

Women Working in the



Skilled Trades and Technologies



MYTHS & REALITIES



*The best man for the job
may be a woman.*

The Canadian electricity sector, including the nuclear industry, has a poor track record of attracting, retaining, and developing women. Our industry is growing at a time when record numbers of employees are eligible to retire. Today's statistics on women in the electricity sector demonstrate that we have an opportunity to maintain Nuclear's competitive advantage by becoming more proactive in attracting the best and brightest from the entire talent pool.

2% - women in the trades

8% - women in engineering

16% - women in management/supervisory roles

25% - women working in electricity sector

To find out more about how to draw from the entire talent pool and attract, retain and advance women in the nuclear industry visit www.wincanada.org and request a copy of the position paper, Women and the Nuclear Talent Pool.

www.wincanada.org

Putting Our Skills to Work

June, 2011

Dear Colleague,

Women in skilled trade and technology careers make up less than three percent of the total Canadian workforce. As baby boomers prepare to retire over the next five to ten years, it is estimated that 40 percent of current tradespeople will need to be replaced. This will have an immediate impact on Canada's infrastructure. The crisis associated with critical shortages of skilled workers makes it imperative that government, educators and industry work together as partners and utilize a cohesive approach in solving the problem of skilled worker shortages and do everything possible to attract women to the skilled trades and technologies.

With that spirit in mind, **WiN-Canada** and **Skills Canada – Ontario** have drawn upon the suggestions of participants at its *“Women in Non-Traditional Roles – Putting Our Skills to Work”* workshop, held on February 24, 2010, in Ottawa. We have written a position paper as a means of providing our partners with recommendations for education, government and business on how to address female employee and skills shortages in Canada.

We address the myths and realities around women working in the skilled trades and technologies and offer recommendations for positive change. Government, educators and industry need to value the importance of trades workers in the development of communities in our society, and actively market these well-paying, highly technical, creative, intellectually stimulating careers to today's young women.

The paper will dispel many of the myths held by students, parents, educators and business people around women working in the skilled trades and technologies. The recommendations for industry, educators and government will help to build programs and incentives that will entice women into looking at the skilled trades and technologies as viable, first-choice career options.

The paper is a credit to **Linnea Catalan**, Bruce Power, for her diligence in the research completed for the paper; **Samantha Young**, student, who wrote the first draft; **Tammy Fluttert**, student, who wrote the second draft, and **Anita Tomins**, Skills Canada – Ontario, who put all the information together and wrote the final paper.

We invite you to review the document and to put into practice its recommendations to help attract the best and the brightest workforce into careers in skilled trades and technologies. Please feel free to contact us for more information or to share your own best practices in this area.

Sincerely,



Gail Smyth
Executive Director
Skills Canada – Ontario
www.skillsontario.com



Cheryl Cottrill
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Women in Nuclear
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Executive Summary for Skills Position Paper

The under-representation of women in skilled trades is well documented. Numerous studies and stacks of data support this fact, as does anecdotal evidence (a visit to almost any construction site will confirm the scarcity of female skilled workers). Currently, women in the nuclear industry working in skilled trades and technologies represent less than ten percent of the total workforce. Many other industries report an equally low representation of female workers. The trades industry has seen a drastic increase in the number of employees eligible to retire, resulting in the challenge of finding replacement workers for an estimated 40 percent of North America's current tradespeople over the next five to ten years.



This situation will have a dire effect on our economy, particularly given the labour shortage and looming attrition of older workers and how it is affecting not only the prosperity of our industry, but also the very infrastructure of our society.

Typically, less than three percent of all apprentices in construction, automotive and industry trades are women. Considering the average age of a skilled tradesperson is 55, the short supply of such workers will become more urgent as this segment of the workforce retires. In fact, the Conference Board of Canada predicts that one million skilled workers will be needed by 2020¹. The Ontario Ministry of Finance estimates that worker shortfall will rise to at least 200,000 and even as high as 1.8 million by 2031. These predictions require industry to think differently about who they can attract, retain and promote within the skilled trades and technologies and provide an abundance of opportunities for women who are considering skilled trades and technology careers.

To address this crisis, Women in Nuclear (WiN) held a workshop in February 2010 and asked women and men, currently working in the trades, to provide feedback on how the problem can be solved. This workshop, "Women in Non-Traditional Roles – Putting our Skills to Work," drew 53 participants representing a cross-section of industry. Three roundtable discussions examined "what business, education, government and female workers need to do to address female employee and skilled shortages."

WiN-Canada invited Skills Canada – Ontario to facilitate the discussion and bring their knowledge and expertise to the table.

In summary, we identified six common myths that we felt discourage women from pursuing careers in the skilled trades and technologies. We made these six myths the foundation of our paper and offered counterpoints to these common misconceptions. We then expanded upon the suggestions by the workshop participants, supported by data and research, to offer recommendations that can be instituted by government, educators and industry. It is important that we all work together to address and solve the problem of the under-representation of women working in skilled trades and technology careers.

Women working in the skilled trades is not new. During World War II, for example, women stepped in to perform the important jobs vacated by men who were fighting overseas. Then, as now, the skilled trades were essential and important professions where women could demonstrate leadership and ability. The very foundation, infrastructure and operation of our communities are dependent upon the skilled trades.

Jobs in the skilled trades or technical fields offer wages above the average salary paid to many other workers, while providing an opportunity to "earn while you learn" through apprenticeships. These jobs offer excellent opportunities for women to be self-reliant and enjoy medical and pension benefits. Many pre-existing government programs make the skilled trades attractive for women who are trying to build a better life for themselves and their families.



Women now make up one-half of the workforce and in order to fill the human resource crunch caused by increased retirements, we must work together to encourage more female workers to look at the skilled trades and technologies as a first-choice career option. This paper sets out recommendations on how to make these jobs more attractive to women. Campaigns with proactive programming and incentives from governments across Canada that target a female demographic through social assistance agencies, employment organizations, educators and women's groups will help to educate women on the benefits of these careers.

Educators who value the skilled trades as good jobs and promote co-op and apprentice programs will help to bring knowledge to young women of opportunities they may not be aware of. A leadership role by industry to go after a broader base of talent and break down "old boys" networks will help to attract and retain more women into skilled trades and technology careers.

The recommendations set out in this paper are your call to action. If we wish to engage the best and the brightest, the search for tradespeople needs to be open to all backgrounds and both genders. Diversity provides the opportunity for innovative and creative perspectives, which are an asset to any industry, and the skilled trades cannot afford to underutilize or overlook any segment of the talent pool.

Our society's infrastructure depends on a skilled workforce. Let's do our part to make sure we have the best and brightest workforce keeping Canada strong.

Skilled trade and technology careers offer an opportunity to build, design, fix or create, while working towards the achievement of "Master" in a chosen trade. Women traditionally are credited for possessing patience and attention to detail, attributes that are important in trades and technologies.

Brute strength is not a requirement for skilled tradespeople. While there is certainly a physical component to most trades, technology has changed the nature of how work gets done. Work in the skilled trades today increasingly uses computer software and mechanical equipment. The reliance on technology in production is increasing the demand for skilled tradespeople who have an aptitude for technology. The reality is that skilled trades require workers with a strong academic foundation in reading, writing, math and sciences, along with dexterity, stamina, good hand-eye coordination and balance; all qualities that women possess equally with men.

Tradespeople must be smart and adaptable. It takes as long or longer to acquire a trade as it does to acquire an honours undergraduate degree at university. The upside to apprenticeships is that participants are paid to acquire knowledge and work experience and typically have not accrued major debt by the end of their training.

Women working in the skilled trades tend to enjoy their careers and are happy to share their stories to inspire young women to follow their path. Educators and industry should seek out these women and encourage them to share their stories at career fairs, Skills Canada - Ontario's Young Women Networking Dinners and conferences.



“Jobs in Skilled Trades are **not** good jobs for Women.”

Reality: The skilled trades offer women high pay, good benefits, flexibility, variety, rewarding work and unlimited opportunity.

Fact: There are many benefits to working in the skilled trades and technologies and indisputable evidence that these are, indeed, “good jobs.” Careers in over 150 such fields offer many perks and advantages.

Job Security and Pay

Unlike many other careers, job security and stability are the norm in skilled trades and technology fields as the need for this work never decreases. The trades are booming, so it is relatively easy to get a job. Skilled trades workers are highly employable and in demand!

Celebrity tradesman **Mike Holmes** observed in a recent National Post article²:

Have you driven by a new housing development - and seen no one on the job? Contractors can't find enough skilled workers to begin construction on such major infrastructure projects as highways, hospitals and mass transit systems. Some provinces have billions of dollars of new construction projects slated to begin in the next decade - if they can find the workers. Homeowners can't find qualified contractors to get essential repairs done, let alone dream renovations and upgrades.

Jobs in the skilled trades or technical fields offer wages averaging between \$14 and \$54+ an hour and often include medical and retirement benefits. Canadian tradespeople who manufacture transportation equipment enjoyed average weekly earnings of \$929.95 in the year 2000, well above the all-industry average of \$626.45. Construction-trades workers pocketed almost \$100 a week more than the average worker.³

Transferable Skills

The skilled trades and technologies develop competencies that are valued by a wide cross-section of employers, including problem-solving, precision, dexterity, cooperation and project management skills. “Build, Design, Fix, Create” are the action words associated with skilled trades and technologies and there will always be a demand for workers with these capabilities. These are skills that will last a lifetime.

“The trades are a great place for smart, motivated women who are not easily intimidated. Great hours, great wages, and a hell of a sense of accomplishment! And having to prove yourself in a male-dominated industry just makes you a stronger tradesperson... when they say you can't do it, learn to do it BETTER!”

Tara on Facebook

Great Work Environment

In order to attract qualified workers, many companies are upping the ante when it comes to creating a welcoming and attractive work environment. For example, accommodations at oil patches are more like high-end lodges than camps and often feature such amenities as private rooms with their own gas fireplaces, high-definition televisions, and fridges stocked with all-you-can-drink Perrier. “It’s all to keep workers here and keep them on this site, because they’re so sought after,”⁴ says one petroleum industry employer.

Joycenne Vanderbyl, a Red Seal millwright, notes that “there is a perception, based on old stereotypes, that men on the site will be less than welcoming.” But this is not the reality, says Vanderbyl, who started in construction 38 years ago. In those days, women were such a rarity on the job site that there were not even washrooms designated for their use. “Today women are welcome on the site and our contributions are valued,” she says.⁵

Many companies provide incentives for non-traditional applicants, making a career in the skilled trades and technologies even more attractive. These include clothing and footwear allowances, floating holidays and employee assistance programs.



Superior Training

Training towards a fulfilling skilled trade or technology career can begin as early as grade 10, ensuring a smooth and confident transition into the world of work. Several programs support young women in high school as they begin such training, including OYAP and Ontario's Specialist High Skills Major option.

The skilled trades offer a unique opportunity to “earn while you learn” through apprenticeship.

Apprenticeship training is a form of post-secondary education that combines on-the-job and in-school training. Upon completion of an apprenticeship, women can take an examination. Once they pass the examination and satisfy the criteria set out by their Province/Territory, they will earn a Certificate of Qualification/ Journeyman Certificate from their Province or Territory in Canada. She will already be employed and work with an employer who agrees to ‘sponsor’ and train her as an apprentice for a specific skilled trade.”

Through the **Loans for Tools** program, government will also provide young workers with up to \$800 towards the purchase of the tools of the trade needed for use on the job.⁶



Technology is an important aspect of the skilled trades and it is ever changing. Employers need their workforce to be highly qualified, so training is provided as needed, usually at no cost to the employee. In addition, wages are typically commensurate with knowledge and experience, making the skilled worker worth more as she takes advantage of training opportunities.

First-aid, CPR and WHMIS instruction are important components of skilled trades training and provide tradespeople with an additional essential skill set.

There is always something new and changing; learning and personal and professional growth is on an ongoing basis. As **Stacy DuBois**, IT Office Software specialist and Skills Canada - Ontario alumna advises, “Take advantage of each and every opportunity presented to you. People will recognize and reward your efforts.”⁷

Rewarding Work

Women working in the trades typically report that they feel their work builds self-confidence, is gratifying, that it’s “fun to be at work” and great to “not be tied to a desk.” As Mike Holmes says, “Think outside the cubicle!”

These jobs challenge one’s intellect and creativity on a daily basis.

Physical fitness is part of most jobs in the field, so there may be no need for a gym membership and not as much worry about health problems associated with being out of shape.

There is great satisfaction in contributing to the infrastructure of one’s community and knowing that the work will stand for many years, even generations, to come.

Travel

According to careersintrades.com, there are currently 50 trades that are certified Red Seal trades. This means that there is an agreed national occupational analysis and cross-country standards specific to each of those trades that allow people with Red Seal certifications to work anywhere in the country. More than 80 percent of skilled trade workers are employed in Red Seal trades. Skilled trades workers are in short supply around the world, so the prospect of travel outside of Canada also presents itself.

Support

The skilled trades have many associations, unions and support groups, including those exclusively for women, for example, **Women in Nuclear, Canadian Association of Women in Construction, Women in Mining**. Such groups offer education and camaraderie and help to promote positive work experiences for all.

There are many workplace programs to ensure that women have equal access to a supportive and harassment-free workplace.

There are legislated health and safety requirements on levels of noise and exposure to hazardous materials on job sites. Labour and business work together to ensure their workers' safety by implementing workplace safety standards.⁹

The skilled trades and technologies offer a great school-to-work transition because the job site comes to life in the classroom and students get the chance to gain proficiency in their chosen fields before "going live." Educators, apprenticeship

professionals, government agencies and employers work together to create a supportive environment.

There are numerous scholarships specifically designated for women in the skilled trades, for example "physical sciences offers 47 scholarships, and engineering, 57. There are currently seven for women interested in becoming an electrician and ten for women in welding technology."¹⁰

There are several government-sponsored programs that allow women to pursue pre-apprenticeship programs at no cost, such as Women in Skilled Trades. (WIST). For example, the "*Enhanced General Carpentry program*" offers women the opportunity to train for a rewarding career in the Construction industry. It features 28 weeks of in-class instruction, paid work placement component, and Government of Ontario funding for tuition, books and tools for eligible students.¹¹

Opportunity

There is a realistic opportunity to advance one's career in the skilled trades, from apprentice to journey-person, supervisor, union leader, manager, educator or business owner.

Within the main sectors of Construction, Technology, Motive Power, Industry, and Service, there are more than 150 careers from which to choose. Human Resources and Skills Development Canada (HRSDC)⁸ has identified a number of new and emerging industry sectors in the economy including:

- Aerospace
- Biotechnology in agriculture, forestry, fishing and pharmaceuticals
- Distance-learning
- Environment
- Green energy technologies
- Health informatics
- Multimedia, particularly for mobile communications

It is not uncommon for the skilled trades to be self-run businesses where people set their own hours and their own hourly rates. Such flexibility and independence provides the opportunity to sustain home-life balance and address childcare issues.



MYTH

“Jobs in Skilled Trades **are not creative.**”

Reality: The skilled trades and technologies require workers with a good eye and a steady hand and the ability to put things together according to specifications or by one’s own design.

Fact: It is impossible to function within the trades – to “Build, Design, Fix or Create” – without pride of craftsmanship, expert knowledge and creative talent.

Satisfaction

One of the most compelling aspects of the skilled trades is the pleasure in seeing the result of one’s work.

Whether it’s a permanent fixture such as a building or bridge, or the more transitory art of a delectable cake, there is satisfaction in the completion and enjoyment of the work at hand. This is equally true of virtually all trades and technologies – an expertly welded pipe, a serviceable software program, an engine that “purrs” – all have their genesis in creative skill sets.

In such disciplines as plumbing, carpentry and the culinary arts, the experience one builds in many of the skilled trades allows for the achievement of the title “Master.”

The practitioner’s level of artistry and years of experience are acknowledged through this designation, something that tends not to be the case in so many other jobs (i.e. there are no “master” retail clerks!).

Descriptive words associated with the creativity of the work are part of several titles within the skilled trades and technologies. (i.e. landscape designer, graphic designer, cake decorator).

Many career artists choose to work in such media as metal and wood, reiterating the artistry inherent in working with such materials.

Women traditionally are credited for possessing patience and attention to detail, attributes that are important in the creative world of trades and technologies.

“Don’t worry about the fact that you’re a woman. Use that to your advantage and understand what you as a woman bring to the table that is a different perspective, and that it can be valued if it’s positioned properly.”

Michelle Carinci, CEO
Atlantic Lottery Corp.





“Jobs in Skilled Trades **are not important.**”

Reality: The very foundation, infrastructure and operation of our communities are dependent upon the skilled trades; the work that these skilled workers perform is undeniably important.

Fact: Without the women and men who work in the skilled trades and technologies, the homes, schools, businesses, hospitals, roads and technologies that support our society itself would literally disintegrate.

Tradition

The idea of women being prominent in the skilled trades is not new. During WWII, women stepped in and performed the essential positions vacated by the men who were fighting overseas. “They welded aircraft and built machinery, hammered buildings together and operated heavy equipment during the war when they were needed in the factories.”¹² Through generations and in many different applications, women have proven their capabilities in jobs traditionally occupied by their male counterparts.

Respect

The fact that there are so many government programs to recruit women in the skilled trades and to offer them free educational programs and a number of enticements indicates the level of importance attached to the skilled trades and technologies. There are tax incentives for employers who take on apprentices, grants for training, and tax deductions for tools. In March 2008, the Ontario government injected \$1.5 million in skilled trades programs for women.¹³ The Government of Canada is also offering registered apprentices an **Apprenticeship Incentive Grant** of \$1,000 once they have completed their first and/or second year in a **Red Seal Program**. Employers can also apply for the **Apprenticeship Job Creation Tax Credit**, which is available when they hire and register apprentices in the Red Seal Program.¹⁴

*“Embrace opportunity.
You need to be brave.
You need to take risks.
You have to find confidence.”*

Sheelahy Whittaker, Director,
Imperial Oil and Standard Life



The Red Seal program verifies the importance of the skilled trades. The **Canadian Council of Directors of Apprenticeship (CCDA)** is responsible for this interprovincial standards program. The Red Seal program allows skilled workers to pursue opportunities in other parts of Canada and ensures that a level of expertise has been established in 50 trades.

The recent creation of the **Ontario College of Trades** will bolster the skilled trades and reinforce standards across the board that will benefit everyone who works in these fields. "Establishing the College puts skilled trades on a similar footing with teachers, doctors and nurses, who have their own professional regulatory colleges."¹⁵

The growing alternative energy movement offers new and exciting career options for women in such areas as wind turbine power and the construction (and retrofitting) of "green" buildings. This work is imperative to the future of our environment and is another example of why the skilled trades and technologies are important. According to an article entitled "Staying Ahead of the Curve,"¹⁶ in Canada, "there will be huge opportunities in engineering as we catch up on energy-saving technologies already becoming common in Europe. Examples are water-saving technologies and systems that turn lights off when rooms are unoccupied."

The Ontario Government announced its Long-Term Energy Plan in November 2010, a strategy that promises to create 50,000 jobs in the largest expansion of hydroelectric power in almost 40 years. This represents a tremendous opportunity for women working in the skilled trades and technologies.¹⁷

GoForestry.ca indicates that "over the next decade there will be massive investments in new technologies... with a wide range of career options, from forestry sciences to management to harvesting to manufacturing."¹⁸ World-class education opportunities will be available to those in these and related fields.



“Skilled Trades is **no place for a woman.**”

Reality: In the 21st century, there is no place for sexism, particularly on the job site. Industry realizes the need to look at a more diverse pool of employees.¹⁹ Women’s recruitment and retention will “strengthen Canada’s economic position in a global economy by capitalizing on the industry’s full human resource potential.”²⁰

Fact: Ninety-seven percent of skilled trade jobs are full time. Women represent nearly 50 percent of the workforce and they need to focus on job demands that will support themselves and their families.

All Work is Women’s Work

“You don’t need to be strong: There is a role for everyone,” says millwright **Joycenne Vanderbyl**. “One of the myths I like to dispel is the one about having to be big and strong to work in construction. I know women who are 90 pounds soaking wet who work in the trades. Women can drive machinery or do electrical or pipefitting work. There are so many choices to suit every interest and capability.”²¹

Careersintrades.com points out that while there is certainly a physical component to most trades, “there is a diversity of skills required to be a tradesperson. Trades require intelligent individuals with good literacy, mathematical and analytical skills, as well as creativity.”

Respect for women in construction has ridden the same wave as respect for women in society in general.²²

Annette Nisbett, Ironworker Journey-person and dedicated mentor at Skills Canada – Ontario networking dinners and Young Women’s Conferences puts it this way: “They are not masculine skills, they are just skills.”

“When construction sites are advertising for helpers, just because you’re a woman doesn’t mean you shouldn’t go and apply. Walk in there with those hard-toed work boots like everybody else does and fill out that application.”

Employer quoted in Bonnie Watt-Malcolm paper



Careersintrades.com also emphasizes that:

Technology has changed the nature of many of the trades. People interested in working in the skilled trades need to learn how to operate the increasing amount of computer software and mechanical equipment that is incorporated into their jobs. The reliance on technology in production is increasing the demand for skilled tradespeople who have an aptitude for technology. Today, the line between 'white-collar' and 'blue-collar' is becoming blurred in comparison to many skilled trades of the past. Again, it is not about physical strength.

The reality is that skilled trades require individuals with a strong academic foundation in reading and writing, math, and sciences. Physical work does not solely imply strength. In fact, skilled trades require dexterity, stamina, good hand-eye coordination and balance – all attributes that women possess equally along with men.²³

The perks of a great job are there to be enjoyed. For example, although she was the first woman millwright at Presstran Industries in London, Ontario, **Cathy Lewis** doesn't give much thought to being a female in a traditionally male profession. Instead, she says, "I think about the fact that I love my job!"²⁴

Research has demonstrated that gender diversity at all organizational levels can enhance economic performance.²⁵

There is no need or expectation to give up one's femininity – there are even companies that sell pink hard hats and pink tool belts, for those who are so inclined.

Women must remember that computer-aided technology has improved our productivity and profit and also lessened the demand for unskilled labour. A skilled trade is the ticket to a good future and solid job security.



“Skilled Trades are just for students who don’t excel in academics.”

Reality: In order to work in the skilled trades and technologies, one needs to have a solid grounding in many “school-based” skills such as math, analytical abilities and literacy. The skilled tradesperson also needs to be imaginative, resourceful and dexterous and have the ability to figure out specifications and requirements in real-world applications.

Fact: Intelligence and aptitude are essential components of working in these careers, which are as respectable and important as those requiring a purely academic background.

There’s a Reason They’re Called “Skilled Trades”

Careers in Trades describes the range of skills and characteristics needed to perform the complicated duties associated with the skilled trades such as: “deciphering intricate blueprints while building an office tower; analyzing various elements (such as weather conditions, weight and distance) while operating a crane situated on a ten-storey building; or identifying the potential volume of water and its resulting pressure when installing a sewage system for a hospital. These are but a few examples of the multifaceted tasks that skilled tradespeople regularly perform.”²⁶

Apprentices, men or women, become skilled at utilizing cutting-edge technology and must master often complicated machinery. “These students must learn the theory of their trade in a classroom and then apply their knowledge and academic foundation to master the technical skills on the job.”²⁷ *Careers in Trades* goes on to note that, “In short, selecting a skilled trade and entering into an apprenticeship is a first-choice post-secondary option. Similar to other options, successfully completing an apprenticeship takes intelligence, dedication, focus and hard work. Students who enter these programs prefer careers that are ‘hands-on’ and enjoy applying their knowledge and skills to produce visible results at the end of the day. They are passionate about their work and take pride in their accomplishments.”²⁸

“Two things I always say: hard work, and be yourself. You can’t compromise on either one of those things. And I know ‘be yourself’ sounds like a really soft thing. But it is not. You can tell a fake a mile away. There’s something about authenticity. Don’t change yourself to suit other people.”

Laura Formusa, CEO
Hydro One Inc.

WorldSkills is a prestigious event that exemplifies the high-level esteem with which the skilled trades are held. WorldSkills competitions attract the best skilled trades students from around the globe, and thousands come to cheer them on. Such events serve not only to pay tribute to the competitors, but also to showcase today's cutting-edge skilled trades.

There are exacting standards in the skilled trades and it takes many years to attain one's certifications. "Tradespeople must be smart and adaptable. It takes as long or longer to acquire a trade as it does to acquire an honours undergraduate degree at university. Additionally, apprentices get paid while acquiring their knowledge and work experience."²⁹



Tradeability.ca points out that: "The skilled trades, while they still involve 'work', physical work, are at the same time getting highly technical, and the math and science competencies needed are high. The minimum education requirement is generally Grade 12. More and more employers are looking for young people who bring passion, dedication and intelligence to the workplace". The skilled trades today are one of the pillars of post-secondary education, the others being college and university, as noted by Tradeability.ca. Another pillar could, of course, be work itself and the experience gained on the job.

A significant number of university graduates go to college to gain skills that translate more readily into a job and differentiate them from other job applicants.³⁰

“Women don’t work in the skilled trades therefore there are **no mentors available for young women.**”

Reality: Though they generally aren’t as plentiful as their male counterparts, many women work in the skilled trades.

Fact: Many women working in the skilled trades enjoy sharing their stories and inspiring young up-and-comers to consider these careers. Search them out!

If You Want a Mentor, be a Mentor

There are women who work in all of the main sectors of the skilled trades and technologies and would welcome the questions of those who seek answers. Every community has female workers in the skilled trades; for those who wish to find them, the Internet, business directories, trade union directories, newspapers, women’s organizations, and educational institutions are good places to start.

Skills Canada – Ontario and New Brunswick host “**Skills Work!® for Women**” networking dinners every fall and winter that welcome high school girls who are curious about the skilled trades.

“As for being ladylike... take those big bucks you will be earning and treat yourself... then knock ‘em dead. Working in construction does not mean you have to lose your feminine side... it’s not a gender change... just a job.”

Helen on Facebook





These events feature networking opportunities with women mentors who are currently working in a number of related fields.

In our popular culture, television shows, particularly on such networks as HGTV, often show women in the trades who are hosting their own TV programs for DIYers.

There are many websites dedicated to women who are working in the skilled trades and many of these have personal profiles and stories to inspire young girls who are considering these fields.

Mentors do not need to come directly from the skilled trades – women excelling in leadership, creativity and excellence in workmanship are in every field and these skills translate to those working in skilled trades and technologies.

Mentors do not need to be women – more and more men are willing to act as mentors to skilled trades people of both sexes.

Commit to becoming a mentor yourself some day!

Recommendations

The crisis associated with critical shortages of skilled workers makes it imperative that government, education and industry do everything possible to attract women to careers in the skilled trades and technologies and, more importantly, to retain them. All three must work together as partners and utilize a cohesive approach in solving the problem of skilled worker shortages and particularly of the underrepresentation of women in trades.

With that spirit in mind, WiN-Canada and Skills Canada – Ontario have drawn upon the suggestions of participants of its “Women in Non-Traditional Roles – Putting our Skills to Work” workshop, held on February 24, 2010, in Ottawa. The data and proposals of a variety of concurring researchers have also been referenced in an effort to pull together a comprehensive set of recommendations for government, education and industry.

It is imperative that government, education and industry do everything possible to attract women to careers in the skilled trades and technologies and more importantly, to retain them.



Government

Investment in Infrastructure

Canada must invest in its own infrastructure in order to attract the best and the brightest. In Europe, skilled tradespeople are held in high esteem because they “support better, safer, more ecologically sound applications in the public interest.”³¹ Cutting-edge technologies require continuing upgrading of skills. Pride is taken in environmentally responsible road and rail networks with such components as modern passenger train service and sensing devices to control public lighting. “Canada needs to undergo a cultural shift that begins with a determination to catch up technologically. The more we value our public infrastructure, the more we value those who build it.”³²



Aboriginals and Immigrants

The two fastest-growing groups in our population are aboriginals and new immigrants. **Derek Burney**, Canada’s ambassador to the U.S., says “Government should focus on these groups, and the women within them, as a huge untapped resource.”³³

Additionally, females from some cultural backgrounds may require extra assistance in gaining exposure to the opportunities available in the trades and in having the support necessary to pursue these prospects. According to one study,

*Education for these groups must be flexible and should provide access to information networks and tradespeople who can help them find out more about the trades and access workplaces. Community-based organizations representing particular ethno-cultural groups are essential to provide services that prepare visible minorities for apprenticeships and training by helping with credentials recognition and improving language skills in the command of technical terminology. These services must be funded by diverse groups of private and public donors to ensure long-term funding and promote a commitment to community diversification.*³⁴

Proactive Programming & Incentives

There are many effective and innovative government programs at all levels that encourage women to enter (and stay in) the skilled trades and technologies. Just two examples are the **Bread and Roses Bursary** and **Partners Building Futures**. The Bread and Roses Bursary in Dartmouth, NS, allows women who are studying trades and technology at **Nova Scotia Community College** to apply for a bursary to support their education while assisting with such costs as childcare, transportation, tuition, school supplies and other necessities. Partners Building Futures is a \$4.48 million pilot project designed to help introduce women receiving social assistance to skilled trades in New Brunswick. Similar initiatives should exist in communities across our country and be readily available to a wide range of female recipients. It is imperative that such programs be well advertised to qualifying women through every available channel, including social assistance agencies, employment organizations, educators, and women’s groups.

Government should offer grants to industries to advance women within their ranks (career and leadership training). There is a place for some gender diversification incentives. Offer a variety of programs to employers that encourage inclusive hiring methods and an equitable, positive workplace culture. “The activities that help employers identify and work through issues typically include toolkits, workshops and technical assistance. Also, provide and prove a solid business case for increasing the number of women on site.”³⁵

Conference participants suggested that government “Change EI rules to ensure that it is not a penalty to enter into a skilled trade and to reinstitute EI during training.” Government must champion strong retraining programs in partnership with education and industry.

Government must take on an advocacy role for women working in the skilled trades, including “instating regulations to provide legal support to women’s claims against discriminatory working policies (and) providing specific affirmative standards for government contractors and the industry, outlining specific actions to be taken regarding recruitment, hiring procedures, and the maintenance of work sites to be free of sexual discrimination and harassment.”³⁶

Targeted funding, financial assistance arrangements and scholarships should be available to women pursuing a career in the skilled trades through government programs. “This should include financial assistance for outreach, leadership development as well as training and mentorships.”³⁷

More national programs targeting the hiring of minority groups such as the 1982 National Training Act, and the Government of Ontario’s \$1.5 million investment in trades training for low-income women through the **Women in Skilled Trades** program (2008) should continue to be instated and governmentally funded in order to attract women to non-traditional occupations.³⁸

Courses for women must continue to introduce them to a variety of options and industries. “Incorporating employment equity principles into all levels of training and employment will also ensure further success in retention rates and will bring up equity principles on work sites through national legislation.”³⁹

Programs introducing girls to the trades must be financed by industry in cooperation with the government in order to ensure that there is no cost to students or schools and to promote partnerships between industry, government and educational facilities. Workshops, conferences and day programs could encourage girls to form the initial links which will build the network foundations that will carry them through their careers in the trades.

Provinces and Territories should actively involve mentors as part of the apprenticeship program for women. For older women entering the trades, retraining in order to obtain the qualifications for a job in the trades can be very intimidating. Some women may feel much older than their peers and colleagues, but having mentors and instructors in their training programs and classrooms who are within a similar age bracket can make the experience less uncomfortable.

Pre-apprenticeship programs should be increased to “prepare women to enter a career in the trades by introducing them to construction workplaces before career training, and providing work-hardening experiences.”⁴⁰

Targeted government support is needed for single mothers who are motivated to pursue a career in the skilled trades and technologies in order to support their dependents with a liveable wage.⁴¹ Many lone-parent families are headed by mothers and are likely to be in the low-income category compared to families headed by male single parents,⁴² which suggests that these women might be eager to improve their financial situation.

Awareness Campaigns

Media campaigns should advertise the many benefits of careers in the skilled trades, specifically for women. Women could be directed to a government clearing house website of financial assistance programs and information.

In addition, a single-point-of-contact website for women in technology and trades would be useful.

Shop courses, home economics, tech centres, “Take Your Kid to Work” days, and trades fair days are the perfect way to begin to get children curious about the trades and provide them with fun, hands-on opportunities to try a trade for themselves. These programs cannot continue without proper funding, and the provincial and federal governments should encourage their continuation by providing multi-year budget mechanisms and funding for educational work programs.⁴³



Education

Parents

It is crucial that parents become more aware of careers in the skilled trades, since they have so much influence on what post-grad career paths their children choose. Skills Canada – Ontario has launched parent presentations that follow the same multi-media format as its in-class program “Skills Work!® What’s Out There?” Schools should make an effort to represent all options at their open houses and information sessions, as well as in their guidance departments and newsletters, specifically reaching out to parents of young women.

Experiential Learning

Interestingly, many of the stories of women who went into the skilled trades speak of how they were shown how to use a hammer when they were young. There may be an opportunity here to look at ways to take advantage of that kind of anecdote in a broader application – parents demonstrating simple carpentry at **Sparks and Girl Guides** meetings, for example.

Schools need to continue to work on promoting maths and sciences to girls and consider having all-girl classes, clubs or contests to encourage young women. Clubs like **WiN-Canada’s GIRLS** (Girls in Real Life Science) are also extremely helpful in encouraging young women to think about how science and math are used in everyday life and in every career path. Such initiatives should be promoted and encouraged.



Schools that have some kind of program (informal or structured) that shows elementary-school girls how to use tools have a much higher success rate of getting these same girls to pursue skilled trades further down the educational path. Participants explain that no one had ever showed them how to work with tools before, but once they tried it, they loved it. This is more proof that it can often be a matter of experiential learning. Educational pathways must be widened accordingly to afford more programs where girls can get their hands on tools.

The repertoire of co-op work placements should be expanded to include more non-traditional workplaces.

Female representatives working in the skilled trades should be invited to speak to students about career possibilities on a regular basis. Skilled trades industry representatives should be as prevalent as university recruitment officers in high schools.

Shop classes could be reintroduced in the early grades. Similarly, the shop environment in high school should have a higher profile and could be mandatory, as is the case in Austria.⁴⁴ If girls are never informed about these opportunities, it is a lot less likely that they will pursue them. High schools need to have trades courses and apprenticeship programs that influence that line of thinking.

Unique skilled trades programs can be created that are geared specifically for girls in high school. There are good examples of this, for instance; Ontario high schools that have all-female shop classes or mechanics courses.



Accommodation

It is most important to remember that flexible learning is key for many women to accommodate their family responsibilities.

Continuing education should target older women who have found themselves in need of a new and meaningful career path due to layoffs, childcare issues, or changes in their living arrangements.

Workshop participants suggested that organizations like Skills Canada – Ontario “pound the pavement” to get the word out to the vulnerable groups of women who could use the message the most.

For example, such organizations should literally promote the skilled trades and their programs in less affluent neighbourhoods, welfare offices, prisons, and the Ontario Works Program.

Training for women should be diverse in order to address issues that could arise when working in environments where they are likely to be the minority. “Training for women needs to include both technical and non-technical education... theoretical technical skills... help to gain credibility in the workplace. Non-technical training in work ethic and dealing with workplace culture is also central to the success of female graduates in the workplace.”⁴⁵

Awareness and Partnerships

Some guidance counsellors are ill-informed about apprenticeships and trades schools, a situation that “prevents many young people from receiving unbiased information about the benefits of entering a career in the trades. Girls in particular are systematically steered away from science trades and technology careers in favour of university degrees by teachers and career counsellors who feel that these degrees are the only method by which to attain gainful employment.”⁴⁶ Guidance counsellors should be encouraged to be kept up-to-date and informed about the 150+ career options that are available in the skilled trades and technologies. It was suggested that a requirement of the Skills Canada – Ontario’s in-class presentation be that guidance counsellors attend one of these sessions. Since Career Counsellors are typically university graduates, they may tend not to promote careers in the skilled trades.⁴⁷

Schools should work to partner with a wide range of industries to provide meaningful co-op, summer, and post-grad job placements. “Programs such as these also provide women access to word-of-mouth networks that inform them of job opportunities after their training is complete.”⁴⁸

Educational institutions must take a more active role in sharing responsibility with employers within industry and government to support initiatives which introduce young girls and women to the skilled trades. Programs like **GIRLS Science Club**, **GoEngGirl**, **Women in Engineering Advisory Committee (WEAC)**, Skills Canada – Ontario’s **Young Women’s Conferences**, **Engineering in Residence**, robotics fairs and other initiatives provide many girls with their first experiences with the skilled trades.⁴⁹

Industry

Leadership

A leadership role must be taken by employers. A study by **Bonnie Watt-Malcolm** of the University of Alberta notes that “employers suggested that they, rather than governments, are the critical link between women and skilled trade occupations.” One study participant stated that: “I know that in this country there’s not a shortage of workers, there’s a shortage of skilled workers. So what we have to do is get the people that are in Canada... trained.” Industry must seize the solution to the skilled trades shortages by recognizing and going after a broader base of talent by recruiting women. A need has been identified to continue to break down the “old boys” network’s lack of progression for women. Employers must educate themselves on women’s issues/needs and rise above discrimination and stereotyping.



Culture

It has been established that the presence of women in any workplace and at any level has a positive impact. In one gender diversity study⁵⁰ it was shown that:

In situations where women are a significant minority (below 15 percent), and in occupations traditionally thought of as male... systemic organizational dynamics operate that are prejudicial to women’s job satisfaction, productivity and career development. In these situations women typically receive heightened attention or visibility; are subject to higher performance pressure; are isolated from informal social and professional networks; are compared in an exaggerated manner to male peers; and are more subject to gender stereotyping. As the relative percentage reaches 35 percent, women begin to have a stronger voice and influence the work culture and organization. Given these dynamics, it is important... to seek a 35 percent representation of women in the major occupational groups and to monitor progress towards this percentage.⁵¹

Employers who provide flex time are ultimately able to draw from a wider pool of talent, as both genders welcome the opportunity for work-life balance. Women appreciate sufficient notice of assignments and flexibility so that they can make necessary arrangements at home. Travelling for assignments is not a problem, but not having any time to coordinate childcare issues may be.⁵²

However, more important than flexibility is workplace culture, as identified by a recent Women in Mining study.⁵³



It is essential to cultivate a positive work culture that is inclusive and meets the needs of women. “What is often forgotten is preparing the workplace so that... women are tolerated and welcomed,” says **Rosella Melanson**, Executive Director of the New Brunswick Advisory Council on the Status of Women. “We have seen so many women train for something and then not continue in that line of work because they’ve been harassed from day one or made to be pioneers, and they just move on. It’s a waste of dollars, a waste of talent and we end up with skill shortages.”⁵⁴

Industry needs to have official equity policies in place that are part of the company mandate and are rolled into performance reviews, meetings and employee initiatives. Employers must hold all employees accountable for gender equity and fair and professional conduct in the workplace.

Where possible, industry could provide care/support services, such as exercise facilities and daycare, that are affordable and easily accessed.⁵⁵

Communication between management and all employees should be clear, meaningful, consistent, regular and inclusive. Also, “employers should engage female employees in planning and policy development processes, and create various forums for information sharing and the exchange of ideas and opinions.”⁵⁶

Promotion

According to a recent **Women In Mining** Report:

Eliminating assumptions about women's ability to manage field work is vital. Making this assumption creates a secondary career path, limits opportunities for women's advancement in these occupations, and is a source of significant career frustration. There is a need to address practices that collectively contribute to perceptions of a male-dominated culture, including awareness training, closing the wage gap and implementing mentorship programs... Reducing travel requirements, however well intentioned, can also limit critical career development experience that is needed to advance. This... also prepares men to work with women in the workplace.⁵⁷

Women need to be promoted to senior management positions to serve as role models. The lack of female mentors is cited as a significant barrier to women considering the skilled trades.⁵⁸

Employers must recognize that women are “not imposing workplace hardships but in fact are providing numerous benefits. Women who worked in non-traditional trades were reported to have fewer injuries because they planned their work more carefully and took more precautions.”⁵⁹

“There is a competitive advantage to workplaces to hire women because this increases the range of viewpoints available and can raise the standards of the work place.”⁶⁰



Training and Accountability

It is imperative that industry embrace and enforce clear policies for change.

Workplace policy towards harassment, discrimination, prejudice, and violence must be made widely available to all employees through leadership and sensitivity training programs, with a transparent sequence of actions which are undertaken in all cases of inappropriate workplace behaviour. Both male and female employees must undergo training in order to fully understand workplace ethics, and employers must be strict on enforcing these rules through a system of checks and balances. Workplace policies should respond to incidents of inappropriate behaviour in a way that is generic and applies to both men and women so that women are not perceived as the problem.⁶¹

A Women in Mining report points out that “mentoring and networking opportunities such as support forums for women to create interpersonal connections are critical to provide the support women require to develop and improve skills...it is important that women have peers to turn to as instructors, mentors, and educators. The opportunity to participate in a work environment or training that reflects a positive atmosphere and women’s success will retain more women.”⁶²

In addition, in recognition of the additional responsibility of mentoring, “higher hourly rates could be offered to those who offer their time and expertise to training new recruits.”⁶³

Size doesn’t matter.

Small companies that lack human resources departments and the resources and time to devote to develop recruitment initiatives to attract and retain women should be able to utilize resource guides developed by larger companies. They can also call upon women’s organizations to provide guidance. Making toolkits available online, such as the Construction Owners’ Association of Alberta’s Respect in the Workplace toolkit and the Saskatchewan human resources toolkit, help all companies spread the practice of high industry standards for addressing discrimination in the workplace. Government subsidies can help relieve the costs for smaller industry branches to develop their own policies of respect and recognition.⁶⁴

Reporting diversity measures in an organization’s sustainability/annual reports should be encouraged.⁶⁵

Providing ample opportunities for professional development and training, “allows women to broaden their contribution to their company in a more diverse way, offering training and teaching opportunities on behalf of women to their male colleagues to promote better gender relations within the work environment.”⁶⁶ This kind of support promotes employee retention.

Employers should actively reintegrate women after leave.⁶⁷

Hiring policy should specifically address women’s needs.⁶⁸

Unions should work actively with women in the workplace. “Unions should be encouraged to hire more women and develop women’s committees which can address the concerns and needs of female employees. Unions should also be encouraged to pursue collaborative relationships with women’s groups at the local level.



By talking to each other, women can exchange tactics for confronting workplace discrimination and provide the union with informed suggestions on how to support female members.⁶⁹ Encouraging women to become union members promotes women's leadership opportunities and encourages women to promote their own concerns and take risks on their own behalf.⁷⁰

Additionally, it was suggested that there should be more collaboration between union and management in hiring apprentices and increasing skill level.⁷¹ Management should also make sure that they are reevaluating talent and potential and analysis of pay practices.⁷²

Employers must ensure the Personal Protection Equipment (PPE) and all facilities meet the needs of both men and women. Women should have separate washrooms and change areas and their PPE must fit them properly to ensure their safety and to affirm their equality and value on the worksite.⁷³

Outreach and Profile

Industry needs to take a more active role in promoting the sectors. To accomplish this, several suggestions are offered:

- Promote and market your sector to students at job information fairs. Share success stories of women.⁷⁴ Host open houses for not only students but their parents and educators too.

- Sponsor female-based programs to get your name out there.
- Offer scholarships.
- Tap into external professional women's networks Women in Mining (WIM) or Women in Nuclear (WiN) in order to support employers in making active changes to the work environment; independent women's organizations can host workshops which provide information to employers on strategies to support women in the workplace.⁷⁵
- Work with school boards in offering work placements for co-op education programs. "Forge relationships...with program heads at post-secondary educational and training institutions as well as guidance counsellors."⁷⁶
- Market to young people where they live – social media – and build a strong brand that is attractive and inclusive.
- Offer more opportunities for apprenticeships.
- Sponsor award programs to recognize and encourage a standard of achievement in excellence. They reflect the organization's milestones in showing leadership on gender and diversity issues while simultaneously promoting women's accomplishments within the trades.⁷⁷
- Be a mentor, share experiences, tell our story, lead the way and be supportive.

Employers are encouraged to take advantage of government hiring incentives. They should "hire women with interest and capability, train women beyond entry-level positions or until they reach certified tradesperson status to retain them within the industry for the long term and simultaneously build an environment of acceptance and respect which is earned by the skill and ability of the female trainee."⁷⁸

Networking is invaluable to creating awareness of employment and training opportunities within the industry. Thus, organizations, women's groups and industry associations which target recruitment of women should be enthusiastically encouraged and supported by employers.⁷⁹

Employers must hire women who are fully qualified. "Women applying to work sites must continue to be well-trained... otherwise the industry is at risk of declining in performance and safety standards. Furthermore, hiring women who are not skilled or dedicated enough to carry out job performance to the standards expected by the company will merely perpetuate the stereotypes and myths that women are not meant to work in the trades."⁸⁰

Companies are encouraged to think of ways to sponsor meaningful programs that promote skilled trades and technologies to young women. For example, **Linamar Corporation**, in partnership with Skills Canada – Ontario, funded an all-girls "**Skills Work!® Camp**" in Guelph, Ontario in the summer of 2011.

Hiring and retaining women in the workplace is good for everyone – industry, workers, society.

Programs which support diversity create a working environment which develops and retains the best employees regardless of gender. This is an asset to a company as a marketing tool since it positions them as leaders in diversity and inclusion. Therefore, hiring without discrimination or scepticism is extremely necessary. More women and people with diverse backgrounds are attracted to organizations that demonstrate a commitment to diversity and work-place equity, which provides a company with a continual supply of exceptional talent over other industry competition.⁸¹

Take Action

To prevent the falling number of employees in the skilled trade professions, employers must take action to enlist the best and most diverse talent. As women make up 50 percent of the workforce, they are valuable to the sustainability, success and growth of industry. In order to attract more women to the skilled trade professions, the most common and incorrect myths about women in skilled trade and technology careers must be dispelled.

To do this, further information about skilled trade and technology careers must be provided. Through developing workshops, financial aid and support groups, talented women will be provided with the opportunities and education required for advancement in skilled trade and technology careers.



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