Employer’s perspective of the benefits and barriers to women in trades and what needs to change.

Mark Williams - Building and Construction Industry Training Organisation (BCITO) NZ
A presentation of two half's

Employer research
- Objectives
- Methodology
- The fun stuff

Data insights
- What is the IDI?
- What we looked at in the IDI
- What we are looking at next
Research objectives:

1. Identify the characteristics of employers who have or have not employed women tradespeople
2. Explore reasons for employing and not employing women tradespeople
3. Identify the range of enablers and barriers that employers believe exist with regard to the participation and success of women in trade roles
4. Identify resources employers believe would assist them to enhance enablers and break down barriers to the participation and success of women in trade roles
5. Explore how these resources could be made readily available to employers.
Methodology - Quantitative

Dual-stage qualitative research including face-to-face and telephone qualitative interviews with employers of trades staff:

- Eight face-to-face interviews conducted in Wellington and Auckland
- 26 telephone interviews with employers based throughout New Zealand.

An even mix of employers, who had or had not employed women trade staff, were interviewed across the following industries:

- Automotive engineering
- Building and construction
- Electrical and plumbing
- Mechanical engineering.
Methodology - Quantitative

An online quantitative survey followed the qualitative research. The design of this survey was heavily based on the qualitative findings – such as; the range of barriers tested in the online survey were derived from the initial qualitative interviews.

Across the industries (self-identified by respondent) we collected the following samples:

- Building and construction n=209
- Automotive engineering n=53
- Civil construction n=18
- Electrical and plumbing n=209
- Mechanical engineering n=47
- Other n=29

In total, 565 responses were acquired – 258 from employers who stated they had (currently or in the past) employed women tradespeople, and 307 from employers who had not employed women tradespeople.

Margin of error:

- The margin of error for the sample who employed women tradespeople is ± 6.1%
- The margin of error for the sample who had not employed women tradespeople is ± 5.6%
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The fun stuff

Differences between employers with and without women tradespeople

Female Employers

24% had employed women trade staff
17% for male employers
The fun stuff

Differences between employers with and without women tradespeople

**Female Employers**
- 24% had employed women trade staff
- 17% for male employers

**Companies with women in decision making roles**
- 23% had employed women trade staff
- 9% for companies without women in decision making roles
The fun stuff

Differences between employers with and without women tradespeople

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Automotive engineering sector

- 32% had employed women trade staff
- 17% across the remaining sectors had employed women trade staff
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Automotive engineering sector
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Companies with 20+ employees
- 37% had employed women trade staff
- 12% of businesses with less than 20 employees had employed women trade staff
Employers views on the main strengths of and barriers to women tradespeople

Attention to detail

Employed women: 60% agreed
Not employed women: 45% agreed

Soften workplace behaviours

Employed women: 59% agreed
Not employed women: 41% agreed
Employers views on the main **strengths** of and **barriers** to women tradespeople

**Employed women:** 60% agreed  
Not employed women: 45% agreed

**Attention to detail**

Employed women: 59% agreed  
Not employed women: 41% agreed

**Soften workplace behaviours**

Employed women: 18% agreed  
Not employed women: 38% agreed

**Lack physical strength**

Employed women: 16% agreed  
Not employed women: 24% agreed

**Might get pregnant, would need to train someone else**
Employers views on the main strengths of and barriers to women tradespeople

**Strengths**
- Attention to detail
  - Employed women: 60% agreed
  - Not employed women: 45% agreed
  - *She thinks differently to the guys; she is not as gung-ho as the males and is more methodical in her work.* (Wellington, owner, service technician, female employee, male)
- Soften workplace behaviours
  - Employed women: 59% agreed
  - Not employed women: 41% agreed
  - *In the electrical trade they are more than capable to complete any task a male can. They can ask more defined questions relating to work.* (Auckland, electrical, owner, female employee, male)

**Barriers**
- Lack physical strength
  - Employed women: 18% agreed
  - Not employed women: 38% agreed
- Might get pregnant, would need to train someone else
  - Employed women: 16% agreed
  - Not employed women: 24% agreed
  - *Quite often if there is a bunch of blokes it gets a bit coarse and if there is a female present, they pull their socks up a wee bit.* (Otago, panel & paint, owner, no female employee, male)
- **Might get pregnant, would need to train someone else**
  - Employed women: 16% agreed
  - Not employed women: 24% agreed
  - *If a female didn't already have kids but I thought she might have kids, then there is the obvious that she is going to get pregnant and be off work. So being honest and being blunt, it is a deterrent in those sorts of ways.* (Otago, panel & paint, owner, no female employee, male)
What employers can do to attract more women tradespeople?

Advertise jobs online and show support for women in trades

Employed women: 46% seen as useful
Not employed women: 28% advertised online
What employers can do to attract more women tradespeople?

Advertise jobs online and show support for women in trades

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Offering flexible work arrangements

Employed women: 56% offer
Not employed women: 41% offer
What employers can do to attract more women tradespeople?

- **Partner with schools and pre-trade providers**: Employers of women were twice as likely to have partnerships with education partners than employers who didn’t.

- **Advertise jobs online and show support for women in trades**: Employed women: 46% seen as useful, Not employed women: 28% advertised online.

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What employers can do to attract more women tradespeople?

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- **Offering flexible work arrangements**
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- **Talk to a wide group of people about jobs and show support for women in trades**
  - 59% of employers with female tradies and 63% of employers without use word of mouth to advertise vacancies
Employee attributes and experience

The attributes most sought after by both businesses who had and had not employed women tradespeople were:

- Willingness to learn (61% and 55% respectively)
- Strong work ethic (57%; 59%)
- Reliability (49%; 52%)

Both employer groups were generally unconcerned about the minimum level of education (34%; 44%) though there was low level interest in Pre-trade training (26%; 14%)
How likely is it that your business would consider employing a woman in a trade role in the future?
Flexible employment arrangements – employed women

Do you have staff with any flexible employment arrangements?

- Yes: 56%
- No: 43%
- Unsure: 1%

Base: employed women in a trade role (n=258)

Which of the following flexible work arrangements do you have with your staff?

- Part-time: 59%
- Staggered hours: 47%
- Flexi-time employees: 34%
- Compressed hours: 21%
- Term-time working: 11%
- Shift swapping: 9%
- Job sharing: 5%
- Other: 13%

Base: employed women in a trade role and have flexible employment arrangements (n=145)
Flexible employment arrangements – not employed women

Do you have staff with any flexible employment arrangements?

- Yes: 57
- No: 41

Which of the following flexible work arrangements do you have with your staff?

- Staggered hours: 49
- Flexi-time employees: 40
- Part-time: 38
- Compressed hours: 18
- Term-time working: 14
- Shift swapping: 11
- Job sharing: 6
- Other: 4

Base: not employed women in a trade role and have flexible employment arrangements (n=125)
Potential benefits to employing women trade staff – employed women

In previous research, trade companies have identified benefits to employing women. How strongly do you agree or disagree that each of the following benefits could exist for businesses that employ women trade staff?

Base: Have employed women in trade role (n=258)

Base: Have not employed women in trade role (n=307)
Employment prerequisites

When employing new trade staff how important is it that they have the following?

- A full driver's licence
- Own transport
- Work experience
- A full set of tools

**Base:** Have employed women in trade role (n=258)

**Total**

<table>
<thead>
<tr>
<th></th>
<th>% total positive</th>
<th>% total negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>A full driver's licence</td>
<td>69</td>
<td>14</td>
</tr>
<tr>
<td>Own transport</td>
<td>57</td>
<td>26</td>
</tr>
<tr>
<td>Work experience</td>
<td>38</td>
<td>34</td>
</tr>
<tr>
<td>A full set of tools</td>
<td>22</td>
<td>59</td>
</tr>
</tbody>
</table>

**Base:** Have not employed women in trade role (n=307)

**Total**

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
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<td>73</td>
<td>9</td>
</tr>
<tr>
<td>Own transport</td>
<td>56</td>
<td>24</td>
</tr>
<tr>
<td>Work experience</td>
<td>37</td>
<td>35</td>
</tr>
<tr>
<td>A full set of tools</td>
<td>24</td>
<td>53</td>
</tr>
</tbody>
</table>
Ideas for assisting businesses to employ more women trade staff – employed women

Regardless of your view on whether you would consider employing a women tradesperson, which of the following ideas do you think would be useful for assisting businesses like yours to employ more women as trade staff?

<table>
<thead>
<tr>
<th>Idea</th>
<th>% Total Positive</th>
<th>% Total Negative</th>
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</thead>
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<tr>
<td>Campaigns in schools to attract a more diverse range of students into trade roles</td>
<td>49</td>
<td>30</td>
<td>79</td>
</tr>
<tr>
<td>Campaigns in schools to attract more women into trade roles</td>
<td>46</td>
<td>31</td>
<td>77</td>
</tr>
<tr>
<td>Providing role models to young women to support them into trade roles</td>
<td>40</td>
<td>34</td>
<td>74</td>
</tr>
<tr>
<td>Case studies/examples of businesses successfully employing women in trade roles</td>
<td>24</td>
<td>25</td>
<td>49</td>
</tr>
<tr>
<td>Advice on how to manage senior staff members with less tolerance for diversity</td>
<td>11</td>
<td>25</td>
<td>36</td>
</tr>
<tr>
<td>Advice on setting up male dominated workplaces for women</td>
<td>13</td>
<td>19</td>
<td>33</td>
</tr>
</tbody>
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<tr>
<th>Idea</th>
<th>% Total Positive</th>
<th>% Total Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campaigns in schools to attract a more diverse range of students into trade roles</td>
<td>45</td>
<td>25</td>
</tr>
<tr>
<td>Campaigns in schools to attract more women into trade roles</td>
<td>41</td>
<td>26</td>
</tr>
<tr>
<td>Providing role models to young women to support them into trade roles</td>
<td>30</td>
<td>28</td>
</tr>
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<td>22</td>
<td>21</td>
</tr>
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<td>Advice on how to manage senior staff members with less tolerance for diversity</td>
<td>15</td>
<td>16</td>
</tr>
<tr>
<td>Advice on setting up male dominated workplaces for women</td>
<td>14</td>
<td>17</td>
</tr>
</tbody>
</table>

Base: Have not employed women in trade role (n=307)
How successful have each of the following recruitment channels been for helping you to employ entry-level trade staff?

<table>
<thead>
<tr>
<th>Channel</th>
<th>% Total Positive</th>
<th>% Total Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Word of mouth</td>
<td>59</td>
<td>14</td>
</tr>
<tr>
<td>Relationship with pre-trade institutions</td>
<td>28</td>
<td>25</td>
</tr>
<tr>
<td>Trade Me</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>The Gateway program</td>
<td>22</td>
<td>24</td>
</tr>
<tr>
<td>Seek.co.nz</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>Relationship with high school tutors</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>A recruitment agency</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Facebook</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>MSD or WINZ</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>Local newspaper</td>
<td>3</td>
<td>26</td>
</tr>
<tr>
<td>LinkedIn</td>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>Other social media</td>
<td>1</td>
<td>9</td>
</tr>
</tbody>
</table>

TOTAL: % total positive = 63, % total negative = 10
Data insights from the New Zealand Integrated Data Infrastructure (IDI)

• What is the IDI

• What we have used it for

• What we found

• Where can you find out more - [http://www.sweetanalytics.co.nz/](http://www.sweetanalytics.co.nz/)
Stats NZ’s Integrated Data Infrastructure (IDI) is a large research database containing de-identified microdata about people and households.
What is in the IDI?

**Health data**
- B4 School Checks – from 2011
- Cancer registrations – from 1995
- Chronic conditions – from 2007
- General medical services claims – from 2002
- Health tracker – 2006-13
- Laboratory claims – from 2003
- Mortality – from 1988
- Immunisation – from 2006
- National non-admitted patient collection – from 2007
- Pharmaceuticals – from 2005
- PHO enrolments – from 2003
- Population cohort demographics and addresses – from 2004
- Mental health and addiction – from 2008
- Publicly funded hospital discharges – from 1988
- National Needs Assessment and Service Coordination Information System (SOCocrates)
- Maternity – from 2003

**Justice data**
- Recorded crime: offenders – from 2009
- Recorded crime: victims – from 2014
- Court charges – from 1992
- Sentencing and remand – from 1998

**Education and training data**
- Early childhood education participation – from 2008
- Primary education – from 2007
- Secondary education – from 2004
- Tertiary education – from 1994
- Industry training – from 2001
- Targeted training – from 2001
- Adult competency assessments – from 2014

**Benefits and social services data**
- Benefits – from 1990
- Youth services – from 2004
- Children’s Action Plan – from 1996
- Working for Families – from 2003
- Child, Youth, and Family – from 1991
- Student loans and allowances – from 1992
- ACC injury claims – from 1994
- Family Start – from 2008

**People and communities data**
- Auckland City Mission – from 1996
- Migrant Survey – from 2012
- Driver licence and motor vehicle registers
- Longitudinal Immigration Survey of NZ – 2005-09
- General Social Survey – 2008-2016
- Disability Survey – 2013
- Te Kupenga – 2013

**Population data**
- Border movements – from 1997
- Visa applications – from 1997
- Departure and arrival cards – from 1997
- 2013 Census
- Births, deaths, marriages, and civil unions – from 1840

**Income and work data**
- Tax and income – from 1999
- NZ Income Survey – from 2006
- Survey of Family, Income, and Employment – 2002-10
- Household Economic Survey – from 2006

**Housing data**
- Tenancy – from 2000
- Social housing – from 1980
What have we looked at in the IDI?

- Workforce definitions
- Women in Trades – baseline
- BCATS – School to work transition
- Job tenure
- ITO apprentice pathways
- Accident rates
- Student loans
- Impact of training on career outcomes and income
- Women in Trades – comparisons by gender
Worker time series and training

Recently trained workers by gender

Number of workers over time by gender
The connection of schools based trades training and industry employment/training

Number of school leavers completing BCATS standards (female)

Number of school leavers completing BCATS standards (male)
Controlling for other factors

From the previous chart, it is unclear as to whether BCATS is:

• Attractive to students that would have gone on to study with BCITO anyway
• Encouraging students that would have gone to other ITOs to instead go to BCITO
• Encouraging students that would have pursued study or career options outside of ITO training to instead go to BCITO.
Completing a Level 2 BCATS standard shows a significant effect

Even after controlling for these factors, it appears that BCATS is having a significant effect in encouraging students into training and careers in the building, construction, and allied trade sectors.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Effect on choosing BCITO vs other ITOs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completing a Level 2 BCATS standard</td>
<td>2.6x as likely</td>
</tr>
<tr>
<td>Gaining university entrance</td>
<td>0.5x as likely</td>
</tr>
<tr>
<td>Father in building/construction</td>
<td>1.6x as likely</td>
</tr>
<tr>
<td>European ethnicity</td>
<td>1.7x as likely</td>
</tr>
<tr>
<td>Decile</td>
<td>1.14x as likely per unit increase in decile</td>
</tr>
</tbody>
</table>
The learners’ journey prior to and following engagement with VET in construction
The income potential of trades people

Women in Trades

Gap trade to other Industries $106,722

All trades people

Gap trade to University $144,529
What are we looking at next?

- Characterise worker / apprentice time with employer
- Employer intelligence
- Worker / apprentice industry turnover rates
- Internal migration
- Training penetration – past, present and future

Approach is to model both the ‘stocks’ and ‘flows’ of people and training in to, and out from, the workforce. Information about ‘flows’ e.g. the number of people that enter the industry each year, or the number of trainees that complete qualifications, are much better understood than the ‘stocks’. By modelling the flows in (new workers, supply of on the job training), and flows out (workforce churn, retirements) over time it is possible to estimate the stocks at any given point in time including points in time in the future.
Questions

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