Developing Women Leaders in the Digital Economy

Partners

Women in Communications and Technology (WCT) is a national nongovernmental organization with a 30+ year track record of success in advancing women in digitally driven workplaces. WCT partners with organizations to build more engaged, diverse and resilient workforces by increasing the retention and advancement of women. WCT's approach integrates gender diversity initiatives into the core of the workplace, building strong leadership pipelines to promote more women into leadership roles.

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

The Future Skills Centre (FSC) is a forward-thinking centre for research and collaboration dedicated to preparing Canadians for employment success. We believe Canadians should feel confident about the skills they have to succeed in a changing workforce. As a pan-Canadian community, we are collaborating to rigorously identify, test, measure, and share innovative approaches to assessing and developing the skills Canadians need to thrive in the days and years ahead. The Future Skills Centre was founded by a consortium whose members are Toronto Metropolitan Uaniversity, Blueprint, and The Conference Board of Canada, and is funded by the Government of Canada's Future Skills Program.

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Executive Summary

Despite decades of advocacy, women remain significantly underrepresented in digital roles, especially in leadership positions. To address this persistent issue, Women in Communications and Technology (WCT) has developed targeted programs such as the Roberta Bondar STEM Career Development program and, more recently, the Opening Doors program. Supported by the Future Skills Centre and in collaboration with the Diversity Institute, these initiatives aim to equip women with the skills and resources needed to succeed in leadership roles within the digital economy. Through comprehensive mentorship, networking opportunities, targeted skill development and resource support, these programs are designed to provide women with the essential tools and knowledge to advance their careers and excel in high-level positions.

Context

Women are underrepresented in leadership roles across sectors in Canada, with disparities especially pronounced in the corporate sector. Recent trends show a decline in women's representation in senior management, posing a threat to future gender equality in leadership. In the digital economy, although more women are joining the workforce, the growth rate is slower for those aged 45 to 54 years, who typically occupy mid- and senior-level roles. In the fields of science, technology, engineering and mathematics (STEM), women are more likely than men to leave their careers or switch to non-STEM roles. Additionally, women hold fewer directorships in technology companies compared to the average for all companies listed on the Toronto Stock Exchange.

Gender stereotypes and biases significantly deter women from joining the digital economy. These biases start at an early age and persist across cultures and generations, associating technology with men and caregiving with women. Women in STEM face entrenched discrimination and bias, particularly in performance reviews and promotions. Racialized women experience even greater obstacles. The pervasive "bro culture" in many workplaces reinforces masculine norms and creates exclusionary environments. Inflexible work structures further hinder women's success, especially for those with caregiving responsibilities, leading to poor work-life balance and limited support from employers. Inadequate responses to discrimination and harassment

exacerbate these challenges, making it difficult for women to advance. A lack of mentors and role models in the digital economy leads to isolation and limited career growth opportunities. This isolation often results in feelings of tokenism and imposter syndrome.

Women are underrepresented in leadership roles across sectors in Canada. *Recent trends show a decline in women's representation in senior management, posing a threat to future gender equality in leadership.*

Program design

The Robert Bondar and Opening Doors programs focus on mentorship, networking and resources to help women succeed in environments where they are traditionally underrepresented. The goal is to reduce feelings of isolation while fostering confidence and belonging. As the programs focus primarily on individual capacity building, they do not address broader societal norms and systemic barriers that require wider efforts and policy changes.

The Roberta Bondar program, launched in 2016 by WCT, supported early-career STEM professionals and those re-entering the workforce. The 12-month virtual program included bi-monthly training sessions organized by a committee of WCT representatives and partners from the private and public sectors. Each cohort of up to 20 participants fostered meaningful connections and had diverse perspectives. The program featured a mix of committee-organized and participant-led sessions covering topics such as networking, self-advocacy, entrepreneurship and mindfulness, led by expert guest speakers. Recommendations for improvement included increasing the cohort size for greater impact and developing a competency framework to ensure focus on skills development.

The Opening Doors program incorporated these recommendations. It targeted women with at least one year of professional experience in the digital economy, offering a structured and scalable approach. Running from November 2023 through March 2024, it featured seven interactive workshops and a panel discussion, all conducted online. Topics included self-promotion, personal branding, career planning, selling ideas, negotiation skills, emotional intelligence and managing difficult conversations. Recruitment aimed for 40 to 70 women with a preference for equity-deserving groups. The program included mentorship support, progress tracking and customized resources to support ongoing development. Pre- and post-program surveys measured participants' competencies, and the program aimed to strengthen the information communications and technology (ICT) network through deep connections and lasting relationships within smaller working groups.

Program implementation

Recruitment for Opening Doors evolved from its initial program design target to accommodate as many women as possible, resulting in 172 registrations. The recruitment timeline was significantly compressed due to resource constraints and approval delays and started just 60 days before the program's launch. Despite these challenges, participants were successfully recruited from various public service agencies and corporate sponsors, including Symcor, Bell, Cogeco and Rogers. The program also engaged representatives from the Treasury Board Secretariat and Shared Services Canada, who promoted the initiative through employee resource groups. Nevertheless, the compressed timeline hindered effective engagement with partners in the newcomer and employment service provider ecosystem, limiting outreach to potential participants who require additional support services.

Of the 172 registered participants, about 120 attended at least one session, and 52 met the graduation requirement of attending at least four out of the eight sessions. The program maintained a consistent curriculum and facilitator lineup, with only minor disruptions. The WCT's group mentorship program, Pods, saw 23 participants, with surveys planned to gauge the program's effectiveness in the future. The program faced challenges in networking and partner engagement, underscoring the need for better orientation and support for participants. Additionally, the compressed timeline and limited resources affected the ability to form deeper relationships with external organizations, highlighting areas for improvement in the future.

172
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Participants met the graduation requirements
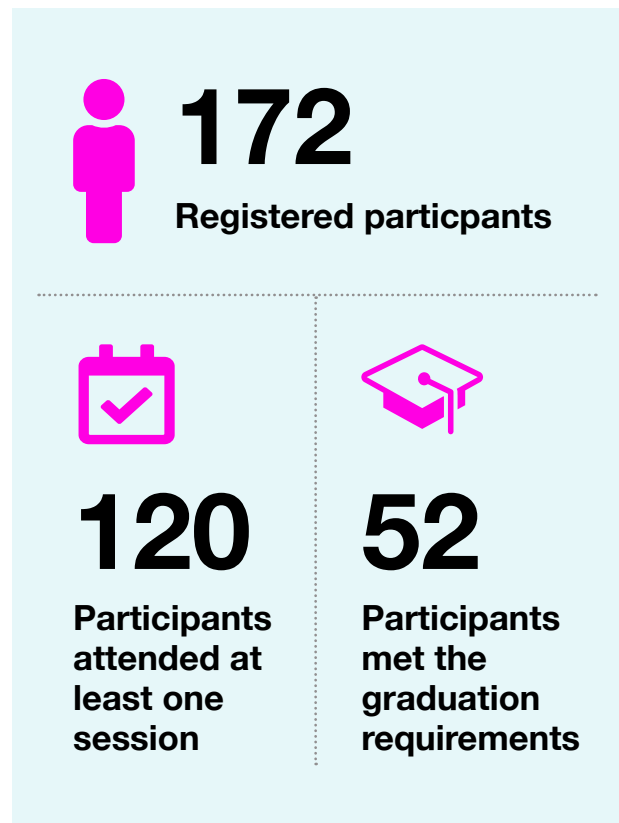
Program evaluation methods

As the Opening Doors program concluded in March 2024, an evaluation of its short-term outcomes was conducted using pre- and post-program surveys. These surveys measured changes in participants' competencies and experiences in four key areas: social and self-awareness (consisting of seven distinct skills), essential skills (10 skills), confidence in dealing with difficult conversations and contributing to the organization (eight skills) and articulating values and skills and advocating for self and others (nine skills). The pre-program survey collected baseline data and demographic information, while the post-program survey reassessed the same skills to gauge program impact.

To evaluate the program's effectiveness, mean scores for each skill were calculated from participants' ratings on a five-point Likert scale. The difference in mean scores between the pre- and post-program surveys provided a quantitative measure of change in each skill area. However, due to low and inconsistent survey response rates (only 15 completed both surveys), analysis is limited. To provide a broader perspective, results from all 50 pre-program and 40 post-program respondents are presented, alongside an analysis of the 15 participants with complete data.

Results from the pre- and post-program surveys show varying degrees of improvement across four major competencies evaluated.

Findings

Pre-program survey results show that most participants identified as women, with a few identifying as non-binary. The overall average age 33 years old. Racialized and non-racialized individuals received nearly equal representation. Participants were highly educated, with nearly all being employed. Most were Canadian citizens. They worked across sectors, including public administration; professional, scientific and technical fields, and arts and entertainment, as well as other in industries such as finance, insurance, administrative support, utilities, information and culture, management and manufacturing.

Results from the pre- and post-program surveys show varying degrees of improvement across four major competencies evaluated. For social and self-awareness, there was an overall increase of 0.05 points. Essential skills also showed slight improvement, with an average increase of 0.22 points. Confidence in dealing with difficult conversations and contributing to the organization experienced a gain of 0.33 points. Finally, articulating values and skills and advocating for self and others saw an enhancement of 0.30 points.

However, a more pronounced improvement is evident among participants who completed both surveys. This group

experienced significant growth in social and self-awareness (0.61 points), essential skills (0.73 pints), confidence in dealing with difficult conversations and contributing to the organization (0.90 points), and articulating values and skills and advocating for self and others (0.97 points).

Recommendations

Several recommendations have been identified to enhance the effectiveness and reach of the Opening Doors program. By addressing these areas, future iterations of the program can better support women in achieving leadership roles in the digital economy:

1   **Recruitment and engagement strategies:** Extend the recruitment period, strengthen partnerships, secure employer buy-in, leverage diverse recruitment channels and apply more targeted inclusion criteria.

2   **Program onboarding and support:** Implement a comprehensive orientation process, provide ongoing technical support and develop a participant handbook so participants can stay organized and informed.

3   **Small-group networking opportunities:** Organize additional small-group networking events to allow for broader connections and facilitate better engagement of working groups through more flexible strategies and external incentives that incorporate gamification.

4   **Evaluation processes and methods:** Improve survey response rates by making time for program evaluation during the training session and offer incentives for completion that do not bias responses. Consider qualitative data collection methods that would contribute to a more in-depth analysis.

5   **Program content:** Make modifications to target specific social and self-awareness skills, where evaluation results showed the smallest positive change.

Introduction

Despite decades of advocacy, women remain underrepresented in digital roles, especially in leadership positions within the information, communications and technology (ICT) sector. Women in Communications and Technology (WCT) has long been dedicated to building the capacity of women to lead in the digital economy. Their efforts began with the Roberta Bondar STEM Career Development program, which focused on mentoring and sponsorship. More recently, they have included the Opening Doors program. With funding from the Future Skills Centre and in collaboration with the Diversity Institute, WCT evaluated its previous programming and developed a competency framework, which was tested through the Opening Doors program. Concurrently, WCT and the Diversity Institute engaged with employers in the sector to better understand the barriers and enablers for women's advancement. A separate report will review ways to address the barriers women face in the workplace.

This report reviews the background research and provides an overview of the Roberta Bondar program, illustrating how it informed the design of the Opening Doors program. It then details the implementation of Opening Doors, followed by a discussion of the program's evaluation methods and findings.

Gender stereotypes and biases, which affect recruitment, retention and career advancement, are among the barriers that impede women's progress.

Conclusions and recommendations are derived from these findings. The background review examines the representation of women in leadership roles, noting a persistent gender gap in Canada, while exploring trends in the digital economy. While there has been an increase in women joining the digital workforce, this growth is not uniform across age groups. This suggests that pathways to higher positions remain narrow. Gender stereotypes and biases, which affect recruitment, retention and career advancement, are among the barriers that impede women's progress.

These biases create a "bro culture" in many workplaces, leading to environments that are unwelcoming and at times hostile to women. Additionally, the scarcity of mentorship and visible role models contributes to workplace isolation, making it harder for women to thrive in these settings.

In response to these challenges, WCT developed its flagship Roberta Bondar program to support early-career professionals in science, technology, engineering and mathematics (STEM) as well as those re-entering the workforce. Led by expert guest speakers, the program covered topics such as networking, self-advocacy, entrepreneurship and mindfulness. Recommendations for improvement included increasing the cohort size for greater impact and developing a competency framework to ensure a focus on skills development.

Building on this foundation, a well-defined competency framework was designed for the Opening Doors program. The program was structured around four key outcomes: social and self-awareness, essential skills, confidence in dealing with difficult conversations and contributing to the organization, and articulating values and skills and advocating for self and others. The program's reach was expanded to include more participants, thereby increasing its impact.

Context

Representation of women in leadership roles

Women continue to be underrepresented in leadership roles across sectors and regions in Canada. They hold just 40.8% of board positions across the corporate and volunteer sectors, as well as hospitals, educational institutions and municipal and provincial agencies, boards and commissions. The disparity is even more pronounced within the corporate sector, where women hold a mere 25.3% of board positions,[1] underscoring a persistent gender gap in career advancement and decision-making roles.

While there have been some improvements in corporate director and executive officer roles, recent trends show a decline in women's representation in senior management within Canada's largest organizations. The proportion of women in these roles dropped to 39.1% in 2023 from 41.9% in 2022. Even more troubling is the sharp decline in the pipeline to senior management, with women's representation falling to 42.9% in 2023 from 54.8% in 2022, which could severely limit the pool of future women leaders and affect gender representation at upper levels of management.[2] These trends signal a crucial

warning: without robust organizational commitments to equitable recruitment, hiring and promotion practices, the progress toward gender equality could be at risk. A consistent focus on fostering a more inclusive environment for women in leadership is crucial to ensuring progress and preventing backsliding.

Women in the digital economy

There has been a steady increase of women joining Canada's digital workforce. A study by the Information and Communications Technology Council (ICTC) found that more women joined the digital economy in 2022 than in previous years, with the growth rate accelerating during this period. The share of women in the digital workforce increased from 17.5% in 2015 to about 22.5% by 2022, with a consistent upward trend. However, women aged 45 to 54 years—the typical cohort for mid- and senior-level roles—are the slowest-growing group in the digital economy, with a growth rate of just 53 individuals per month. In comparison, younger age groups are growing much faster: about 485 women aged 25 to 34 years and 170 women aged 35 to 44 years were added per month.[3]

In STEM, women are more likely than men to leave their careers or switch to non-STEM roles. From 2006 to 2016, 13.7% of women STEM graduates left the workforce entirely, compared to 8.3% of men. Additionally, 75.4% of women STEM graduates moved to non-STEM roles, while only 50.3% of men did the same. Perhaps more telling, 62.3% of women STEM graduates never entered the STEM workforce at all, indicating that in addition to mid-career drop-outs, many women choose not to pursue STEM careers from the outset.[4]

Evidence indicates that women's representation in managerial roles might be marginally higher than in lower-level roles. For example, while women make up 25% of the workforce in natural and applied sciences and related fields, their representation in specialized middle management roles is slightly higher at 26%. However, there is still a substantial disparity when compared to the broader workforce, where women represent 48% of the total.[5]

The representation of women as directors in technology companies remains low, even with some recent gains. According to Osler's 2023 report on diversity and leadership at Canadian public companies, women hold 26% of directorships in technology companies, an increase from 23% in 2022. This figure, however, trails the average (28.5%) for all companies listed on the Toronto Stock Exchange (TSX). While the average number of women directors per board in technology companies has risen slightly (2.1 in 2023 vs. 1.8 in 2022), it is still significantly lower than in other sectors. For example, S&P/TSX 60 companies have an average of 4.42 women directors per board and TSX-listed companies have an overall average of 2.26.[6] This gap illustrates the need for policies and initiatives that promote diversity, inclusion and equitable opportunities in corporate leadership, particularly in technology-focused companies.

Barriers

Stereotypes and biases

Gender stereotypes and biases play a significant role in deterring women from joining the digital economy. These implicit biases often emerge at an early age and appear across genders, cultures and generations. A study conducted in Sweden, a country recognized for its high ranking on gender-equality indices, revealed that gender stereotypes are deeply ingrained from a young age. The research demonstrated that middle school students tend to associate technology with men and caregiving with women, a stereotype that discourages girls from pursuing technology-focused careers.[7] Even women working in science and technology fields internalize the stereotype that science is a domain for men, while women are more suited to the arts.[8]

Gender-based stereotypes affect not only women's career choices, but also the retention and advancement of women within the digital economy. Women in STEM must navigate deeply entrenched discrimination and bias, which can create significant obstacles to their career progression.[9, 10] This discrimination can be evident in performance reviews and promotion practices. According to a TrustRadius survey of 450 U.S. tech professionals, 66% of whom identify as women, 39% reported that gender bias is a significant barrier to promotion. This problem is even more acute for racialized women in tech, with 42% identifying gender bias as a major obstacle to career advancement.[11]

Culture

In the digital economy, workplace cultures often steeped in "bro culture" tend to reinforce masculine norms and behaviour, creating uncomfortable and exclusionary environments for women. This culture can manifest itself in social events, humour or communication styles that alienate those who don't fit the archetype. The TrustRadius survey found that 72% of women in tech have worked at companies where "bro culture" is pervasive, while only 41% of men reported the same experience.[12] This difference points to a fundamental gap in perception. Furthermore, what may seem harmless or insignificant to men can feel exclusionary or even hostile to women.

Research on recruiting sessions revealed that company representatives often engage in behaviors that are known to create a "chilly" or unwelcoming environment for women. These behaviours include gender-imbalanced presenter roles, geek culture references, overt use of gender stereotypes and gendered speech and actions. These can all discourage women from pursuing technology careers.[13]

Workplaces with rigid structures or inflexible hours can further hinder women's success, especially for those with caregiving responsibilities. A culture that demands long hours or penalizes employees for taking time off for family reasons is less appealing to women seeking work-life balance. A 2023 Deloitte study found that women often leave jobs due to inflexible working hours, with 14% citing this as a reason for departure and 12% pointing to a negative work-life balance. Additionally, 97% of respondents felt that asking for more flexibility would negatively affect their chances of promotion, while 95% believed their workload would not be

adjusted even if they did ask. Consequently, 46% of women reported not feeling supported by their employers in balancing work and home life, up from 36% in 2022.[14]

Inadequate responses to discrimination or harassment can create a negative workplace environment where women feel unsafe and undervalued. This environment makes it challenging for women to succeed and advance within their companies, as they face not only the glass ceiling but also the chilling effects of harassment and discrimination. Addressing these issues requires systemic changes that promote inclusivity, flexibility and safety for all employees.

Lack of mentors and role models

A major challenge for women in the digital economy is the scarcity of mentorship and visible role models. Without experienced mentors to guide them, women can feel isolated and struggle to navigate the complexities of the digital workplace. This lack of guidance can hinder career growth, as mentors often provide essential career advice, networking opportunities and
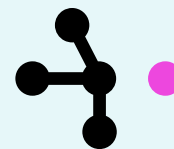
Exclusion and lack of support can lead to feelings of tokenism, *where the presence of women is seen as a response to institutional pressures rather than a genuine commitment to diversity and inclusion.*

advocacy within the organization.

A survey of women in science, engineering and technology (SET) roles in the U.S. revealed a high level of workplace isolation, particularly in fields dominated by men. According to this survey, 27% of women in science, 38% in technology and 44% in engineering felt isolated in the workplace.[15] Workplace isolation made it difficult for women to find peer support, with 84% to 88% of women in SET lacking sponsors and 47% reporting a lack of mentors. For racialized women, these challenges are even more pronounced. Many racialized women report feeling out of place in the workplace, and some avoid social events for fear of reinforcing negative perceptions about their competencies.[16]

This sense of exclusion and lack of support can lead to feelings of tokenism, where the presence of women is seen as a response to institutional pressures rather than a genuine commitment to diversity and inclusion. Tokenism can manifest itself in different ways. For example, women can be assigned to diversity committees or expected to mentor students sharing their identity, which can add undue pressure to represent their gender or racial group in a positive light.[17]

The experience of isolation can lead women to opt out of the digital economy in search of more supportive environments. Imposter syndrome can further exacerbate this isolation, causing heightened anxiety and other mental health issues as women question their competence and sense of belonging in their roles. To address these challenges, organizations need to create welcoming cultures that value diversity of thought, provide strong mentorship programs and promote women to leadership positions. These changes can help retain women in tech and encourage more women to pursue careers in the digital economy.

Program Design

Program objectives

The Robert Bondar and Opening Doors programs were designed to equip women with the skills and support necessary to advance in the digital economy. However, these programs have limitations and cannot address all the barriers women face, including those rooted in broader societal norms and biases that deter women from entering the field. The programs emphasized mentorship, networking and resource support to help women navigate and succeed in an environment traditionally dominated by men. The aim is to reduce feelings of isolation as women progress in their careers, while fostering confidence and a sense of belonging amid what can sometimes be described as a chilly working environment. As they focus on individual participants, these programs do not directly tackle systemic barriers or organizational practices that hinder women's career advancement. Addressing those challenges requires broader efforts and buy-in from policymakers and employers.

The Roberta Bondar program was designed to help professionals within the first five years of their STEM careers, or those who have recently re-entered the STEM workforce after a period of absence. Its objectives were to do as follows:

> ❯ build a robust professional network

> ❯ offer insights into opportunities within Canada's science and technology industries

> ❯ equip participants with the skills needed to advance their careers.

The Opening Doors program had a broader scope, aiming to achieve greater impact by targeting women in the overall digital economy rather than focusing on STEM. At the same time, the objectives were more narrowly defined and measurable, based on a clear competency framework. The four targeted areas were as follows:

> ❯ heightened level of social and self-awareness

> ❯ improved essential skills (communication, numeracy, digital, etc.)

> ❯ improved skills in articulating values and advocating for oneself and others

> ❯ increased confidence and skills in dealing with difficult conversations and contributing to their organizations.

Roberta Bondar program

The Opening Doors program was preceded by the Roberta Bondar program, one of the flagship WCT offerings. It was launched in 2016 and welcomed nearly 100 women, non-binary and gender-diverse early-career professionals from STEM industries. The program was designed to help professionals within the first five years of their STEM career, or those who have recently re-entered the STEM workforce after an absence, build a robust network, gain a behind-the-scenes view of opportunities in Canada's science and tech industries and obtain skills to advance in their careers.

The program was delivered virtually over the course of 12 months through bimonthly training sessions. It was organized by a committee consisting of WCT representatives, a private-sector partner organization and a public-sector partner organization. In the most recent program cohort, these were Microsoft and Shared Services Canada, respectively. The committee was responsible for organizing training sessions, inviting guest speakers and managing logistics to ensure the smooth running of the program.

A key feature of the program was its cohort design. Each cohort consisted of up to 20 participants from the private, public and academic sectors. This group size fostered meaningful connections while providing diverse perspectives across career stages, sectors and industries. The first half of the program featured committee-organized sessions, while the second half included participant-led sessions. This hybrid design covered core topics like networking, self-advocacy, supporting women in STEM and cross-sectoral knowledge sharing. It also allowed participants to explore emerging topics of interest such as entrepreneurship, reconciliation in STEM, mindfulness and boundary setting. Both types of sessions were led by guest speakers who are experts in their respective fields. Past speakers include Kate Arthur, CEO of Kids Code Jeunesse; Kona Williams, Canada's only Indigenous forensic pathologist; and Julia Elvidge, co-founder of SheBoot.

Program efficacy was assessed through a survey sent to past and present participants. It measured the program's relevance and participant satisfaction, as well as the impact of the program on participants' career planning, networking and leadership skills. A primary limitation of the methodology is the low number of survey respondents. Only 17 out of 49 from the past three cohorts participated: nine from the current (2022–2023) cohort, six from the 2021–2022 cohort and two from the 2020–2021 cohort. The low response rate for the current cohort could be attributed to the timing of the survey, which was distributed while the program was underway and several participants were still planning their participant-led sessions. The low response rate for prior cohorts can likely be attributed to the lack of ongoing communication from WCT and program alumni.

A core objective of the program was to expand and diversify the participants' professional networks. All respondents indicated that their professional networks increased as a result of participating in the program, with 41% expanding their networks by 10 or more people. The program also aimed to build participants' knowledge and networks across all sectors, recognizing that the value of a professional network lies not just in its size, but also in its diversity. A truly valuable network includes stakeholders from various sectors, career stages and

*All respondents indicated that their professional networks increased as a result of participating in the program, with **41% expanding their networks by 10 or more people.***

backgrounds to provide comprehensive guidance and insights. All participants reported a diversification of their networks to include professionals from other sectors and more than 50% also connected with associations and advocacy groups for women in STEM. One of the primary limitations of the program was its small cohort size of 20 women selected each year. To mitigate this, participants were expected to apply their learnings in their workplaces to create a broader impact. As a result, 82% of participants felt equipped to advocate for equity, diversity and inclusion (EDI) within their organizations.

The conclusions and recommendations incorporated into the Opening Doors program were based on feedback from Roberta Bondar program participants and sponsors. They indicated that the Roberta Bondar program lacked well-defined outcomes and an evaluation framework. It was suggested that a comprehensive curriculum map – including a learner journey, learning outcomes and topics aligned with those outcomes – would help the program

stay focused on clear goals. To have a greater impact, it was also recommended that WCT increase the cohort size to 100 participants and create smaller working groups to maintain the value of networking.

Opening Doors program activities

Participant recruitment and screening

The Opening Doors program aimed to attract 40 to 70 women aged 25 to 35 years with at least one year of professional experience. Preference was to be given to applicants who identified as members of equity-deserving groups. The recruitment timeline was intended to span from 120 to 45 days before the program's launch. The screening and recruitment process was to be supported by WCT sponsor organizations, government partners and organizations serving newcomers and underemployed individuals. In addition to support from sponsor and partner organizations, recruitment was planned to be conducted through a variety of channels, including the program's website, social media platforms and online discussions.

Training and upskilling

The program was slated to run from November 2023 through March 2024, featuring seven interactive workshops and a panel discussion, all online. These modules were designed to help participants develop foundational skills in leadership and professional relationship management. Each session was planned to provide practical and actionable resources, enabling participants to apply their new knowledge in real-world situations even after the program's end. Facilitators were to be chosen based

on their subject matter expertise and to ensure diverse representation. The program aimed for at least 50% of the facilitators to be from racialized groups, with all panelists and moderators reflecting a range of intersectional identities. The learning objectives for the program's seven workshop sessions and the panel discussion are outlined in Table 1.

TABLE 1

Session learning objectives

Session	High-Level Learning Objectives or Outcomes
#iamremarkable	• Identify unique skills, attributes and values, and enhance self-esteem • Practice effective self-promotion • Build confidence
Brand You	• Articulate unique qualities and begin to develop a personal brand • Understand the importance and utility of networks for women • Manage digital and in-person presence • Cultivate meaningful and mutually beneficial networks
Career Planning	• Recognize the value of having a personal career plan and objectives • Consider potential opportunities and career paths • Design a high-level career plan with milestones and required learnings, experience or certifications
Selling Your Ideas	• Relate objectives and ideas with shared organizational and personal values • Formulate a basic business case for an objective • Reframe setbacks and devise new opportunities
Negotiation	• Understand the unique pitfalls of negotiation for women and how to navigate them • Reasonably appraise your worth in the market • Articulate your unique value • Use a template to write a negotiation script
Emotional Intelligence	• Understand the importance of emotional intelligence in the workplace • Identify the facets of emotional intelligence • Assess personal areas for growth • Gain ability to modify approach as necessary
Panel: Diverse Experiences	• Gain insight into experiences of others • Enhance empathy for members of [other] equity-deserving groups • Understand the importance of allyship and know how it is practiced
Difficult Conversations	• Discover techniques to manage emotions • Plan how to approach a variety of difficult conversations • Use frameworks and scripts to plan and effectively navigate conflict discussions or other challenging interactions

Mentorship support and progress tracking

The modules were designed to foster a strong sense of connection among participants, facilitating peer mentorship and collaborative learning. The aim was to create a supportive network within each cohort, where participants could share experiences, provide guidance and build lasting relationships. To further encourage ongoing mentorship, all participants were invited to join WCT's group mentorship program, known as Pods, after completing the Opening Doors program. This additional mentorship opportunity was designed to extend the benefits of the initial program, offering continued support and networking. To evaluate the success of this initiative, the program planned to track progress by collecting data on how many Opening Doors alumni joined Pods. Additionally, surveys and interviews would be conducted to gather feedback on their experiences, providing valuable insights into the impact of the continued mentorship and guiding future program improvements.

Competency evaluations

To measure the effectiveness and impact of the Opening Doors program against its objectives, the plan was to utilize a pre- and post-evaluation strategy, involving two online surveys:

1. Pre-program survey: This survey, intended to be administered at the start of the program, was designed to measure participants' baseline competencies and experiences in four areas: social and self-awareness, essential skills, confidence in dealing with difficult conversations, and the ability to

articulate and advocate for their values. It also collected demographic information, providing insights into the diversity of the program's participants.

2. Post-program survey: This survey, meant to be completed at the end of the program, was intended to reassess the same competencies and experiences, allowing for a direct comparison of participant progress and program impact in the four core areas.

The comparison between the pre- and post-program survey results would enable the program team to determine the extent to which participants improved in key competencies, indicating the program's successes and areas for improvement. The detailed questionnaire used for both surveys can be found in Appendix A.

Customized resources

Facilitators were expected to share valuable resources, offering practical takeaways that supported ongoing learning and development. Each facilitator would contribute at least one resource from their session. These resources could take various forms such as informative handouts, presentation slides, worksheets or guides that participants could use to reinforce their learning. By offering these takeaways, the program aimed to create a repository of knowledge that participants could refer to as needed. This approach not only enhanced the immediate learning experience but also facilitated continuous development, allowing participants to revisit the resources as they progressed in their careers.

Strengthening and growing the network

The program aimed to strengthen and expand the ICT network by engaging individuals from diverse organizations, industries and geographic regions. Through their participation, the program intended to establish a network of advocates who could refer others and connect the program with their employers for sponsorship opportunities. To assess effectiveness and impact, the program planned to collect data via surveys and interviews. This feedback would help improve offerings and provide evidence to bolster credibility. Testimonials and qualitative feedback would highlight tangible benefits, offering compelling narratives to attract further interest and support from employers.

The program was designed to include smaller working groups to optimize networking within a larger cohort. These groups aimed to form cohesive units of women who could delve deeply into topics and think about applying their knowledge to real-world experiences. This structure was intended to foster deep connections and lasting relationships, enabling participants to fully benefit from the program's teachings and network effectively within the ICT community.

Program Implementation

Program activities

The initial recruitment target was 40 to 70 participants. However, as the program design evolved, this target became more flexible, and the focus shifted to accommodating as many women as possible. This adjustment allowed for a broader outreach; in the end, 172 participants registered. The recruitment timeline was initially planned to cover a window of 120 to 45 days before the program's launch, providing ample time for engagement and selection processes. However, due to constraints of limited resources and delays in approvals, the timeline had to be significantly compressed. Consequently, recruitment began just 60 days before the program's start date and continued until a few days before its launch.

Sponsors and partners of WCT that had employees participate in the program included Symcor, Bell, Cogeco and Rogers. Additionally, several participants were sourced from various public service agencies through WCT's partnership with Shared Services Canada and the Treasury Board Secretariat. Representatives from both organizations, who sat on the program organizing committee for the Roberta Bondar and Opening Doors programs,

promoted the initiative via their employee resource groups and networks. This led to a heavy concentration of public sector employees, particularly from Shared Services Canada.

The shortened recruitment period affected the program's ability to engage partners effectively, particularly those within the newcomer and employment service provider ecosystem. These partnerships were crucial for reaching out to potential participants and offering them additional support. The compressed timeline made it challenging to develop these relationships and leverage their networks, which could have facilitated broader participation.

Out of 172 registered participants, about 120 attended at least one session. To graduate from the program, participants had to attend at least four out of the eight sessions—52 achieved this requirement. The workshop and panel topics remained unchanged throughout the program, maintaining a consistent curriculum. Likewise, the facilitators for the modules remained the same. The only disruption was a last-minute cancellation by one panel speaker, which did not affect the overall program flow.

Twenty-three Opening Doors program

participants went on to participate in the Pods mentoring program. Mentors were grouped with mentees based on career stage, maintaining a 1:5 mentor-to-mentee ratio. The program spanned six weeks and encouraged peer-to-peer and mentor-to-mentee learning, social-emotional skills development and knowledge sharing. Participants worked toward greater self-awareness, developed "about me" statements for elevator pitches, used mind-mapping and career visioning for career planning, and identified and navigated the "broken rung" in their careers. Surveys will be administered to collect feedback on the mentoring experience, measuring its impact on participants' skills, knowledge and career progress.

Competency evaluations

The pre- and post-program surveys aimed to measure participant competency at the beginning and end of the program. However, due to a low response rate and inconsistent participation—with only 15 individuals completing both surveys—a comprehensive analysis of individual progress was challenging. To provide a more complete picture of program impact, the results from all 50 pre-program and 40 post-program respondents are included, alongside a focused assessment of the 15 participants.

Several factors likely contributed to the inconsistent survey completion. Participants may have been overwhelmed by frequent communications, leading to email fatigue and causing them to disregard program-related messages, including survey links. Technical issues, such as glitches with the survey platform, may have also hindered access or completion. To address this issue in future evaluations, strategies could include integrating the surveys more seamlessly

into the program timeline, enhancing communication about the importance of the surveys, offering incentives for completing both surveys and providing timely, personalized reminders.

Customized resources

Facilitators shared valuable takeaway resources, with some providing multiple assets. These resources varied, including infographics, frameworks, scripts and summaries, depending on the session's focus. In session two (personal branding), a detailed workbook was given to guide participants in reflecting on their unique skills and values, aiding in the articulation of their personal brand and setting networking objectives. Session three (career planning) included a workbook to help explore skills, career goals and development areas. For session four (selling ideas), participants received a lean business canvas template and a mini pitch script to apply an entrepreneurial mindset at work. In session five (salary negotiation), a workbook was provided to assist in presenting their value through skills, achievements, and contributions. Session six (emotional intelligence) offered an infographic about the Emotional Quotient Inventory (EQ-I) 2.0 module. Finally, session eight (navigating difficult conversations) included a workbook with frameworks for handling conflict and other challenging discussions.

Strengthening and growing networks

The original plan included collecting feedback from participants and building relationships with newcomer organizations and employment service providers. These relationships were intended to go beyond

simple information sharing; they aimed for meaningful partnerships that could enhance program reach and effectiveness. However, this approach was abandoned due to resource constraints and a shift in WCT's target market. Limited resources made it challenging to maintain and develop partnerships with external organizations, requiring the program team to focus on its core activities.

Another component aimed to improve networking among participants through smaller, curated groups for deep topic exploration and lasting relationships. However, several challenges arose. The technology was not user-friendly, leading to difficulties in navigating the platform. The absence of a comprehensive onboarding process further exacerbated these issues, resulting in low engagement. Additionally, there was a lack of sponsor engagement, which hindered participant involvement and motivation. Consistency within working groups was also difficult to maintain due to irregular attendance, which affected the depth and continuity of group discussions.

Program Evaluation Methods

As the program concluded in March 2024, an evaluation of the identified short-term outcomes was conducted. The logic model for the program is shown in Figure 1.

Two surveys were administered to participants: one before the program began and one after it concluded. These surveys aimed to measure changes in participants' competencies and experiences in four pivotal areas:

> Social and self-awareness (seven skills)

> Essential skills (10 skills)

> Confidence in dealing with difficult conversations and contributing to the organization (eight skills)

> Articulating values and skills and advocating for self and others (nine skills)

The pre-program survey collected data on participants' self-perceived competencies and experiences in each skill. It also gathered demographic information to understand the diversity of the participant pool. This baseline data served as a reference point for measuring changes and progress attributable to the program. The

post-program survey was administered after the program concluded, reassessing the same skills and competencies evaluated in the pre-program survey. By comparing pre- and post-program survey results, the evaluation aimed to generate quantitative insights into the program's impact on participants. The survey questions can be found in Appendix A.

To evaluate the program's impact, the mean score was calculated for each skill before and after participation.

FIGURE 1
Opening Doors logic model

Advance women within the Canadian information and communications technology (ICT) sector and provide stakeholders with resources and best practices

INPUTS	FOCUS AREAS	ACTIVITIES	OUTPUTS	OUTCOMES		
				Short-term	**Intermediate**	**Long-term**
Women in Communications and Technology (WCT) partner network	Provide resources for women in ICT	Diversity focused participant recruitment and screening	Impact report on the training			
Precedent women career development - focused training resources	Provide mentoring and networking	Train/upskill 40-70 women in ICT (online delivery)	Framework and recom-mendations for change	Number of women who are registered and completed the program	Reduced barriers to inclusion for women in their workplaces in ICT	The ICT sector in Canada is inclusive for women
Program participants: women aged 25 – 35 years in ICT	Share knowledge about promoting women in ICT (dissemination)	Provide mentorship and track participant progress (five months+ via WCT membership)	Customized training tools and resources	A higher level of social and self-awareness	Strengthened pathways to and increased opportunities for women workers in ICT	
Data on barriers facing women in ICT	Foster a community of practice	Pre- and post-participant survey		Improved essential skills (e.g., communication, numeracy, digital)	Increased understanding and awareness of the state of women workers in ICT	
		Pre- and post-competency evaluation		Increased skills and confidence in dealing with difficult conversations and in contributing to their organization	Knowledge sharing of evidence-based practices that advance women in ICT in career paths	
		Share customized resources		Improved skills to articulate their values and skills, and advocate for self and others		
		Strengthen and grow the WCT network of community partners				

Canadian women thrive in the ICT sector

Each skill was assessed using a five-point Likert scale, where participants rated their proficiency: no competence/experience (score of one), low (two), average (three), moderate (four) and high (five). This standardized scale ensured a consistent evaluation of self-assessed proficiency across all participants.

The mean score for each skill area was computed by averaging the individual scores provided by participants. This process was carried out for the pre- and post-program surveys. The difference in mean scores between the two surveys provided a quantitative measure of change in each skill area, offering a clear representation of shifts in participants' self-assessed proficiency levels.

The survey results are subject to limitations that necessitate cautious interpretation. Of the 172 registered participants, 50 completed the pre-program survey. Of the 52 individuals who graduated from the program, 40 completed the post-program survey.

However, only 15 participants completed both the pre- and post-program surveys. The small sample size of those who completed both surveys means that the data may not accurately represent the experiences and outcomes of the entire participant population. While we also present the results for all respondents—50 who completed the pre-program survey and 40 who completed the post-program survey—differences in sample composition hinder the ability to measure changes and draw conclusions about the program's impact.

Moreover, the survey data is based on participants' self-perceptions. While self-reported data provides valuable insights, it may not accurately represent actual skill development. One notable effect of the program is that it may lead participants who initially rated their skills as high to question their abilities when faced with new information. As such, reported decreases in confidence may not signify a lack of improvement but rather a heightened awareness of areas for growth.

Findings

Participant demographics

Program participants who completed the pre-program survey mostly identified as women (97.9%), with a few identifying as non-binary. The average age was 33 years old. Participants were well educated, with about six in 10 having a college or undergraduate degree (60.5%, n=29) and about one-quarter (29.2%, n=14) having a master's or professional degree. Most were Canadian citizens (89.6%, n=41), and a little more than one-half were non-racialized (53.6%, n=30).

Most participants were employed (95.8%, n=46) and working in multiple sectors and job functions, including public administration (16.7%, n=8), professional, scientific and technical fields (16.7%, n=8), arts and entertainment (8.3%, n=4), finance and insurance (4.2%, n=2), administrative and support roles (4.2%, n=2), utilities (4.2%, n=2), information and culture (2.1%, n=1), management (2.1%, n=1) and manufacturing (2.1%, n=1).

Short-term outcomes for all survey respondents

This section presents survey results from 50 pre-program and 40 post-program respondents. It is important to interpret these findings with caution, as there is an inconsistency in respondent participation with some respondents completing only one survey. This discrepancy may affect the overall analysis and should be considered when evaluating the outcomes.

Social and self-awareness

Social and self-awareness competency, assessed through seven specific skills—empathy, understanding emotional intelligence, resilience, self-awareness, self-esteem, emotional regulation and self-promotion—showed modest changes following the program. Figure 2 provides a detailed comparison of pre- and post-program mean scores for each skill.

FIGURE 2
Comparisons of skills related to social and self-awareness between pre- and post-program surveys

Skill	Pre-program	Post-program
Empathy	4.42	4.35
Understanding emotional intelligence	3.80	3.75
Resilience	3.86	3.95
Self-awareness	4.02	4.00
Self-esteem	3.76	3.67
Emotional regulation	3.53	3.83
Self-promotion	2.94	3.18

■ Pre-program   ■ Post-program
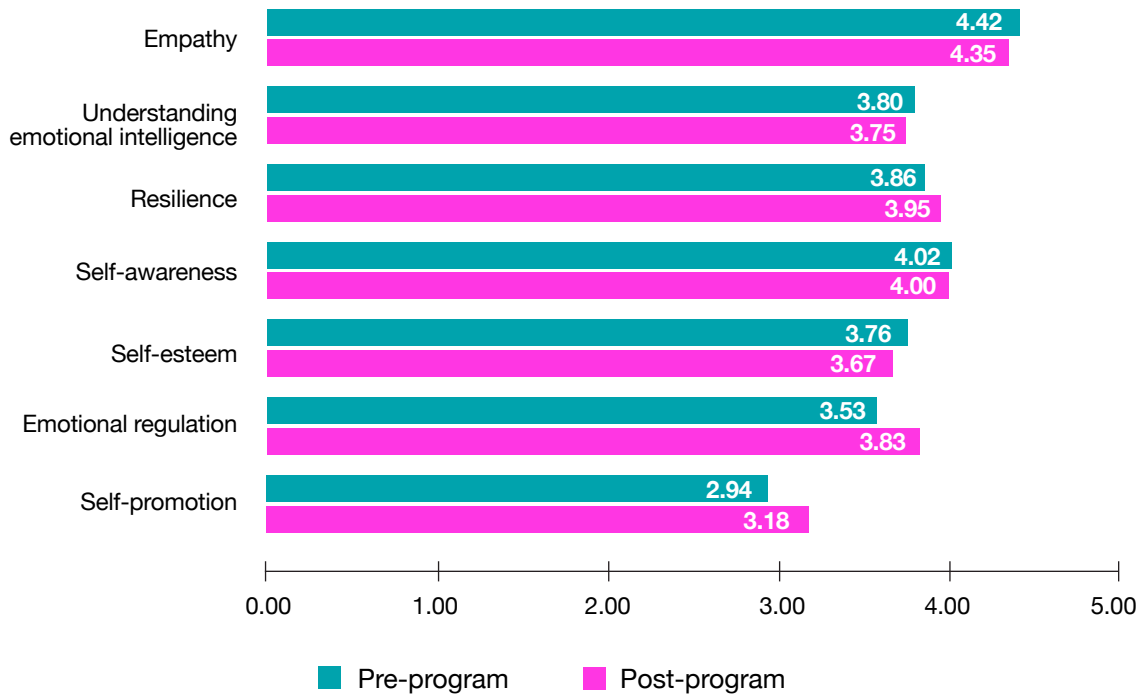
Overall, the social and self-awareness competency improved slightly, with a mean increase of 0.05 points. While emotional regulation (0.25-point increase), self-promotion (0.24-point increase), and resilience (0.09-point increase) showed small gains, other skills experienced small declines. Self-esteem decreased by 0.09 points, empathy by 0.07 points, understanding emotional intelligence by 0.05 points, and self-awareness by 0.02 points.
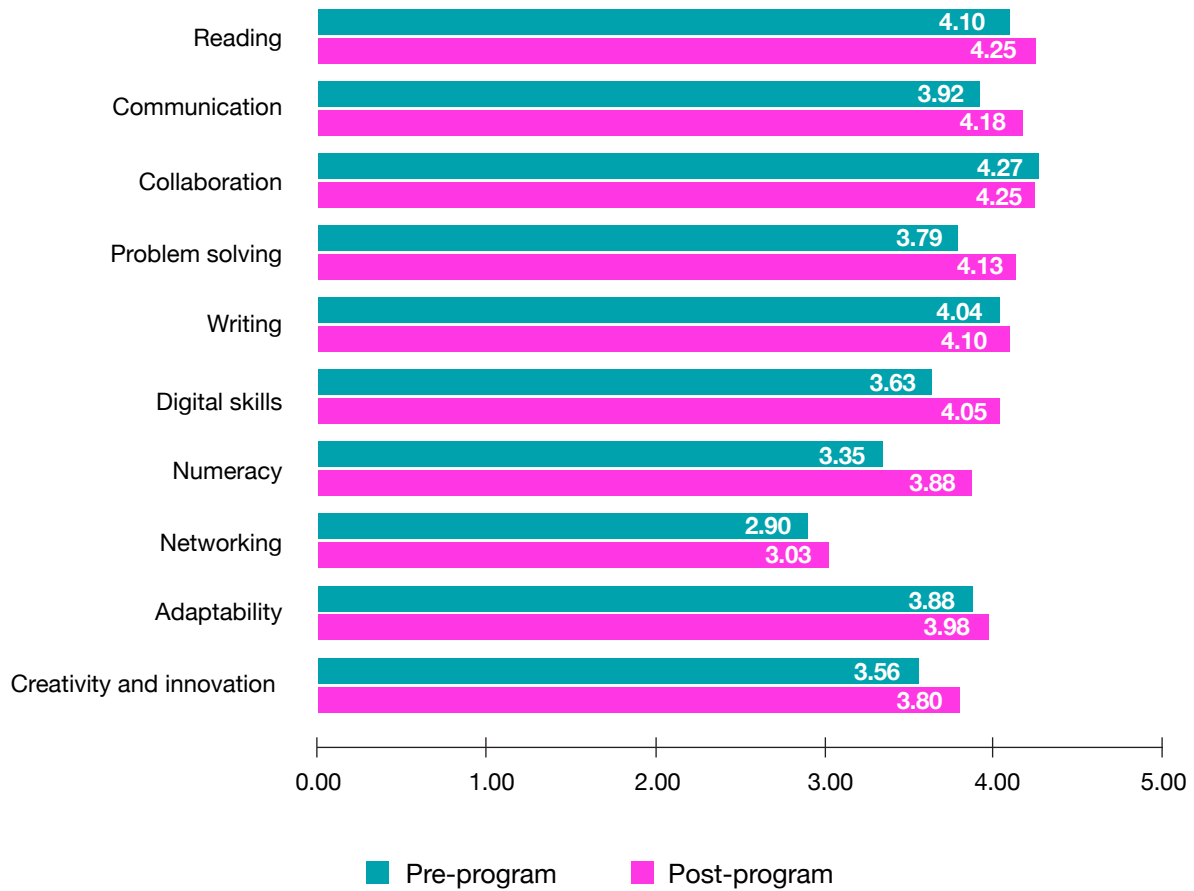
Essential skills

Essential skills development was evaluated by measuring 10 skills: reading, communication, collaboration, problem-solving, writing, digital skills, numeracy, networking, adaptability, and creativity and innovation. Figure 3 illustrates the comparison of mean scores for each of these skills.

FIGURE 3
Comparisons of skills related to essential skills between pre- and post-program surveys

	Pre-program	Post-program
Reading	4.10	4.25
Communication	3.92	4.18
Collaboration	4.27	4.25
Problem solving	3.79	4.13
Writing	4.04	4.10
Digital skills	3.63	4.05
Numeracy	3.35	3.88
Networking	2.90	3.03
Adaptability	3.88	3.98
Creativity and innovation	3.56	3.80

Overall, essential skills showed modest improvement, with an average increase of 0.22 points. Numeracy saw the most significant growth, increasing by 0.52 points. This was followed by digital skills (0.43 points) and problem-solving (0.33 points). Notable improvements were also observed in communication (0.26 points) and creativity and innovation (0.24 points). Reading (0.15 points), networking (0.13 points), adaptability (0.10 points) and writing (0.06 points) experienced smaller gains. Collaboration saw a slight decline of 0.02 points.

Confidence in dealing with difficult conversations and contributing to the organization

This area was assessed across eight skills: confidence, managing online presence, managing in-person presence, navigating difficult conversations, managing conflict, navigating negotiations, reframing setbacks as opportunities and writing a negotiation script. Figure 4 illustrates the differences observed in the mean scores in pre- and post-intervention surveys in each skill. The average score across all these skills combined increased by 0.33 points, from 2.94 in the pre-program survey to 3.27 in the post-program survey.

FIGURE 4

Comparisons of skills related to confidence in dealing with difficult conversations and contributing to the organization between pre- and post-program surveys

|	Pre-program	Post-program
Confidence	3.40	3.68
Navigating difficult conversations	3.26	3.38
Reframing setbacks as opportunities	3.16	3.48
Managing conflict	3.12	3.45
Managing in-person presence	3.14	3.43
Managing online presence	2.68	2.98
Navigating negotiations	2.62	3.05
Writing a negotiation script	2.10	2.70

Each skill saw growth. Writing a negotiation script showed the most improvement (0.6 points), followed by negotiation skills (0.43 points). Conflict management (0.33 points) and reframing setbacks as opportunities (0.32 points) also advanced. Managing online and in-person presence improved by 0.30 and 0.29 points respectively, while confidence increased by 0.28 points. Navigating difficult conversations saw a modest gain of 0.12 points.

Articulating values and skills and advocating for self and others

Nine skills were included under the articulating values and skills and advocating for self and others competency: identifying areas for personal growth, advocating for self, advocating for others, career planning, finding career opportunities, formulating a business case for an objective, developing your personal brand, appraising the worth of your business idea and effectively communicating your value in the market. Figure 5 compares average scores across various skills before and after participating in the program. Overall, results indicated improvement, with a 0.30-point average score increase.

FIGURE 5

Comparisons of skills related to articulating values and skills and advocating for self and others between pre- and post-program surveys
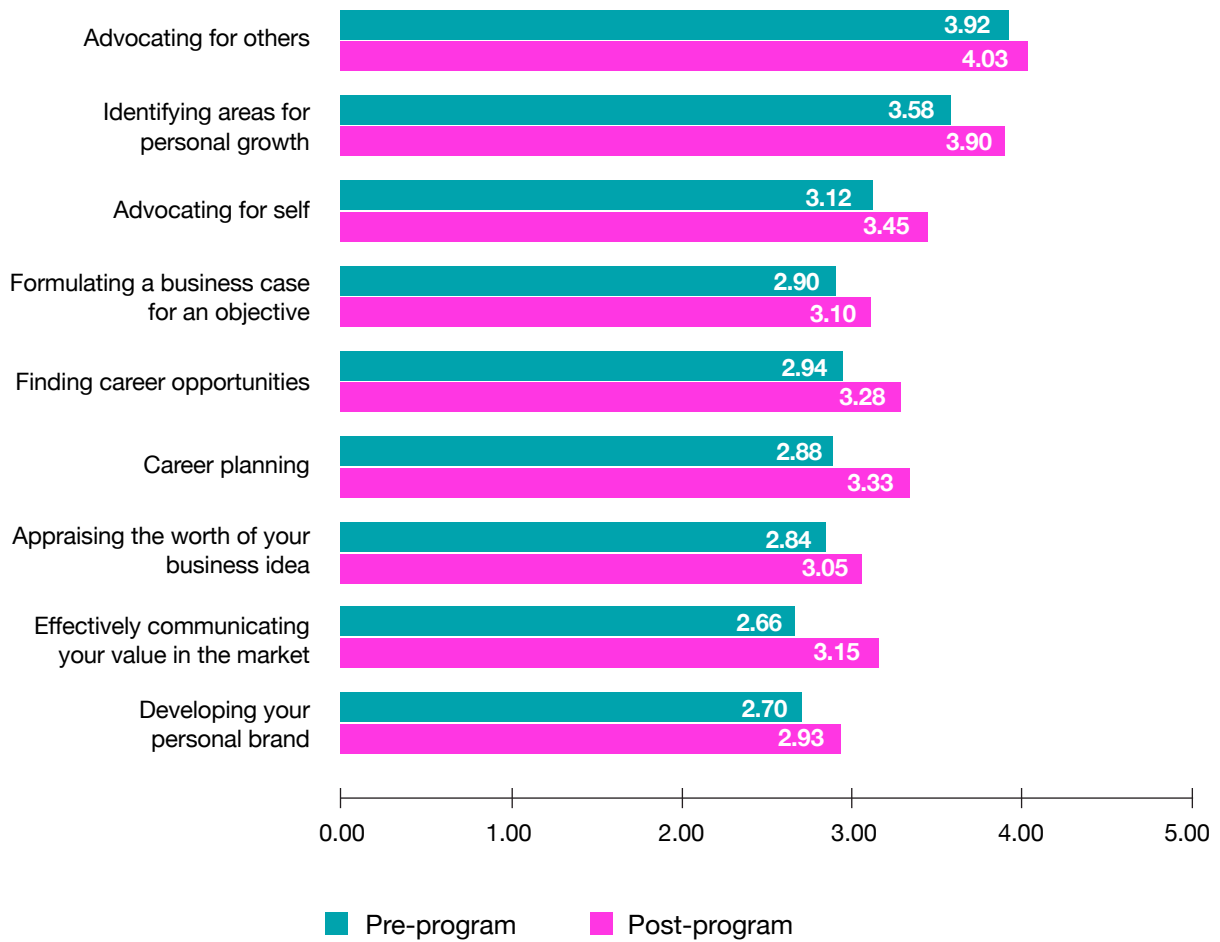
The most substantial growth occurred in effectively communicating market value (0.49 points) and career planning (0.45 points). Finding career opportunities (0.34 points) and self-advocacy (0.33 points) also showed progress. Identifying areas for personal growth advanced by 0.32 points. Personal branding (0.23 points), business idea valuation (0.21 points), and crafting a business case for an objective (0.20 points) saw moderate gains, while advocating for others had a modest improvement of 0.11 points.

Short-term outcomes for respondents completing pre- and post-program surveys

When we look at the results for the 15 participants who completed the pre- and post-program survey, they indicate the program was effective in enhancing skill sets. Each skill assessed experienced improvements, with the changes in scores ranging from 0.13 to 1.46 (see Appendix B for further details). Regarding the overall competency areas, participants experienced the greatest improvement in articulating

values and skills, and advocating for self and others, with scores increasing by 0.98. This contrasts sharply with the overall results, which showed only a 0.30-point improvement in this area. Confidence in dealing with difficult conversations and contributing to the organization also saw substantial progress, with scores rising by 0.9 compared to the overall change of 0.33. Essential skills improved significantly as well, with an enhancement of 0.73, while the overall group showed a modest change of 0.22. Social and self-awareness increased notably, with participants' scores improving by 0.61, in contrast to the negligible overall change of 0.05 (Figure 6).

FIGURE 6
Comparisons of overall competency areas for participants that completed pre- and post-program surveys (n=15)

Competency area	Pre-program	Post-program
Social and self-awareness	3.64	4.25
Essential skills	3.64	4.37
Confidence in dealing with difficult conversations and contributing to the organization	2.83	3.73
Articulating values and skills and advocating for self and others	2.92	3.90
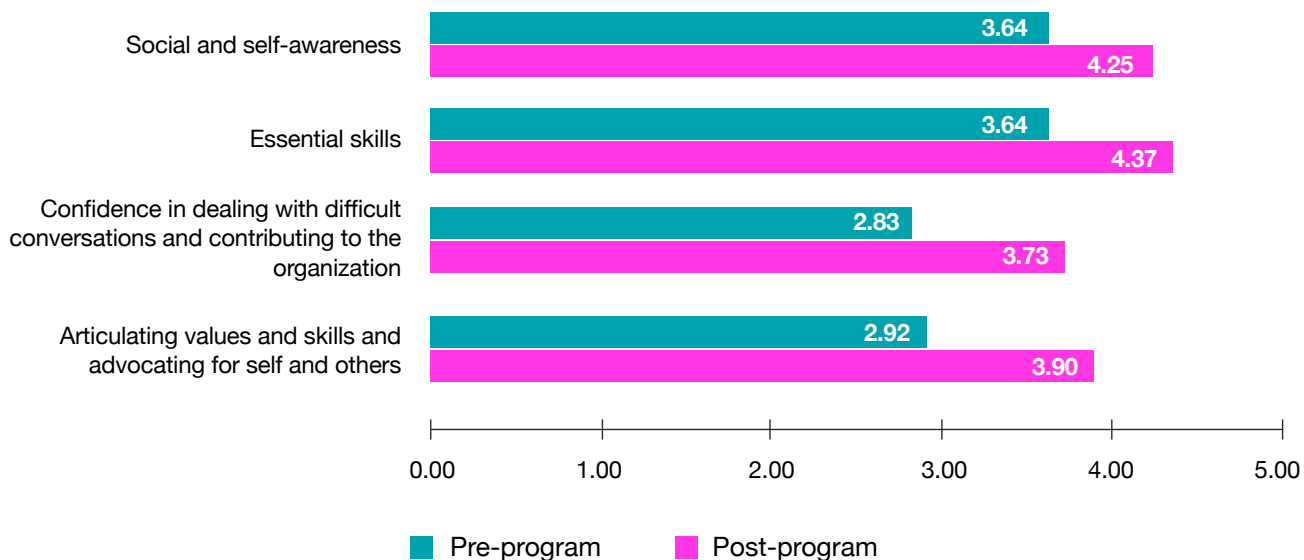
Recommendations

Based on the program evaluation, several recommendations have been identified to enhance the effectiveness and reach of the Opening Doors program. They focus on improving recruitment and engagement strategies, program onboarding and support mechanisms, networking opportunities, evaluation processes, and methods and program content. By addressing these areas, the program can better support women in achieving leadership roles in the digital economy.

Recruitment and engagement strategies

> **Extend recruitment period:** The program faced significant challenges due to a compressed recruitment timeline, which limited the ability to engage deeply with partners. Extending the recruitment period before the program launch will allow for a more thorough selection process and foster stronger partnerships with organizations.

> **Strengthen partnerships and secure employer buy-in:** Support from employers and supervisors is essential. Strengthening partnerships with key stakeholders will ensure that participants receive the necessary backing from their workplaces, leading to better attendance, participation and overall program success. Employers who are invested in the program are more likely to encourage their employees to engage with the curriculum and apply what they learn.

> **Leverage diverse recruitment channels:** Build robust relationships with newcomer and employment service provider organizations to expand the reach of the program. Newcomers with tech experience can significantly benefit from the program's offerings, which provide valuable insights into the Canadian workplace culture that would help them integrate more effectively into the local job market. Additionally, consider engagement with smaller-sized employers who may have fewer resources for professional development for their employees.

> **More targeted inclusion criteria:** While it is commendable that the Opening Doors program expanded its scope and focused on all sectors of the digital

economy, it may benefit from more targeted recruitment. Refining the inclusion criteria to target individuals already holding digital roles might allow for a more tailored curriculum. Directly addressing the needs and challenges faced by professionals in the digital economy would enhance the program's relevance and impact.

Program onboarding and support

- ❯ **Comprehensive orientation:** Implement a comprehensive orientation process for new participants. This should include a detailed introduction to the program's objectives and structure, as well as to the technological platform used for sessions and networking.

- ❯ **Technical support:** Provide ongoing technical support to help participants navigate the program platform. This can include tutorial videos, FAQs and a dedicated help desk to assist with any issues.

- ❯ **Participant handbook:** Outline all essential information, schedules, expectations and resources available throughout the program to help participants stay organized and informed.

Small-group networking opportunities

- ❯ **Networking events:** Organize additional events to facilitate broader connections beyond the immediate cohort. When possible, consider hosting in-person networking events in locations with a large concentration of

participants. To accommodate those located elsewhere, subsidize travel expenses or provide options for virtual engagement if funding is limited.

- ❯ **Facilitate engagement in smaller working groups:** To address the challenge of irregular attendance in large programs, adopt a more flexible and ad hoc working group strategy instead of a strictly curated approach. Distribute breakout group discussions throughout the entire session to maintain engagement and encourage interaction, rather than reserving them for the end. Implement external incentives, such as gamification, to boost attendance and participation by offering prizes for engaging in working groups. This approach will help keep sessions dynamic and ensure more consistent involvement from attendees.

Evaluation processes and methods

- ❯ **Improve survey response rates:** While frequent reminders were sent out to increase survey engagement, response rates remained low. Rather than expecting participants to complete an online survey in their own time, engagement could be increased by making time for program evaluation during the training session. Targeted follow-up with those who completed pre-program surveys can help ensure the collection of data that can be used for more meaningful comparisons. Offering incentives for completing program evaluations may also be appropriate. However, this needs to be handled with sensitivity and incorporated appropriately to avoid

biasing participants in their responses.

⊙ **Alternative data collection methods:** Expand data collection methods to include qualitative feedback through interviews and focus groups. This will complement the quantitative survey data and provide a richer understanding of participant experiences and program impact.

Program content

The competency area that experienced the smallest change was social and self-awareness, with an overall change that was negligible (0.05-point increase) when considering all survey responses, although it was higher (0.61-point increase) when looking only at the 15 participants who completed both the pre- and post-program surveys. The program's delivery method and the nature of the skills themselves may have influenced the results. Social and self-awareness skills may develop more effectively in face-to-face environments, where participants can benefit from deep

personal connections and immediate feedback. Online platforms may struggle to replicate the same level of engagement, as participants might be less inclined to engage in activities requiring self-reflection and emotional sharing in a virtual setting.

However, if limited to the online format, changes to the program curriculum may incorporate the following:

- Activities focused on self-reflection and self-assessment to help participants understand their thoughts, behaviour and emotions better

- Targeted workshops aimed at boosting self-esteem and self-confidence through activities like public speaking, positive reinforcement techniques and peer feedback

- Role-playing exercises, storytelling sessions and interactive group activities, which can help participants develop a stronger sense of empathy and improve their emotional intelligence.

Appendix A: Pre- and Post-Program and Participant Questionnaire

Self-assessment of competencies

1. Please indicate your perception of your level of ability in the following areas. In your response, please use a scale from 1 to 5, where:

   1 = No level of competence/experience in the skill area
   2 = Low level of competence/experience in the skill area
   3 = Average level of competence/experience in the skill area
   4 = Moderate level of competence/experience in the skill area
   5 = High level of competence/experience in the skill area

	1	2	3	4	5	Prefer not to answer
Self-esteem (e.g., the degree to which you like and value yourself as a person)						
Self-awareness (e.g., understanding of how your thoughts, behaviours, and emotions align with your values and standards; understanding of strengths, weaknesses, preferences, goals and aspiration)						
Self-promotion (e.g., communicating your interests, abilities and achievements with others)						
Confidence (e.g., appreciation of your abilities; self-efficacy; learning from every experience and ability to move past obstacles)						
Resilience (e.g., ability to observe and act to address strengths, weaknesses, opportunities and threats during a time of crisis)						

	1	2	3	4	5	Prefer not to answer
Empathy (e.g., ability to understand the emotions and perspectives of others)						
Emotion regulation						
Developing your personal brand						
Networking						
Managing online presence						
Managing in-person presence						
Career planning						
Finding career opportunities						
Formulating a business case for an objective						
Reframing setbacks as opportunities						
Navigating negotiations						
Appraising the worth of your business/idea						
Effectively communicating your value in the market						
Writing a negotiation script						
Understanding emotional intelligence						
Identifying areas for personal growth						
Advocating for self						
Advocating for others						
Navigating difficult conversations						
Managing conflict						

Self-assessment of essential skills

2. Please indicate your perception of your level of ability in the following areas. In your response, please use a scale from 1 to 5, where:

    1 = No level of competence/experience in the skill area
    2 = Low level of competence/experience in the skill area
    3 = Average level of competence/experience in the skill area
    4 = Moderate level of competence/experience in the skill area
    5 = High level of competence/experience in the skill area

	1	2	3	4	5	Prefer not to answer
Adaptability: achieving or adjusting goals and behaviours when change is encountered, planning, persisting, and overcoming setbacks						
Problem-solving: addressing issues, monitoring success, and learning from experiences						
Communication: receiving, understanding, considering, and sharing information/ideas through speaking, listening, and interacting with others						
Collaboration: contributing and supporting others to achieve a common goal						
Reading: finding, understanding and using information presented through words, symbols and images						
Writing: sharing information using written words, symbols and images						
Numeracy: finding, understanding, using and reporting mathematical information presented through words, numbers, symbols and graphics						
Creativity and Innovation: imagining, developing, expressing, encouraging and applying ideas in novel or unexpected ways, challenging existing methods and norms						
Digital Skills: finding, managing, applying, creating and sharing information and content						

Barriers to career pathways

3. What barriers or obstacles have you experienced in your career journey thus far? Please select all that apply.

    a. Difficulty finding information for my desired career path

    b. Difficulty determining the appropriate career path for me

    c. Lacking networking opportunities

    d. Discrimination

    e. Low confidence in possibility of success

    f. Low English or French language skills

    g. Lack of time due to personal/family responsibilities

    h. Low digital skills to access opportunities online

    i. Other (please specify): _____

    j. I haven't experienced any barriers or obstacles in my career journey thus far [EXCLUSIVE]

    k. Prefer not to answer [EXCLUSIVE]

Needs for support

4. Where do you need support in your career? In your response, please use a scale from "strongly disagree" to "strongly agree."

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Prefer not to answer
Understanding my strengths and weaknesses						
Preparing a resume to match the job posting I am applying for						

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Prefer not to answer
Preparing a cover letter tailored to a specific job						
Where to look for job opportunities and information						
Using LinkedIn or similar platforms to look for opportunities and information about careers online						
Engaging while at professional networking events (e.g., job fairs).						
Preparing for job interviews						
Asking for advice from a mentor, advisor, or coach about education, training, and/or career decisions (outside of my immediate family).						
Accessing online programs or tools that help me with my job or career plans (e.g., job search strategies, resume or CV building, or interview preparation).						

5. Are there any other areas in which you need support or resources? [OPEN TEXT]

Demographics

6. Please enter your year of birth: _____

7. What is your gender identity?

    a.   Woman

    b.   Man

    c.   Non-binary

    d.   Two-spirit

    e.   Prefer to self-identify (optional): _____

    f.   Prefer not to answer

8. Which of the following describes you (select all that apply): [MULTI-SELECT]

 a. Arab

 b. Black

 c. Chinese

 d. Filipino

 e. Indigenous

 f. Japanese

 g. Korean

 h. Latin American

 i. South Asian (e.g. East Indian, Pakistani, Sri Lankan)

 j. Southeast Asian (e.g. Vietnamese, Cambodian, Laotian, Thai)

 k. West Asian (e.g. Iranian, Afghan)

 l. White

 m. Other (please specify): _____

 n. Prefer not to answer [EXCLUSIVE]

9. [IF INDIGENOUS SELECTED FOR ETHNICITY] Which best describes you?

 a. First Nations

 b. Métis

 c. Inuit

 d. Prefer to self-describe: _____

 e. Prefer not to answer

10. Do you identify as a person with a disability (visible or invisible)?

 a. Yes

 b. No

 c. Prefer not to answer

11. Do you identify as 2SLGBTQ+?

 a. Yes

 b. No

 c. Prefer not to answer

12. What is the highest level of education that you have completed?

    a. Less than high school

    b. High school diploma or equivalent

    c. College, trade school, or apprenticeship

    d. Undergraduate degree (bachelor's degree)

    e. Master's or professional degree

    f. Doctoral degree

    g. Other (please specify): _____

    h. Prefer not to answer

13. Which of the following best describes your immigration status?

    a. Canadian citizen

    b. Permanent Resident

    c. Temporary visa (e.g. work, student, other)

    d. Refugee claimant

    e. Other (please specify): _____

    f. Prefer not to answer

14. What is your employment status? Please select all that apply.

    a. Working for an employer (full-time)

    b. Working for an employer (part-time)

    c. Freelance, on-call, or temporary jobs

    d. Self-employed/ running a business

    e. Digital platform jobs (e.g., Uber, Door dash, Airbnb)

    f. Not employed

    g. Other (please specify): _____

    h. Prefer not to answer [EXCLUSIVE]

15. Which sector best describes your primary occupation?

    a. Accommodation and food services

    b. Administrative, support and waste management services

      c. Arts, entertainment and recreation

d. Construction

e. Educational services

f. Finance and insurance

g. Forestry, logging and support

h. Healthcare and social assistance

i. Information and cultural industries

j. Management of companies and businesses

k. Manufacturing

l. Mining, oil and gas extraction

m. Professional, scientific and technical services

n. Public administration

o. Real estate, rental and leasing services

p. Retail trade

q. Transportation and warehousing

r. Utilities

s. Wholesale trade

t. Other (please specify): _____

u. Prefer not to answer

Appendix B: Results for Respondents Who Completed Pre- and Post-Program Surveys

Social and self-awareness	Pre-program score (n=15)	Post-program score (n=15)	Change in score
Empathy	4.20	4.67	0.47
Understanding emotional intelligence	3.60	4.33	0.73
Resilience	4.00	4.13	0.13
Self-awareness	3.93	4.33	0.40
Self-esteem	3.50	4.21	0.71
Emotional regulation	3.47	4.33	0.87
Self-promotion	2.80	3.73	0.93

Essential Skills	Pre-program score	Post-program score	Change in score
Reading	4.00	4.73	0.73
Communication	3.67	4.53	0.87
Collaboration	4.13	4.67	0.53
Problem-solving	3.67	4.47	0.80
Writing	4.07	4.60	0.53
Self-promotion	3.53	4.47	0.94
Numeracy	3.27	4.27	1.00

Networking	2.67	3.27	0.60
Adaptability	3.87	4.40	0.53
Creativity and innovation	3.53	4.27	0.74

Confidence in dealing with difficult conversations and contributing to the organization	Pre-program score	Post-program score	Change in score
Confidence	3.13	4.20	1.07
Navigating difficult conversations	3.20	3.87	0.67
Reframing setbacks as opportunities	2.93	4.00	1.07
Managing conflict	2.93	3.93	1.00
Managing in-person presence	3.13	3.93	0.80
Managing online presence	2.67	3.40	0.73
Navigating negotiations	2.53	3.20	0.67
Writing a negotiation script	2.13	3.33	1.20

Articulating values and skills and advocating for self and others	Pre-program score	Post-program score	Change in score
Advocating for others	3.93	4.60	0.67
Identifying areas for personal growth	3.33	4.20	0.87
Advocating for self	2.93	3.87	0.94
Formulating a business case for an objective	3.00	3.87	0.87
Finding career opportunities	2.73	3.86	1.13
Career planning	2.73	3.67	0.94
Appraising the worth of your business idea	2.73	3.73	1.00
Effectively communicating your value in the market	2.47	3.93	1.46
Developing your personal brand	2.47	3.33	0.86

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