colleagues in order to gain respect in the workplace.

Women also face difficulty when seeking employment. This is a persistent challenge for all apprentices, leading to large numbers of them abandoning their apprenticeships; however, this challenge is exacerbated for women. Experiences of being overlooked for projects reduces their income and prevents them from accessing opportunities that help improve their skills.

It's important to note that the discrimination faced by women in the skilled trades begins early on in life. Biases and prejudice embedded in our society discourages them from pursuing non-traditional careers. This experience is present throughout the education system, limiting their career options and reinforcing gender-based stereotypes. Given that women are subjected to gendered discrimination early in life, it is essential to have early interventions addressing these biases and barriers.

Lack of Programming & Lack of Supportive Structures

In contrast of persistent biases as barriers in the skilled trades, the literature details a lack of resources and programming as another challenge. Women apprentices face difficulties when seeking mentors and attempting to develop their skills in the trades, and their inability to find mentors prevents from acquiring new skills.

The lack of networking opportunities or skill trades connections act as a barrier for apprentices, especially at the beginning of their apprenticeship, which can cause them to become discouraged in pursuing careers in the skilled trades. Additionally, not having meaningful mentorships can lead to feeling isolated; however, when apprentices are matched with mentors, especially mentors of the same gender, they are more likely to feel a sense of comfort.

As previously mentioned, discrimination and hostility are often barriers for women apprentices. It is not uncommon for them to be assigned low-skill and repetitive tasks, which keeps them from further developing their skills. The prejudice women experience in the skilled trades affect their ability to build mentorship-style relationships with journeypersons, forepersons, and supervisors, which in the long-term affects their ability to develop skills and obtain employment.

Industry-related Barriers

Barriers to achieving success in the skilled trades for women also exist at the employment end. Small- to medium-sized employers especially have difficulty with the supplementary costs of apprentice mentorships. Expenses such as materials, tools, cost of supervision, and cost of training such as safety training pose a challenge to employment, highlighting the need for employment supports in areas of training and mentorship.

Employers also identified the lack of gender-inclusive safety protocols and personal protective equipment and lack of accessibility in the workplace as barriers to inclusion for women in the workplace. These factors, which together create an unwelcoming environment, prevent women from feeling a sense of belonging and discourages them from pursuing careers in the skilled trades. These issues persist due to the trades centering men, and fail to adapt to the needs of women, thus failing to attract and retain diverse populations.

Overall, the need for a change in workplace culture has been expressed by employers, who highlight current practices and culture that are deeply rooted traditional values and passed down to men in the skilled trades through generations as an ongoing issue. Fortunately, there are existing efforts that aim to increase representation of women in the skilled trades. These efforts include financial support, mentorship support, and early education efforts that all have varying levels of success. Mentorship supports, networks, and placements in particular have resulted in positive outcomes, further highlight the need for women-centered initiatives that directly address challenges in the skilled trades; and in

addition to being effective for women, there is evidence that suggests initiatives in these areas also lead to economic growth and security for employers.

Emerging Implications

From the literature review multiple implications for the future of the skilled trades industry emerged:

- Policy makers and stakeholders should increase their investments into pre-apprentice programming that prioritize women and acknowledge the economic benefits for individual participants as well as governments and employers.
- The implementation of mentorship initiatives as well as the promotion of these initiatives can increase retention of women in apprenticeships, ultimately increase success for women in the industry. Financial supports are essential for bringing into these programs and address barriers that create gaps to entry and retention.
- Measures for addressing discrimination and harassment against women, which often factor into their decisions to leave the industry, are necessary for bridging gaps and addressing gender disparities.
- Ongoing evaluation of women's experiences in apprenticeship programs are important for improving industry strategies and increasing gender equality and inclusivity.

Background Research

In addition to the literature review conducted by PolytechnicsCanada, the CTS team conducted background research that highlighted priority areas that can help women succeed in the skilled trades by focusing on their needs. The following are the identified priorities:

- *Training and Education* – ability to access adequate skilled trades training and education as well as having access to mentorship and women role models
- *Gender Bias & Stereotypes* – addressing gender biases and stereotypes in the industry in order to create an inclusive and supportive environment for women. This may include cultural sensitivity education, awareness programs, and policies geared toward removing biases in the workplace.
- *Career Advancement* – ensure women have equal opportunities for career advancement in the industry, including promotions and leadership roles, to increase their chances of success. This includes equitable hiring and promotion practices as well as policies that support career progression
- *Interpersonal Skill Development* – opportunities for interpersonal skill development in apprenticeship programs, supporting the retention of and success of resilient tradeswomen

The research suggests that addressing these needs will help ensure the establishment of work environments that are diverse and inclusive, provides support to tradeswomen and increase their success, and ultimately guide them in their career paths in the skilled trades.

Methodology

The goal of this research was to examine the current landscape of mentorship and support services as well as identify gaps between the needs of the target population and current service practices. In order to better understand the barriers faced by women and gender-diverse persons and build a comprehensive picture of the accessibility of available resources, CTS engaged in data collection and analysis in the North American context. The CTS team reviewed and analyzed mentorship supports and resources currently available across the country. The team also gathered information from women and gender-diverse individuals to capture their perspectives and experiences.

Program Analysis

An environmental scan – a detailed look at comparable programming, services, and initiatives within the skilled trades – was conducted to identify common themes and establish a standard. The CTS team looked at apprenticeship experiences, including during pre-apprenticeships, student experiences, experiences of women, barriers, and resources.

A thorough review of available programs and supports across Canada and the United States was conducted in five (5) stages. This began with a search of the literature using engines such as Google Scholar and Scholar AI. The CTS team used several key terms to achieve results including *women*, *mentoring*, *apprenticeship*, *skilled trades*. The documents retrieved from the search were then reviewed and placed in a classification system based on topic. The document contents were then analyzed for key themes and patterns, which were ultimately placed in a summary document under the following categories:

- A. Emergent themes across the domain
- B. Pre-apprenticeships, women, and student experience
- C. Gender equity in skilled trades
- D. Strategies for women apprentice success
- E. Barriers for women to participate in skilled trades
- F. Evaluating apprenticeship programs
- G. Mentoring programs for women in skilled trades
- H. Employer actions to ensure equitable outcomes for women in skilled trades
- I. Online Canadian women in skilled trades mentoring resources

The key themes and findings for each category were recorded in the summary document. From this info, the CTS team was able to better understand the existing barriers, gaps, and experiences of women in the skilled trades, especially that which inhibits their ability to progress and be successful in their career path. To build on these findings the CTS team conducted a program analysis. This is a qualitative practice that involved the assessment of supportive programs and resources available to women with the intention of understanding how existing efforts are attempting to fill gaps in the industry and support the targeted population as well as identify common characteristics among the programs.

Data Collection

Primary data about the experiences of women and gender-diverse individuals in the skilled trades, or those trying to enter the skilled trades was collected through an online survey referred to as the

Women in Trades Barriers Survey. Questions for the survey were developed by the Fanshawe CTS team, who then consulted the National Working Group. The Group reviewed the questions and provided feedback which was then incorporated into the survey questions.

The online surveys were made available from November 2023 to February 2024, and a total of 275 responses over the span of the survey run time were received. It consisted of 27 multiple choice questions and 7 open-text questions. With the multiple-choice questions on the surveys, the CTS team collected demographic information, career experiences, career demands and barriers, and support and resource accessibility. The following are examples of multiple-choice questions that appear on the survey:

- Where do you see yourself in the future?
- Think about your career goals in the skilled trades, indicate your level of agreement with the following statements:
 - There is a lack of woman role models or mentors in my field.

Some questions, like the second example, were accompanied by statements in which participants indicated how much or how little they agreed. The second example above shows just one of several statements. Open-text questions collected further information about the challenges faced by women and gender-diverse individuals on their career path, suggestions and visions for the future, and supportive needs for success. The following are examples of open-text questions that appear on the survey:

- What challenges do/did you face to entering or remaining in the skilled trades?
- What suggestions do you have in the development of a new mentorship program for women and gender diverse individuals in the skilled trades?
- Are there specific topics or areas you wish were covered more to help you enter the trades?

Once the data from the surveys were collected and compiled, the CTS team conducted two types of analysis to gain a comprehensive understand of the findings:

1. *Thematic Analysis* – an exploration of key words and phrases to identify distinct themes, followed by an interpretation of and labeling of each theme based on the most representative words and phrases
2. *Sentiment Analysis* – compiling comments relative to each theme, followed by calculation of a sentiment score for each comment within the theme, finding an average sentiment for each theme by aggregating the sentiment scores

This information was assessed and compared to the findings of the e-scan and program analysis, further highlighting gaps and barriers, and developing an understanding of current experiences. A complete list of survey questions can be found in Appendix C.

Existing Programs & Services

To understand the commonalities across documents about programs and supports for women in the skilled trades as well as determine how gaps and barriers are currently being addressed in the industry, the CTS team conducted an environmental scan and curated an inventory of programs and supports across Canada and the United States which were reviewed and analyzed.

Environmental Scan

The environmental scan looked at the commonalities across various documents regarding programs and supports for women in the skilled trades and determined how gaps and barriers were being addressed. Based on information pulled from the e-scan, a summary document was divided into nine (9) sections that explore the key points and learnings from the review.

A) Emergent themes across the domain

Gathered insights from the literature reviewed in the e-scan revealed common, connecting themes that foster a deeper understanding of the space women hold in the apprenticeships in the skilled trades.

Table 1: Key Themes Across Domains

Key Theme	Explanation of Theme
Underrepresentation of Women in the Skilled Trades	• Emphasis on gender disparities in the skilled trades, specifically in roles that are historically male-dominated
Importance of Mentoring	• Significance of mentorship, especially for youth and women • Mentor-apprentice relationships can greatly influence the apprentice's experience, learning, and field retention
Barriers to Participation	• Women face many barriers in male-dominated fields, including societal expectations, workplace cultures, stereotypes, and a lack of role models
Economic Implications	• Gender imbalance in the trades has economic consequences, including lost opportunities for growth and underutilization of talent
Employer Engagement	• Employer engagement is significant in apprenticeships and promoting gender diversity • Engaging small- and medium-sized enterprises plays a crucial role in growth and ensuring successful outcomes
Strategies for Inclusion and Equity	• There exist field-specific strategies and initiatives to promote gender diversity, inclusion, and equitable opportunities

As demonstrated in Table 1, the emerging themes cover challenges and barriers, significant opportunities, and potential strategies that would aid in increase gender equity within the skilled trades.

B) Pre-apprenticeships, women, and student experience

This section centres the experiences of women in the skilled trades, especially during the pre-apprenticeship phase. Table 2 summarizes the findings of these documents, highlighting the positive outcomes and challenges experienced by women who engage in programs in the skilled trades.

Table 2: Key Themes from E-Scan Thematic Analysis

Key Theme	Explanation of Theme
Empowerment and Confidence	• Women gain empowerment and increased self-confidence from skilled trades and pre-apprenticeship programs, which is crucial for navigating male-dominated industries
Challenges and Stereotypes	• Gender stereotypes, biases and at times unwelcome workplace culture are barriers • Addressing challenges is important for long-term success and gender-diverse retention in the skilled trades
The Importance of Supportive Environments	• Women-only settings provide supportive environments • These environments reduce intimidation and competition, and foster collaboration and learning
Skills Development and Hands-On Training	• Practical training is important, including skill development, hands-on training, and real-world exposure
Networking and Mentorship	• Mentorship from other women in the trades as well as networking opportunities foster career growth and help navigate challenges

C) Gender equity in skilled trades

The documents in this section underscore the challenges faced by women in the skilled trades, particularly the lack of representation and persisting inequalities, as well as the importance having

inclusive strategies. Five key thematic areas across the documents were identified as demonstrated in Table 3.

Table 3: Key Gender Equity Thematic Areas

Key Theme	Explanation of Theme
Strategies for Inclusion	• There is emphasis on the importance of best practices, policies, and strategies that promote gender equity and inclusion in the industry
Cultural and Structural Barriers	• Gender roles, the glass ceiling, work culture, and other cultural aspects impact women's participation and growth in the construction industry
Need for Further Research	• There is a lack of research and global research gap about women in constructions in developing countries
Promotion and Mentorship	• Mentorship, training, and promotion of positive role models to inspire and support women is important in the skilled trades
Diversity Initiatives	• Initiatives to help diversify the industry, including gender diversity, and acknowledged as significant for growth and innovation

These focus areas offer a unique perspective about the challenges women face in male-dominated industries such as the trades, highlighting the need for strategies that prioritize inclusion. Additionally, they point to the importance of understanding the challenges women face and best practices to adopt as well as collaborating for improve gender equity.

D) Strategies for women apprentice success

The documents sorted into this section illuminate important themes and strategies for successful careers in the skilled trades for women. Table 4 demonstrates how to engage employers in apprenticeships, covering appropriate integration and collaboration between employers and apprenticeship initiatives. In contrast, Table 5 highlights useful strategies for attracting diverse apprentices and developing an inclusive work culture.

Table 4: Employer Engagement

Key Theme	Explanation of Theme
Value Proposition	• It's important for employers to see value in engaging with apprenticeships in terms of skill acquisition, the talent pipeline, and financial incentives
Partnerships with Educational Institutions	• Having partnerships between SMEs and educational institutions ensures the curriculum aligns with industry standards
Support Systems	• SMEs need supports such as resources, tools, and other guidance to effectively mentor and train apprentices
Flexibility in Training	• Flexibility in training duration, training methods, and training outcomes is important consider the diversity in SMEs
Feedback Mechanisms	• Ongoing feedback from employers can help refine the apprenticeship programs to be more effective

Table 5: Attracting Diverse Employees

Key Theme	Explanation of Theme
Awareness Campaigns	• Raise awareness about trade opportunities and benefits of construction management careers through visits to educational and career institutions as well as media campaigns
Mentorship Programs	• Ensure women students are connected with field professionals, giving them a chance to gain insight, ask questions, and build a supportive network
Financial Incentives	• Provide scholarships, grants, or stipends for women entering construction management programs
Inclusive Curriculum	• Revise curriculums so they are more inclusive, celebrate achievements of women in the construction industry, and address barriers

Safe and Supportive Environment	Establish a campus culture of safety, respect and inclusivity to ensure women students feel valued and safe
---------------------------------	---

When viewed wholly, these documents identify the following key actions:

- *Engage employers* – highlight value of apprenticeships for SMEs and other employers, encouraging collaboration with educational institutions to ensure curriculum is relevant
- *Provide flexibility* – provide flexible training in terms of method, duration, and outcomes to address the needs of both employers and apprentices
- *Establish support systems* – Ensure SMEs have the necessary tools, resources and guidance to mentor and train apprentices successfully
- *Promote awareness* – create campaigns that raise awareness about apprenticeship opportunities, especially for equity-denied groups
- *Offer financial incentives* – provide scholarships, grants, and other financial incentives to increase diversity
- *Incorporate feedback* – create ongoing feedback mechanisms for employers and apprentices to ensure continuous improvement to apprenticeship programs
- *Foster inclusivity* – provide safe, respectful, and inclusive training environments as well as curriculums that highlight contributions and achievements of diverse apprentices

E) Barriers for women to participate in skilled trades

Multiple of the reviewed documents centred the barriers to participation faced by women in the skilled trades. There were many themes and key data points collected from the documents, however, the following tables highlight and summarize the most significant of these points.

Table 6: Barriers to Participation

Key Theme	Explanation of Theme
Gender Challenges in Male-Dominated industries	Women face challenges such a societal expectations, stereotypes, overt discrimination, and harassment
Economic Disadvantages	In some sectors, women experience economic disadvantages, limited access to opportunities, and reduced earning potential
Workplace Culture and Tokenism	Unwelcoming workplaces are recurring themes, with women facing environments that consider them tokens instead of genuine participants,

	especially in training and education environments
Sexual Harassment	Women experience sexual harassment in construction industry settings, including educational settings, which as a prominent barrier for their participation and overall success
Representation and Historical Barriers	Women, especially BIPOC women, are underrepresented in certain industries, but there are also significant milestones and role models that have established a path for increased representation
Benefits of Diversity	Diversity is beneficial as it helps increase creativity and innovation and makes a strong business case for inclusion
Strategies and Initiatives for Change	There are existing efforts for promoting diversity, including targeted recruitment strategies, training programs, and policy revision

Table 7: Actions & Solutions for Eliminating Barriers

Key Theme	Explanation of Theme
Targeted Interventions	Create and action interventions that address challenges faced by women – workshops, trainings, and awareness campaigns
Mentorship Programs	Create mentorship programs in which women professionals support young women entering the field, providing insight, promoting confidence, and navigating challenges
Inclusive Policies	Establish and promote inclusive policies that directly address gender bias and ensure equal opportunities for everyone
Reforms in the Apprenticeship System	Re-evaluate the apprenticeship framework and reform to ensure there is equitable access and benefits for all genders

Cultural Shifts in Educational Institutions	• Address tokenism and sexual harassment in educational environments, establishing a safe and inclusive learning space to attract diverse talent
Promote Community Support	• Establish communities and networks that support women in the skilled trades and other fields, including online forums, local meetups, and workshops
Awareness Campaigns	• Create awareness campaigns that celebrate the achievements of women and BIPOC in male-dominated fields to challenge stereotypes and encourage other generations
Addressing Practical Barriers	• Address practical challenges that include views of physical strength requirements in specific industries, which can look like offering important tools, equipment, and specific training that addresses diverse needs
Enhanced Training for Management	• Leadership should be trained on the significance of diversity and inclusion, giving them the tools to address biases and promote workplace inclusion
Regular Feedback Mechanisms	• Establish ongoing feedback mechanisms that include surveys and focus groups to foster understanding of women's and equity-denied groups experiences, which will help improve diversity efforts based on realistic feedback
Diversity Hiring Initiatives	• Action targeted recruitment strategies that prioritize attaining diverse candidates, which may include partnerships, job fairs, or targeted advertisements
Safety Reporting Mechanisms	• Ensure safe and clear mechanisms for reporting issues that may include discrimination or harassment

	• Establish a comprehensive policy that ensures reports are taken seriously and addressed without retaliation
--	---

Table 6 demonstrates the high-level themes and barriers extracted from analysis of these documents, while Table 7 demonstrates the actions and recommendations the documents suggest to resolving these barriers. Some key themes pulled from the documents include:

- Ongoing and persisting challenges faced by women in male-dominated fields
- Societal norms and biases serving as barriers
- The significance of mentorship, community supports, and policy changes
- The benefits of DEI promotion in various sectors

F) Evaluating apprenticeship programs

This section summarizes the key points drawn from documents that detailed the elements of apprenticeship programs, with the following in Table 8 emerging as key actions to enhance the success of apprentices who participated in such programs.

Table 8: Actions for Increasing Participation

Key Theme	Explanation of Theme
Emphasizing Holistic Development	• Prioritize personal and professional development in addition to technical skill development, shaping apprentices' vocational identities • Modules and curriculum content can include soft skills, communication training, personal growth
Strengthen Pre-Apprenticeship Programs	• Invest in pre-apprenticeship programs that help prepare people for trade-specific demands • Programs should offer foundational skills and introduce trade-specific requirements
Foster Strong Employer Partnerships	• Collaborate with local employers to make sure training aligns with industry needs and requirements • Create feedback mechanisms in collaboration with employers to maintain and improve curriculums

	• Encourage employer involvement in mentorships and in hands-on training
Enhance Retention Services	• Establish comprehensive mentorship programs that have ongoing training and support • Ensure mentors have necessary resources to support apprentices with both technical and soft skills • Track the progress of apprentices and provide interventions when necessary
Address Underrepresentation and Diversity	• Establish strategies that help with entry and retention of underrepresented persons, including women and other equity-denied groups • Establish inclusive environments that provide supports to help address the challenges faced by equity-denied groups
Standardized Training Programs	• Consider the standardization of apprenticeship and pre-apprenticeship program elements to ensure quality is consistent • Create benchmarks and best practices to help with training of providers in different regions
Secure Adequate Funding	• Advocate for more funding and other resources in public and private sectors • Consider partnerships, sponsorships, grants, and other financial support to help expand programming
Tailor Programs to Industry Specifics	• Acknowledge the demands of different sectors, such as heavy highway construction • Establish tailored apprenticeship programs that address trade-specific needs and nuances
Address Gender Disparities	• Provide equitable opportunities and benefits for all genders

	Establish and action strategies that support women apprentices in male-dominated trades
Promote Continuous Learning and Feedback	- Create feedback mechanisms that allow apprentices to share experiences, concerns, and suggestions - Update and improve training content on a regular basis based on feedback as well as industry advancement

The documents offered a broad range of quantitative data that highlighted the positive impacts of pre-apprenticeship and apprenticeship programs skill development, confidence, employability, and income. In addition to these points, the documents reviewed in this section revealed access to and participation in adequate supports increase success in entering apprenticeship programs for women, and women experienced a high employment success rate following the completion of apprenticeship training programs. This underscores the importance of filling skills gaps and having tailored training programs.

G) Mentoring programs for women in skilled trades

The documents sorted into this section detail how important mentorship programs can be in reducing barriers for women and increasing participation in the skilled trades with adequate supports. Women experience complex challenges in their trades careers, and mentorship approaches can be used to address these challenges.

Table 9 demonstrates the types of supports that can be used to address barriers to participation in the skilled trades, providing explanations of specific solutions and barriers. It is important to note that mentorship programs cannot eliminate these barriers on their own; however, they are significant in reducing barriers and can help increase chances of success.

Table 9: Potential Mentorship Solutions

Programs	Barriers	Solutions
Psychological and social support	Women in male-dominated industries feel isolated and a lack of belonging, discouraging them and influencing their confidence and commitment	When women have mentors, they have emotional and psychological support as there is someone to guide them, listen to them, and share experiences,

		addressing isolation and improving confidence
Skill development and technical guidance	Women may feel they are more scrutinized than male colleagues in terms of their technical skills	Mentors can help with hands-on training and guide mentees through their tasks, giving women an opportunity to gain necessary skills and be confident in their abilities
Navigating workplace dynamics	Being unfamiliar with workplace culture and dynamics can pose a challenge, and women may experience biases, stereotypes, and/or overt discrimination	Mentors can provide insight into workplace dynamics as well as provide information on addressing biases, conflicts, and making the workplace manageable
Networking and career advancement	There are limited networking opportunities which prevent women from progressing	Mentors can offer a pathway to industry relationships, networking opportunities, and provide guidance in terms of career advancement
Addressing practical concerns	Women may experience practical challenges that include work-life balance such as familial responsibilities or physical demands	Mentors can provide advice on maintaining work-life balance, direct women to resources, and/or suggest techniques for handling physical demands

Creating a more inclusive culture	• Workplace cultures in the skilled trades may not be inclusive or considerate of the unique needs of women	• When workplaces prioritize building mentor-mentee relationships, they demonstrate commitment to diversity and inclusion, establishing a change in workplace culture
Retention and persistence	• Previously mentioned challenges may cause women to leave their apprenticeships or career in the skilled trades	• Mentoring can greatly increase retention rates, as the support provided by mentors motivate women to persist and face challenges

These documents highlighted important considerations for establishing mentorship programs that are effective in supporting women in trades. To summarize:

- Promoting confidence and stronger relationships
- Promote equity, diversity, and inclusion
- Knowledge application and transfer
- Building relationships through mentorship
- Improved communication
- Supports for mental well-being
- Occupational support
- Evidence-based support

H) Employer actions to ensure equitable outcomes for women in skilled trades

The section explores important areas of understanding for employers, which include cultural and social contexts that result in challenges such as:

- Lack of representation of women
- Economic implications of gender imbalances
- Barriers to entry and retention of women in the skilled trades
- Essential, targeted policies and interventions
- Intersectional experiences such as race, ethnicity, and socio-economic status as it interconnects with gender

Consideration of these challenges in these contexts are pathways for developing appropriate actions such as gender inclusive policies and trainings as well as DEI initiatives and efforts that are tailored toward women and gender-diverse individuals.

Additionally, the documents underscore that actions should be intentional in the ways they attract diverse groups and women. Developed practices should also have room for feedback and improvement as a means of creating and maintain inclusivity. The overarching theme is that proactive measures, ongoing supports, and collaboration are important for establishing environments of inclusion and more broadly a culture of inclusion in the skilled trades industry. Attracting women in to trades is as much a priority as is ensuring retention and success.

1) Online Canadian women in skilled trades mentoring resources

This last section examines online resources for women in the skilled trades, prioritizing areas such as trade-specific aid, programs for young women, mentorship, and pre-apprenticeship resources. Resources were offered through women-focused programs and organizations such as the Office to Advance Women Apprentices (OAWA) and the BC Centre for Women in the Trades. Additionally, some resources were offered at the provincial level (i.e., Skills Ontario), the national level (i.e., Canadian Construction Women), and the international level (i.e., Pride and a Paycheck).

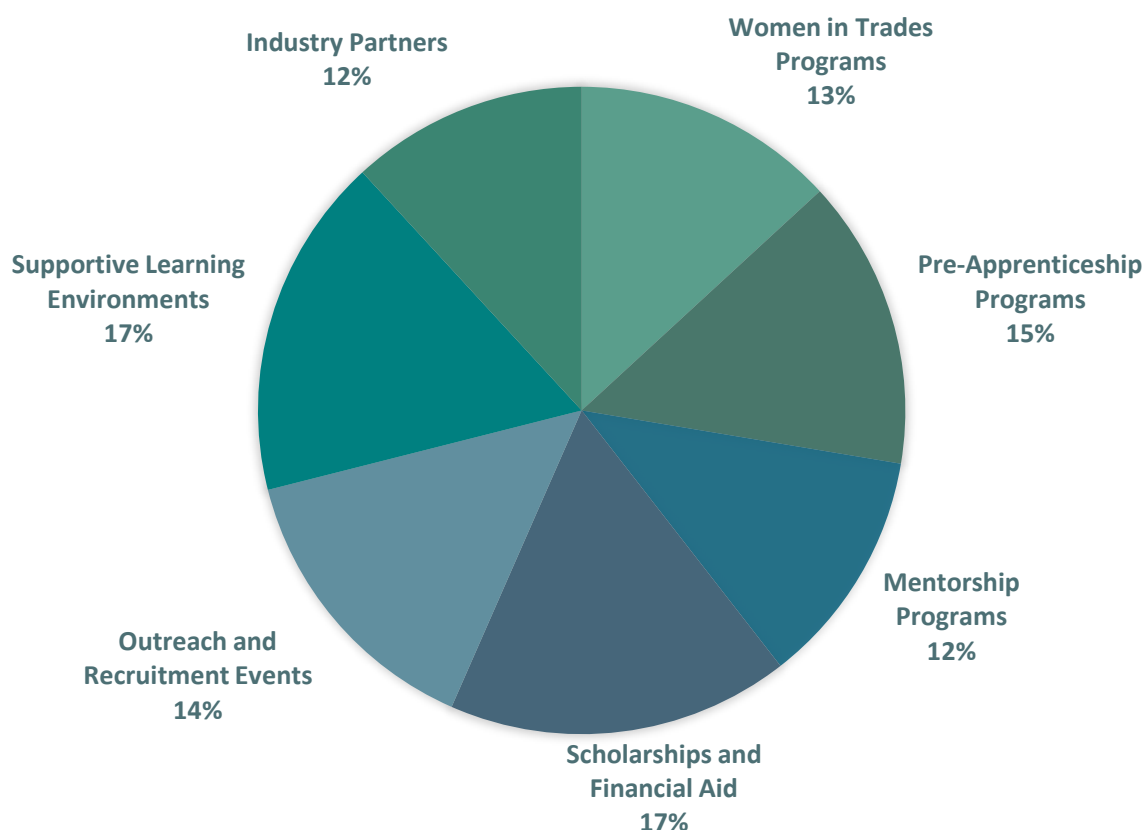
All resources focus on key areas essential for women to effectively enter the trades and be successful. Some of these focus areas include skill development, especially for young women, training, career preparation, career longevity, talent acquisition, guidance, and building community.

For a full list and summary of the mentoring resources, see Appendix B.

Program Inventory Analysis

The CTS team developed an inventory of programs and supports available across Canada and the United States, reviewing and analyzing them for themes and patterns that speak to the way skill and gender gaps are being addressed in the skilled trades.

Figure #1: Program Inventory



Altogether, the CTS team analyzed 25 programs and services tailored to women working in or intending to work in the skilled trades. Programs were spread across North America, with some of them having regional branches across both Canada and the United States. The existence of programs with branches was viewed positively, as it demonstrated mobility and connectivity for women participating in these programs. The programs fit into the following categories:

- 13 programs offered scholarships and/or financial supports
- 11 programs offered pre-apprenticeship supports and outreach services
- 10 programs specified to be for women in trades
- 9 programs offered mentorship and trades partnership opportunities

The analysis revealed that many programs and supportive initiatives in the inventory, including trainings, mentorship programs, and tailored resources, were offered through technical colleges and trade schools to encourage women to join the trades as well as address their needs. Several of these programs have been successful in their goals, aiding women to succeed in a male-dominated industry. Despite this, mentorship was one of the least advertised characteristics.

Table 10: Characteristics and Components of Trades Programs Supporting Women

Components	Explanation
Women in Trades Programs	Programs that carry a specific title and/or objective. These programs are often found at certain technical colleges that may have specialized "Women in Trades" programs which provide training and resources to help women enter and succeed in various trades
Pre-Apprenticeship Programs	Programs may offer pre-apprenticeship programs which are designed to prepare individuals for formal apprenticeships in various trades. A program or technical college may offer pre-apprenticeship programs that are open to women and may provide a supportive environment for entry into trades
Mentorship Programs	These programs pair female students with experienced female professionals in their chosen trades. Mentorship can provide guidance, support, and a valuable connection for women entering the trades. Different programs may provide different titles – e.g. success coaches
Scholarships and Financial Aid	Programs or organizations that offer scholarships or financial aid specifically for women pursuing trades-related programs or jobs. These financial resources can help reduce the cost of education and training, may help to pay for tools, or provide funding for necessary certification or transportation costs.
Outreach and Recruitment Events	Programs, colleges or organizations may host outreach and recruitment events targeting women to inform them about the opportunities available in trades and the specific programs being offered.
Supportive Learning Environments	Some technical colleges create inclusive and supportive learning environments, where women feel comfortable and encouraged to pursue trades. Additionally, organizations or unions may offer pop-up learning events,

	workshops and/or seminars. As well as courses for obtaining training and/or certification.
Industry Partnerships	A program or institution may collaborate with industry associations and employers to offer women opportunities for internships, apprenticeships, or job placement in trades

The programs are structured to attract women in fields such as construction, carpentry, plumbing, welding, electrical work, and other Red Seal trades. Table 10 shows and explains common elements of supportive trades programs for women. The key findings pulled from the program analysis are as follows:

- Including co-curricular programs for women in male-dominated fields can potentially increase success.
- Some programs in the inventory support potential tradeswomen by offering affordable housing services, financial supports, and access to a success coach as well as flexible class schedules and supports for accommodations such as transportation and PPE.
- Some programs were tailored to youth aged 18-24 years old and only required a high school diploma.
- Many existing supports and programs centre outreach initiatives and educational efforts for women to learn about career opportunities in the skilled trades

The environmental scan and program analysis did not reveal much about advocacy and workplace culture. These findings are significant as advocacy and presentation are essential to women's success in male-dominated fields. When women feel encouraged to take on larger roles and become more visible in their industry, they inspire others to address and eliminate barriers. Additionally, advocating for policy and legislative change to support gender equality in the skilled trades is important for ensuring fair hiring practices, closing wage gaps, and establishing family-friendly policies.

Survey Findings

Through the use of online surveys, the CTS team was able to gather data from women and gender-diverse individuals as a means of understanding first-hand experiences and barriers faced by these groups in the skilled trades. The survey contained a multiple-choice section and an open-text response section that gave respondents the opportunity to elaborate and provide in-depth information about their experiences and perspectives.

Multiple-Choice Findings

The majority of respondents were in their early thirties, as demonstrated in Table 11, with the least number of respondents being 60+. Table 11 also demonstrates the gender diversity of respondents.

While the overwhelming majority identified as women, 5% of respondents identified as not fitting in a gender binary such as two-spirit, transgender, genderfluid, and more.

Table 11: Demographics of Survey Respondents

Age	
18-20 years	5%
20-24 years	10%
25-29 years	16%
30-34 years	20%
35-39 years	17%
40-49 years	20%
50-59 years	10%
60 years and older	2%
Gender Identity	
Gender Conforming	93%
Gender Non-conforming & Gender-Diverse	5%

As shown in Table 12, there were five (5) themes that emerged from the responses obtained from the multiple-choice section of the survey. While respondents felt mostly positive about the existence of networking opportunities as well as career supports, the sentiments across the other four (4) themes were mixed, with most responses leaning toward negative sentiments.

Table 12: Key Themes from Survey Analysis

Theme	Overall Sentiment
Networking and Support	• Mostly positive
Diversity and Inclusion	• Mixed, with more negative sentiment
Career Perception	• Mostly negative
Workplace Environment	• Mixed, leaning towards negative
Financial Concerns	• Mixed, leaning towards negative

In terms of diversity and inclusion, respondents felt there was a lack of women and gender-diverse mentors and role models, as well as gender-based discrimination and systemic barriers in the industry. There were also negative perceptions about their careers, with respondents sharing negative sentiments regarding wage gaps and job demands that affect their health. Despite this, respondents felt their training programs had positively influenced them when pursuing a career in the skilled trades.

Lastly, responses regarding feelings of safety were mixed, with most appearing to have negative sentiments under this theme. The cost of education also posed an issue, with the many respondents feeling this acted as a financial burden. Overall, the sentiments across themes are a mix of both positive and negative. Theme 2: Diversity and Inclusion as well as Theme 3: Career Perception appear to have the most prominent themes and with areas of concern for respondents. While financial

concerns and workplace safety contained mixed sentiments, the responses show that these themes still contribute to negative sentiments among respondents.

A summary of key themes and sentiments can be found in Appendix D.

Open-Text Response Findings

The results from the open-text comments identified similar themes as shown in Table 13. The following are key demographic findings from respondent comments:

- Theme 1 was the most popular across all age groups, although it was particularly popular among those aged 25-34
- There was limited representation for theme 2, being the most popular across the 40-49 age group
- Themes 3-5 had varied distribution, with respondents age 30-39 having higher representation in 3 and 4, and respondents aged 30-49 being evenly spread across theme 5

These age distributions offer insight into how the themes resonate with individuals across age groups, potentially reflecting a different in unique experiences, perspectives, and priorities.

Table 13: Key Themes from Survey Comments

#	Theme	Avg. Sentiment Score	Keywords	Description
1	Diverse Trades and Experience	0.03	• Industrial, cook, millwright, retired, arborist, pipefitter, steamfitter, welder	Discussion implications for various trades, professions, and experiences that include retirement
2	Career Progression and Education	0.04	• Apprenticeship, construction, worked, continue, field, time, hope, manager	Topics relative to career development, continuous education, and skilled trades aspirations
3	Employment and Professional Identity	0.07	• Working, employed, trades, self, management, apprentice, union, tech, skilled	Sentiments about employment status, self-employment, and identity within different trades
4	Technical Skills and Specializations	0.04	• Technician, automotive, horticulture, landscape, industrial, power, HVAC, electrician, welding	Technical skills, specializations in the skilled trades industry, and potentially educational pathways that lead these roles

5	Professional Development	0.01	Trade, employed, seal, red, educator, instructor, business	Potentially includes discussions about personal growth, certifications (i.e., Red Seal), teaching roles, and entrepreneurship elements in the skilled trades
---	--------------------------	------	--	--

Sentiment scores provide a generalized understanding of respondents' feelings toward the identified themes. For example, themes 3 and 4 had more positive sentiments, suggesting respondents felt positive about employment prospects, professional identity, their technical skills, and specializations. Themes 1, 2 and 5 were less positive, with most leaning to neutral feelings about their emotions and perspectives in regard to the diversity of the trades, their career progression, and their professional development.

Analysis of the comments revealed three areas of career supports that are best equipped for helping women and gender-diverse individuals. These supports include:

1. Mentorship
2. Education and Training
3. Union Membership

"It would have been great to see more female instructors in the program... having a mentorship program with female professionals and also non-binary and LGBTQ2S+ professionals would be really helpful for students."

The findings suggest these identified areas are valuable support areas for women pursuing careers in the skilled trades. Expanding on these supports and resources as well as establishing connections and promoting leadership roles are potential strategies for provided additional support.

The responses also offered insight into why women and gender-diverse individuals exit the skilled trades. These reasons included:

1. Career Change and Further Education
2. Leaving the Trades
3. Unspecified Reasons and Space Constraints
4. Leaving Specific Trades

"I still love the welding trade, and would love to teach it again one day. I left since I just really wanted to continue my education as far as I could."

The findings not only offer insight into the reasons women and gender-diverse individual exit the trades, but also deepen understandings regarding the complexities and personal elements surrounding these decisions to leave. Decisions can vary from career changes, educational changes, personal or professional challenges, and more that are not so easily captured in survey responses.

A full list of the multiple-choice survey questions and open-text survey questions can be found in Appendix C.

Discussion

The data collected across the literature review, background research, environmental scan, program analysis, and online surveys were largely consistent in their findings. Both the primary and secondary research conducted suggests the availability of training and educational opportunities greatly increases the success for women and gender-diverse individuals in the skilled trades as well as those hoping to enter the industry. Mentorship and networking opportunities especially are helpful in reducing barriers to entry and retention, as it offers some insight into what can be expected on the job as well as offers an ongoing system of support that increases confidence and willingness to join or stay in the industry.

The findings of this research also underscored the importance of establishing supports and resources in consideration of both employers and employees. While there are barriers that inhibit the success of women and gender-diverse individuals, there are also barriers that affect employer's ability to hire diverse groups, especially those of small and medium enterprises. An example of this is the necessity of training and protocols, such as safety training. Both employers and employees across the literature and research cited this as an issue – employers felt the costs associated with having trainings posed a barrier, while apprentices felt the lack of safety training and considerations acted as barriers to retention and success.

Another important consideration is work-life balance. The skilled trades are an androcentric field that at times operates in a binary, causing women and gender-diverse individuals to be excluded. For example, tailored accommodations and work equipment are seldom available to non-men in the industry. The difficulty navigating safety concerns and work-life balance was raised throughout the research, with women and gender-diverse persons expressing a desire to have greater consideration of their need to balance personal and professional lives. Many are responsible for childcare or require accommodations to create an inclusive environment where they can feel comfortable in the workplace.

Lastly, the research reinforced the importance of fostering environments that are inclusive and diverse. While having supports that attract and retain diverse groups are useful, there is also need for permanent cultural changes. Additionally, while these findings were detailed and comprehensive, opportunities exist to gain greater understanding of the diverse and unique needs of gender-diverse

individuals. This is worth exploring further, as their needs may differ and there are implications that their experiences in the skilled trades do not always align with the experiences of women.

Recommendations

Best Practices

The following are best practices to consider when developing programs and supports for women and gender-diverse individuals. It is important to note that not all of the best practices are specific to the skilled trades industry; however, they address the key themes drawn from the research and the discussion.

Advance Women in Skilled Trades Strategic Action Plan

- A strategic action plan and toolkit for attract women into the skilled trades. Strategies include early exposure and promotion in schools through partnerships, recruiting female teachers and developing their training, utilizing tools for recruitment and retention, forming partnerships, and more. Each strategy is accompanied by specific actions intended to drive the strategy forward.

Women's Leadership Institute: Establish or Enhance Leadership Development, Mentoring and/or Sponsorship Programs for Women

- A best practices toolkit for establishing mentorship programs and relationships for women. The toolkit covers topics such as building mentorship groups for peers, assigning sponsors for women rising in their industries, maintaining mentorship relationships, advocating for mentees, programming structure for supporting mentorship relationships, and assisting with meaningful matches.

LinkedIn Supporting Diversity Through Mentorship

- This resource offers considerations and best practices for supporting the creation of diverse mentorships. It provides information for mentees as well as program developers, highlighting the importance of collaborative processes.

MindFrame Connect Inclusive Leadership

- This resource offers thoughtful insights and considerations that may be helpful for mentors. It encourages them to reflect on their biases and the way they provide support to mentees. This can be useful for training and supporting mentors in their mentor-mentee journey.

Kenan Institute of Private Enterprise: A Roadmap for Diversifying Apprenticeships

- This resource offers best practices for diversifying apprenticeships in the trades and structuring supportive programs to be equipped for attract diverse talent. Practices are vague but encourage meaningful thought processes for the development of programs and supports.

Jobs for the Future: Family-friendly Policies

- This document, which was developed in collaboration with Chicago Women in Trades, highlights the necessity of family-friendly policies in the skilled trades as well as best practices for developing these kinds of policies. The document also frames the benefits of these policies in the perspective of both employers and employees.

Canadian Apprenticeship Forum: Best Practices for Recruitment and Retention Guide

- This best practice document offers a step-by-step guide for diverse training, recruitment, and retention in the skilled trades. It provides detailed explanations of recruitment and retention strategies as well as case studies for understanding of that underscore the applicability and necessity of strategies.

UN Women: Compendium of Good Practices in Training for Gender Equality

- This resource provides information based on diverse international practices that help in training and developing gender equality. It underscores the importance of training in helping to establish gender equality as well as the need for this kind of learning. This resource may be useful when promoting DEI to partnerships, communities and employers as well as developing industry-related trainings.

Final Recommendations

These final recommendations were developed to align with the findings of this research, including the identified themes and commonalities that speak to the barriers, gaps, and inconsistencies across the skilled trades industry as well as the needs and perspectives of women and gender-diverse individuals who will benefit from the ConnectHer Mentorship Programs. After carefully reviewing the main findings and considering best practice literature, the final recommendations are as follows:

1. Improve access to mentorship, training and education by establishing opportunity pathways

Mentorship programming provides opportunities for women to build connections with experienced tradespersons and other tradeswomen. Provide women and gender-diverse individuals with mentorship and networking opportunities that help them build relationships with industry members and feel confident and encouraged in their career path. Also ensure provided programming is flexible and considerate, for example, of women who are transitioning from a different career, have caretaking and familial responsibilities, and other responsibilities that affect their ability to participate. Providing various options for service and content delivery helps to create supportive environments. These include online and evening learning for synchronous programming as well as asynchronous learning options. This may also include communication flexibility, so that participants can connect with educators easier. Lastly, establish support services that help participants find relevant training courses and keep channels of communication open so they're aware of financial aid opportunities, including scholarships, grants, and bursaries for women in skilled trades programs.

2. Prioritize partnerships, advocacy and industry representation

Encouraging partners and external organizations to adopt DEI policies promoting gender equality helps to establish equitable and inclusive workplace environments. Additionally, the research has demonstrated how important representation of women and gender-diverse role models are to apprentices, with successful mentor-mentee relationships being grounded in shared similarities and experiences. When implementing programming and services, ensure to promote DEI in the Red Seal skilled trades in the community, and acknowledge and communicate how barriers for women will be addressed with services. Ensure data regarding biases and barriers are leveraged to ensure effective actions are taken to improve inclusivity in the workplace. Also consider how to improve visibility and representation of women and gender-diverse individuals in the industry. Actions may include success stories available to participants as well as communication pathways to engaging with mentors. Ensure to guide program participants into their mentor-mentee journey as well. Their learning can include information about building those relationships, asking questions, seeking support, and accessing helpful information that further supports their career goals. Additionally, providing a pre-established structure and boundaries may help both parties establish and maintain a relationship, encouraging them to continue their path.

3. Encourage and establish a supportive workplace inclusive culture

While representation and advocacy are essential supportive measures, action to maintain inclusive environments and change the overall culture of the industry is important. Women and gender-diverse persons should be given space and opportunities to advocate for their own success and the success of their peers in addition to programming and service measures. Therefore, ensure services and learnings also include practice training regarding the challenges women may face in the industry. This involves preparing them for situations where they may experience gender-based discrimination in the workplace as well as giving them the tools to properly navigate these situations, building resilience and confidence. This learning may also be integrated into content modules, exploring workplace conflict specific to the industry, navigation techniques, and strategic actions for establishing positive relationships in the skilled trades.

Next Steps

Based on the identified best practices and final recommendations, the recommended next steps are as follows:

1. Identify capacity to support new training and education efforts.
2. Develop a strategic plan for attracting participants and helping them foster industry relationships.
3. Leverage existing partnerships and connections to promote DEI in the skilled trades.
4. Assess the final recommendations and identify goals for achieving each recommended action for the ConnectHer mentorship program.
5. Established tracking and measuring measures for ongoing reviews of program consistencies, inconsistencies, gaps, and opportunities.

Conclusion

Findings from program e-scan, inventory analysis, and data collection align with the existing literature. Issues are consistent, and while there has been some headway in making change, there has not been enough done to reduce and eliminate disparities. It is apparent that trade demands increase, there is more need to take action to reduce these gaps, and support women and gender-diverse individuals. The information gathered from the primary and secondary research in combination with the themes and information collected from the analysis will be used to inform the development and implementation of the ConnectHer Mentorship Program, leaving to positive, lasting change that addresses the challenges and needs of tradeswomen and prospective tradeswomen.

References

- Apprentice Search. (2024). *Women in Skilled Trades Peer Mentorship Group*. <https://www.apprenticesearch.com/news/women-in-skilled-trades-peer-mentorship-group>
- BC Centre for Women in the Trades (BCCWITT). (n.d.). *Welcome to BCCWITT*. <https://bccwitt.ca/>
- British Columbia Institute of Technology (BCIT). (n.d.). *Trades Discovery for Women*. <https://www.bcit.ca/programs/trades-discovery-for-women-associate-certificate-full-time-1190acert/#contacts>
- BuildForce Canada. (n.d.). *Careers in Construction, Opportunities for Women*. <https://www.careersinconstruction.ca/en/why-construction/opportunities-women>
- Canadian Association of Women in Construction. (n.d.). <https://cawic.ca/>
- Canadian Construction Women. (2024). *Connect*. <https://constructionwomen.org/>
- Department of Justice. (2023). *Definitions*. <https://www.justice.gc.ca/socjs-esjp/en/dash-tab/definitions>
- Dorrance Hall, E., & Gettings, P.E. (2020). "Who is this little girl they hired to work here?": Women's experiences of marginalizing communication in male-dominated workplaces. *Communication Monographs*, 87, 484 - 505.
- Erickson, J.A., & Schultheiss, D.E. (2009). Women Pursuing Careers in Trades and Construction. *Journal of Career Development*, 36, 68 - 89.
- Garstein, M.A., Benjamin, C.P., Lavine, L., Craft, R., & Wharton, A.S. (2018). External Mentor Program: A Pathway to Career Advancement for Women in STEM. *ADVANCE Journal*.
- Government of Canada. (2023). *Follow your passion. Find your skilled trade*. <https://www.canada.ca/en/employment-social-development/campaigns/skilled-trades.html#indemand-canada>
- Government of Canada. (2024). *Guide on Equity, Diversity and Inclusion Terminology*. <https://www.noslangues-ourlanguages.gc.ca/en/publications/equite-diversite-inclusion-equity-diversity-inclusion-eng>

-
- Government of Ontario. (2024). *Women's social and economic opportunity*. <https://www.ontario.ca/page/womens-social-and-economic-opportunity>
 - Grogan, K. E. (2019). How the entire scientific community can confront gender bias in the workplace. *Nature Ecology & Evolution*, 3(1), 3–6. <https://doi.org/10.1038/s41559-018-0747-4>
 - Halton Industry Education Council. (2020). *Gateway to the Trades*. <https://hieec.on.ca/gateway-to-the-trades/>
 - Lourens, A.S. (2014). The development of co-curricular interventions to strengthen female engineering students' sense of self-efficacy and to improve the retention of women in traditionally male-dominated disciplines and careers. *South African Journal of Industrial Engineering*, 25, 112-125.
 - Manitoba Women in Construction. (n.d.). <https://mbwomeninconstruction.com/>
 - MAP Strategic Workforce Services. (2024). *Women in Trades*. <https://nb-map.ca/new-boots/women-in-trades/>
 - Nova Scotia Community College (NSCC). (2024). *Women Unlimited*. <https://www.nsc.ca/about/schools/access/women-unlimited.asp>
 - Office to Advance Women Apprentices. (2024). *Supporting Women in Skilled Trades*. <https://www.womenapprentices.ca/>
 - Office to Advance Women Apprentices – Newfoundland and Labrador. (2024). *Mentoring Women in the Trades*. <https://www.womenapprentices.ca/newfoundland-labrador/mentoring-women-in-the-trades/>
 - Okanagan College. (2024). *Women in Trades Training Department*. <https://www.okanagan.bc.ca/trades-and-apprenticeship/women-in-trades>
 - Ontario Colleges. (2024). *Women in Trades*. <https://www.ontariocolleges.ca/en/apply/skilled-trades/women>
 - Pride and a Paycheck. (n.d.). *Welcome to Pride and Paycheck E-Mag Site*. <https://www.prideandapaycheck.com/>
 - Skills/Compétences Canada. (2024). *Young Women's Initiatives*. <https://www.skillsontario.com/young-womens-initiatives#Hub>
 - Skills for Change. (n.d.). <https://skillsforchange.org/>
 - Skills Trades BC. (2023). *Equity in the Trades*. <https://skilledtradesbc.ca/equity-in-the-trades>
 - Statistics Canada. (2024). *Archived – Proportion of women and men employed in occupations, annual, inactive*. <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410033502>
 - Straus, S. E., Johnson, M. O., Marquez, C., & Feldman, M. D. (2013). Characteristics of successful and failed mentoring relationships: a qualitative study across two academic health centers. *Academic medicine : journal of the Association of American Medical Colleges*, 88(1),
 - Struthers, K., & Strachan, G.J. (2019). Attracting women into male-dominated trades: Views of young women in Australia. *International Journal for Research in Vocational Education and Training*. 82–89. <https://doi.org/10.1097/ACM.0b013e31827647a0>

- Trevelin, A.T., Neto, A.C., & De Freitas Censoni, P.G. (2023). Work Disruptions and Skill Shifts: Insights on the Characterization, Importance and Development of Soft Skills. *European Journal of Development Studies*.
- Turner, M., Holdsworth, S., Scott-Young, C.M., & Sandri, K. (2021). Resilience in a hostile workplace: the experience of women onsite in construction. *Construction Management and Economics*, 39, 839 - 852.
- Women Building Futures. (2024). *You'll Be Surrounded by Support*. <https://womenbuildingfutures.ca/>
- Women in Resource Development Corporation. (2024). <https://wrdc.ca/>
- Women's Network PEI. (2024). *Trade HERizons*. <https://www.wnpei.org/en/trade-herizons>

List of Tables

Table 1: Key Themes Across Domains

Table 2: Key Themes from E-Scan Thematic Analysis

Table 3: Key Gender Equity Thematic Areas

Table 4: Employer Engagement

Table 5: Attracting Diverse Employees

Table 6: Barriers to Participation

Table 7: Actions & Solutions for Eliminating Barriers

Table 8: Actions for Increasing Participation

Table 9: Potential Mentorship Solutions

Table 10: Characteristics and Components of Trades Programs Supporting Women

Table 11: Demographics of Survey Respondents

Table 12: Key Themes from Survey Analysis

Table 13: Key Themes from Survey Comments

Appendices

Appendix A: Important Terminology & Definitions

Accommodation – measures in the workplace that enable employees to participate and fulfill workplace duties.

Barrier – physical, structural, technological, and socioeconomic obstacles that prevent full and equal participation in society.

Bias – preconceived judgments that influence an individual's view of attitude towards others.

Equity-Denied Groups – groups in society who face barriers due to systemic discrimination, preventing them from having proper access to resources and opportunities other groups may have.

Gender-Diverse Individuals – people who do not exclusively identify as being male or identify as being female.

Gendered – characteristics or bias toward or against a specific gender.

Harassment – unpleasant, unwanted, demeaning, and belittling actions or comments that are directed toward an individual, causing them distress.

Intersectionality – interconnectedness of social characteristics such as sex, gender, sexuality, race socioeconomic status, and disability as applicable to a certain individual or group, impacting their experiences of discrimination.

Men – cisgender and transgender people who identify as men.

Non-binary – individuals with a gender identity that does not align with a binary gender identity; non-binary individuals may identify as both man and women, neither man or woman, or somewhere within the gender spectrum.

Trans – a broad term referring to transgender, non-binary, and other gender-diverse groups.

Transgender – an individual whose gender identity does not coincide with the sex they were assigned at birth.

Two-spirit – a broad term for some Indigenous Peoples who identify as having a male and female spirit or whose gender and/or sexual identity is not limited by binary understandings of gender.

Women – cisgender and transgender people who identify as women.

Appendix B: Summary of Environmental Scan – Online Canadian Women in Skilled Trades Mentoring Resources

Women Building Futures (WBF)

- An Edmonton organization that commits to recruiting, training, and supporting women in the skilled trades. WBF offers several programs and services that prepare women for careers in sectors they've been historically underrepresented in. The organization also helps prepare women for lucrative careers by raising awareness and offering training and other opportunities. Focus areas include workforce attraction, assessment and essential skill training, workforce training, workforce coaching, job search training, and support with obtaining employment.

Canadian Association of Women in Construction (CAWIC)

- Supports women in the construction industry by offering mentorship programs, networking opportunities, and educational resources that help women succeed in the industry.

Skills Canada

- Not a resource specific to women but offers resources that promote the skilled trades to young women. This includes hosting competitions and other events to showcase skilled trades and technology.

Skills Ontario – Young Women's Initiatives

- A collection of hands-on events and programs that offer skill development and mentorship opportunities to young women. Participants range from grades 7-12 and have the chance to explore the trades through Career Exploration Events that are hosted across the province. Young women also have the opportunity to participate in the Skills Ontario Competition each year.

Apprentice Search – Women in Skilled Trades Peer Mentorship Group

- A monthly peer mentorship group for women in the skilled trades that takes place the second Thursday of every month. The group is a gathering of women in the skilled trades, providing them an opportunity to speak and connect. The group welcomes individuals who identify as women and who are learning or working in the skilled trades or thinking of joining the skilled trades.

Halton Industry Education Council – Gateway to the Trades Program

- A part-time, five (5) weeklong, facilitated program that helps individuals explore the skilled trades and become employment ready by helping them develop skills and make connections with employers in order to gain meaningful employment. Topics in the program include career awareness, health and safety training, numeracy skills, financial literacy, and job search training.

Women Apprentices – Mentoring Women in the Trades

- An interactive training workshop resource for journeypersons and supervisors of tradeswomen to help them identify necessary tools for being an effective mentor to women. The goal of the workshop is to help foster a positive and health mentor-mentee relationship with women in the trades.

BC Center for Women in the Trades (BCCWITT)

- An organization that strives to eliminate barriers experienced by women in the skilled trades by establishing a network that helps create a culture of equality. The broader goal of this two (2) year pilot project is to increase retention and advancement of women by offering targeted supports and programming.

Canadian Association of Women in Construction (CAWIC)

- Helps facilitate long-term success for women in construction related fields – general contracting, trades, building products, architecture, engineering, interior design, and professional services. CAWIC is developing several programs and services for women in this sector.

Canadian Construction Women (CCW)

- Offers members supports, mentoring and networking opportunities, community involvement, and learning and development opportunities to encourage and inspire women to seek a career in the building industry and demonstrate a wealth of opportunities.

Careers in Construction – Opportunities for Women

- Shares resources, including videos and information, about entering the trades. They have also created a Pinterest page with a wide variety of resources for women in the construction industry.

emPOWER: Women in Trades – Manpower Alberta

- Government-funded training in Calgary that supports unemployed or marginally employed women who are interested in entering the skilled trades. The program provides skill developing and support to help start a career and obtain entry-level work in the trades.

Horticulture Technician Pre-Apprenticeship Training Program for Women – Skills for Change

- A Humber College program that helps prepare women who are interested in the trades for employment in the landscape field – landscape construction, grounds and golf course maintenance, parks and operations, and garden care. The program offers academic and practical training that helps with obtaining employment.

ITA Women in Trades Training Initiative – Industry Training Authority

- Showcases stories from successful women apprenticeships and provides enrolment information, examination details, and more.

Manitoba Women in Construction

- A group of women in Manitoba's construction industry working to support, educate, and mentor other women in construction. The organization's goal is to give women in the industry a voice.

New Boots: Progressing Women in Trades

- A New-Brunswick resource network that promotes, supports, and mentors women in non-traditional trades that may include construction, maintenance, automotive, truck and transport.

Office to Advance Women Apprentices (OAWA)

- The Newfoundland chapter of the organization helps women apprentices after they've completed their academic training, assisting them with obtaining employment and achieving journeyman status. OAWA has partnerships with relevant employers, unions, and government and training institutions that help with fulfilling these goals.

Pride and a Paycheck

- A free e-magazine for tradeswomen, friends, organizations, and supporters, with most of the articles, poetry, and other pieces being written by women.

British Columbia Institute of Technology (BCIT) – Trades Discovery for Women

- A program that offers extensive access to trade and technical training at BCIT campuses, including practical and relevant programming that prepares participants to succeed in entering and finishing trade and technical training or finding apprenticeships.

Women’s Network PEI – Trade HERizons

- A program offering career exploration and college preparation opportunities, particularly focusing on providing exposure to careers in the skilled trades and technology sector as well as improving skills and personal development. Participants engage in labour market research, resumes, interviews, and math and team-building.

Women in Resource Development Corporation (WRDC)

- Helping women in Newfoundland and Labrador prepare for and succeed in finding meaningful, long-term careers in the skilled trades and technology sector.

Government of Ontario – Women in Skilled Trades and Information Technology Training

- Offers training for women to succeed in communities where skilled trades and IT workers are in demand. There is gender-sensitive, in-class, and on-the-job training opportunities for women with low-incomes as well as women who are unemployed or underemployed.

Ontario College of Trades – Women in the Trades

- Provides information about entering the trades, addresses myths about working in the trades, and offers information about financial opportunities such as bursaries and scholarships.

Okanagan College – Women in Trades Training (WITT)

- A program funded through the Canada-British Columbia Workforce Development Agreement that helps increase the number of women apprentices in British Columbia.

Women Unlimited Association

- A Nova Scotia-based not-for-profit women’s organization that promotes the participation of women in the skilled trades and technology sector. The organization partners with industry employers, governments, educational institutions, and the community to address and eliminate systemic barriers to participation for diverse women in the trades.

Appendix C: Survey Questions

Multiple-Choice Questions

- What is your age?
 - I am younger than 18 years of age
 - 18-20 years
 - 20-24 years
 - 25-29 years
 - 30-34 years
 - 35-39 years
 - 40-49 years
 - 50-59 years
 - 60 years and older
- Please select the option(s) that best correspond(s) with your gender identity or feel free to offer another selection in the “Prefer to self-describe” box.
 - Woman
 - Man

-
- Trans
 - Two-spirit
 - Gender-queer
 - Gender nonconforming
 - Non-binary
 - Agender
 - Gender-fluid
 - Pangender
 - Prefer not to answer
 - Prefer to self-describe
 - With which of the five (5) Red Seal Skilled Trades listed do you associate:
 - Construction Electrician
 - Carpenter
 - Welder
 - Plumber
 - Heavy Equipment Operator
 - I have not yet decided on a specific skill trade
 - I work in another skilled trade

Select which category BEST describes each stage of your career:

- a) In the early years of my career:
 - a. I considered a career in the skilled trades, but had not taken concrete steps to a...
 - b. I worked as an unregistered tradesperson
 - c. I was a direct-entry apprentice
 - d. I completed a pre-employment/foundation program in a specific trade
 - e. I was employed in a different career unrelated to the skilled trades
 - f. I was a trainer/educator in a field unrelated to skilled trades
 - g. Other
- b) Current:
 - a. I am self-employed as a certified tradesperson
 - b. I am working as an unregistered tradesperson
 - c. I am a registered apprentice
 - d. I am a certified tradesperson employed through a union hall
 - e. I am a certified tradesperson employed in a small or medium sized business
 - f. I am a certified tradesperson employed in a large business
 - g. I am a certified tradesperson not actively working in the skilled trades
 - h. I am transitioning from my current career to one in the skilled trades
 - i. I am considering a career to be one in the skilled trades
 - j. I am a trainer/educator in the skilled trades
 - k. I am taking a break from my apprenticeship
 - l. Other

-
- c) Where do you see yourself in the future:
- a. I would like to transition from my current career to one in the skilled trades
 - b. I would like to be a self-employed certified tradesperson
 - c. I would like to be an apprentice
 - d. I would like to be a certified tradesperson employed through a union hall
 - e. I would like to be a certified tradesperson employed in a small or medium sized...
 - f. I would like to be a certified tradesperson employed in a large business
 - g. I am not actively working in the skilled trades
 - h. I would like to be a trainer/educator in the skilled trades
 - i. Other

Thinking about your career goals in the skilled trades, indicate your level of agreement with the following statements:

1. It is/was easy to network with guidance counsellors, career counsellors, employers and mentors to help me get started in my skilled trades career.
2. There is a lack of woman role models or mentors in my field.
3. The lack of available woman role models or mentors in my chosen trade has discouraged me from pursuing a career in the skilled trades.
4. I believe women feel welcome in the skilled trades.
5. My perception is that women in the skilled trades earn lower incomes than their male peers.
6. The perception of lower earnings for women in skilled trades has deterred me from pursuing a career in this field.
7. It is/was easy to find an employer to sponsor my apprenticeship.
8. I feel safe from harassment and abuse while I am at work.
9. The emotional demands of working in the trades have negatively impacted my health and well-being.
10. The physical demands of working in the trades have negatively impacted my health or well-being.
11. I have access to necessary support for my health and well-being as a skilled tradesperson.

Thinking about your career goals in the skilled trades, indicate your level of agreement with the following statements: (continued)

1. I have experienced/I am concerned about sexism or discrimination in the skilled trades workplace.

-
2. A zero-tolerance policy towards harassment and discrimination is something I look for in an employer.
 3. The cost of education or training for my trade has been a financial burden.
 4. I can afford the necessary tools or transportation to work in the skilled trades.
 5. I struggle/have struggled with accommodation for my caregiving commitments.
 6. I have/had easy access to academic supports and tutoring during training or education opportunities for my trade.
 7. The availability of training programs or apprenticeships influenced my decision to pursue a career in skilled trades.
 8. I have/had access to effective networking opportunities in my chosen trade.
 9. Lack of networking opportunities has hindered my career advancement in skilled trades.
 10. I have experienced systemic barriers such as racism or other biases in my attempt to enter or work in skilled trades.

Open-Text Response Questions

1. What challenges do/did you face to entering or remaining in the skilled trades?
2. How were/are they being addressed?
3. What suggestions do you have in the development of a new mentorship program for women and gender-diverse individuals in the skilled trades?
4. What additional support or resources do you wish are/were available for you in the skilled trades?
5. Are there specific topics or areas you wish were covered more to help you enter the trades?
6. Are there specific topics or areas you wish were covered more to help you remain in the trades?
7. What is the most rewarding aspect of being/becoming a tradesperson?

Appendix D: Summary of Multiple-Choice Question Survey Themes

Multiple-Choice Themes

Theme 1: Networking and Support	
Overall Sentiment	Positive

Theme 2: Diversity and Inclusion – Negative Sentiment	
• Lack of Role Models/Mentors • Welcome Perception • Gender Discrimination Concerns • Systemic Barriers	• Negative Sentiment • Mixed • Negative Sentiment • Negative Sentiment
Overall Sentiment	Mixed, with more negative sentiment
Theme 3: Career Perception	
• Gender Wage Gap Perception • Impact on Career Decision • Employer Sponsorship • Influence of Training Programs • Impact of Job Demands on Health	• Negative Sentiment • Negative Sentiment • Neutral Sentiment • Positive Sentiment • Negative Sentiment
Overall Sentiment	Mostly Negative
Theme 4: Workplace Environment	
• Feeling of Safety	• Neutral Sentiment
Overall Sentiment	Mixed, leaning towards negative
Theme 5: Financial Concerns	
• Financial Burden of Education • Affordability of Tools/Transportation	• Negative Sentiment • Neutral Sentiment
Overall Sentiment	Mixed, leaning towards negative