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Career pathways of women in construction: Boots on the ground

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Glossary

Australian Apprenticeship Support Network (AASN): A national advisory service for both employers and potential apprentices/trainees that consists of multiple providers across Australia. More information available from this link: https://www.australianapprenticeships.gov.au/about-aasn

Group Training Organisation (GTO): A corporation established predominately to provide training and employment opportunities. GTOs employ apprentices and trainees and are responsible for ensuring they receive suitable training and experience. To achieve this aim, the GTO will find a suitable 'host' employer for each apprentice or trainee to work with.

Higher Education (HE): Also known as tertiary education, higher education consists of awards spanning Australian Qualifications Framework levels 5-10.

Indentured: The existence of a regulated, employment-based training arrangement, and a registered legal training agreement.

Registered Training Organisation (RTO): In Australia, an RTO is an organisation providing Vocational Education and Training courses to students, resulting in qualifications or statements of attainment that are recognised and accepted by industry and other educational institutions throughout Australia.

Technical and Further Education (TAFE): Institutes that are government-owned providers in Australia that provide education after high school in vocational areas.

Victorian Building Authority (VBA): The regulator for building activity in Victoria that is responsible for the registration of building practitioners. More information available at this link: https://www.vba.vic.gov.au/registration-and-licensing/building-practitioner-registration

Victorian Certificate of Applied Learning (VCAL): A hands-on option for Year 11 and 12 designed for students to gain experience that prepares them for gaining employment, including apprenticeships and traineeships.

Vocational Education and Training (VET): A tertiary education pathway that enables individuals to gain qualifications for employment. It is designed to deliver workplace-specific skills and knowledge-based competencies in a wide range of occupations.

Victorian Certificate of Education (VCE): A credential available to secondary school students who successfully complete year 11 and 12 in the Australian state of Victoria. The VCE is the predominant choice for students wishing to pursue tertiary education.

1. Report summary

1.1. Women in Construction Strategy

The Victorian Government has developed the state's first *Women in Construction Strategy: Building Gender Equality* (https://www.vic.gov.au/victorias-women-construction-strategy#rpl-skip-link) in conjunction with the Building Industry Consultative Council (BICC).

The BICC is a forum for dialogue between Government, employers, industry associations and unions on significant economic and industrial relations issues in the building and construction industry (Victorian Government, 2020).

The focus of the Strategy is on women in trades and semi-skilled roles in the construction industry. The Government has invested $2 million to create a strategy to diversify the male-dominated construction industry. The Strategy is based on three key themes:

- Attract: women need to be aware that construction is an attractive and viable career option.
- Recruit: Women must be proactively recruited and have access to strong career pathways.
- Retain: Workplaces must be inclusive and adaptive to ensure women want to stay.

According to industry stakeholders, the strength of this Strategy lies in its comprehensive Work Plan, which will deliver on a range of tangible positive outcomes which are industry-led and will lay the foundation for lasting change.

1.2. Establishing an evidence-base

To date, limited research has taken a systems-wide approach to explore the pathway of women into trades and semi-skilled roles in the Victorian construction industry. This research contributes to an evidence-base informed by the voices of schoolgirls and school career educators, women in apprentice and trainee roles, and trainers and employers, founded on a rigorous research design. Findings outlined in this report enable a move from anecdotal evidence to a strong evidence-base which can be used to inform targeted interventions that support the attraction and retention of tradeswomen and semi-skilled women into construction.

1.3. Aims of the research

This research responds to the *Victorian Women in Construction Strategy 2019-2022 Building Gender Equality*. The objective of this research is to understand how girls and women are attracted to and experience apprenticeships and training in construction-based trades in the Victorian state of Australia. The research aims are to:

1) Identify the barriers and facilitating factors of women entering construction-based apprenticeships and traineeships.

2) Explore the experiences of women undertaking apprenticeships and traineeships in construction.

3) Identify ways to effectively promote construction trades as a viable career pathway to school aged girls and women.

4) Explore how apprenticeship and traineeship programs in Victoria are structured and governed to identify how apprentices and trainees are formally supported.

1.4. Key findings

Data was gathered from four key groups: schoolgirls, school career educators, apprentices and trainees, and trainers and employers. Data was also collected on the apprenticeship structure and governance framework. Key findings are outlined below.

1.4.1. Schoolgirls

Subject choice and pursuit of entry pathways into post-secondary education in the early years of secondary school was influenced by parents, friends, teachers, career educators, workplace exposure and experience, and fellow students.

Gendered occupational norms and their influence over student choices became apparent in middle secondary school (years 7 – 9). Key influencers were career educators, schoolboys, and parents.

When schoolgirls expressed interest in pursuing a construction-related trade, they were often met with resistance from parents due to the poor reputation of the industry and its treatment of women.

Schoolboys perpetuated gendered stereotypes associated with construction-related occupations, underpinned by an assumption that these were only appropriate for males. The communication of this gendered norm perpetrated in jest or with malicious intent, coupled with the knowledge of a male-dominated industry, seeded doubt in schoolgirls interested in pursuing construction-related trades. The emerging doubt related to the idea of working in a hostile workplace rather than lack of ability, and was further compounded by consistent messaging within society that construction work is the domain of males. For example, schoolgirls observed very few instances of women working in building and construction related trades.

Most schoolgirls had determined their future career well before year 10 subject selection and selection of VCE or VCAL. Schoolgirls recognised the different Victorian secondary certificates as providing for different learning needs. Schoolgirls were reflective and conscious of their choice as it related to their learning style and occupational pursuit. VCAL was not considered an end to education, but the beginning of post-secondary education combined with work experience that would lead to higher education and further qualifications.

Schoolgirls' awareness of work, career, and the role and relationship between VET and HE resulted from discussions with career educators and parents. Most career-related subjects pursued by schoolgirls was dominated by gender-stereotyped pathways such as nursing, teaching, hospitality, business administration, sports management, and beauty.

Schoolgirls who wanted to pursue a construction-related trade and who were enrolled in a school that did not provide those opportunities were discouraged from changing schools and directed into more traditional occupation pathways by their existing schools.

Schoolgirls believe they have the capability to pursue whatever career interests them, however the pathway into a construction related trade remains unclear.

1.4.2. Career educators

Both VCAL and VET education were offered by the schools of career educators, including trade-related subjects, however these were not specifically promoted to schoolgirls. There was a belief that a culture of acceptance of equality within the student cohort would empower all students with the confidence to pursue an occupation aligned with their interests and skills. There was also a belief that all students supported girls in non-traditional classes, which is contrary to the experience of girls.

Some career educators provided gendered occupational advice to schoolgirls.

Parents and employers are seen as those who act as a barrier to girls' pursuit of non-traditional trades with an assumption that higher education and office-based work will facilitate better career outcomes.

Schools struggled to find technology teachers who were women and women in non-traditional roles to speak with schoolgirls about opportunities and experiences.

There is a need for students, especially girls, to experience non-traditional occupations before making subject choices in years 11 and 12. Some schools made a concerted effort to enable girls to access these experiences.

There is a need to promote and invest in VCAL programs to ensure they are valued and understood as providing meaningful occupational/career pathways by both students and parents.

Societal norms and concerns about the safety and acceptance of women in construction influenced parents' career preferences for their daughters.

Schoolgirls on work experience in construction often have negative experiences.

Women make a valuable contribution to trades, and these occupations can be very rewarding. Yet, it is difficult for girls to access workplace experiences in non-traditional occupations unless they have connections to these workplaces.

1.4.3. Apprentices and trainees

The majority of our participants were defined as adult apprentices. i.e., those who commenced their apprenticeship aged 21 years or over. Of those who were adult apprentices, the majority considered trades while at school but were actively discouraged to pursue.

Pre-apprenticeships (Certificate II) acted as a pathway into an apprenticeship allowing for exploration of what a trade is, development of skills, and connection to jobs.

Employers were sceptical of the capability of women to undertake the work, remain in employment, cope with the culture of the industry, and act as a productive team member. Completing a Certificate II pre-apprenticeship in the associated trade provided some confidence to employers that women understood the trade requirements, had some related skills, and would be able to contribute to the business.

Women are a minority group on construction sites, and this can have both positive and negative outcomes. Women may be treated better than men, but this may lead to resentment and leave them

more isolated. Site culture needs improvement as aggressive behaviours towards women is still commonplace.

Given their minority status and assumption that they are not capable of undertaking the work, women felt pressured to validate their presence. Women were accepted by their work crew when they had demonstrated their abilities. Consistency of work crew and workplace was essential to women, as it took time to build relationships and feel included. Only when individuals feel safe can they take risks in their learning which is central to an apprenticeship or traineeship.

Respectful relationships were crucial in terms of opportunities in the workplace and support from those in the workplace. Support was an essential requirement identified by women for having a successful learning journey because the culture women experience on site can be aggressive, confrontational, and discriminatory. Women reported experiencing more support from younger men in the industry.

With support and consistency came loyalty, and many of the apprentices and trainees had stayed with their same employer and saw themselves still working with that employer over the coming decade.

While most apprentices and trainees saw themselves in the industry in 10 years, many were looking to transition into management roles. Having a family was considered as a key challenge to career longevity, as was being accepted into a management role by male workers.

Access to mentoring programs can assist women in navigating their apprenticeship and the hostile workplace.

Most women felt supported by their trainers and classmates. However, some trainers and male students still believed that women didn't belong or were not capable. Classroom management was vital to ensuring a safe and accepting environment. If not actively managed, the environment of the classroom mirrored the construction workplace and perpetuated the hostility and non-acceptance of women.

Increased consistency of trainers with a high level of education skills and more time to learn competencies relative to current industry practice was also essential to improving the apprentice model.

While workplace learning is viewed as the best way to learn a trade, women need to be self-directed and self-motivated learners to gain access to the experiences required to successfully qualify.

Attracting more women into trades needed to be directed at young girls in school. This can be achieved through the curriculum as well through the use of social media. Social media can also be used to attract adult apprentices.

Financial incentives for employers are vital to encourage employment of women, especially adult-aged women into apprenticeships.

1.4.4. Trainers, employers, and stakeholders

Apprenticeships are valued as central to preparing individuals to become qualified tradespeople and to support the skills base of the construction industry.

Securing employment is a requirement for commencing an apprenticeship and women face various barriers including employer hesitation and outright refusal to hire a woman.

The increased payrate for mature-age apprentices can deter employers from employing mature-aged people, which impacts women especially as many women did not consider or were discouraged from pursing a trade when they are young.

Classroom culture can reflect a site culture where women are not respected and are treated inappropriately by both male apprentices and their trainers. This culture impacts on the quality of training and learning that women undertaking apprenticeships receive.

Trainers have not received a sufficient level of education on how to teach and how to manage a classroom. Similarly, workplace trainers do not always have the skills required to effectively teach.

There is a lack of women trainers in RTOs and this is an obstacle for supporting women undertaking apprenticeships and changing the classroom culture.

Trades as a career choice needs to be promoted more in schools, and women in trades needs to be more visible. Additionally, trades should be promoted more broadly to mature-aged women in other careers or in higher education.

1.4.5. Apprenticeship structure and governance

Aside from the apprentices, trainers, and employers involved in an apprenticeship, there is a vast range of stakeholders and regulations/standards/guides associated with Victorian apprenticeship and traineeship programs. The programs are governed from both the state and federal levels, and many of the elements are interdependent. For women in apprentice roles, the complexity of the system acts as a barrier for seeking and receiving the support and guidance required to navigate the challenges faced in the classroom and workplace.

1.5. Recommendations

Recommendations seeking to remove the barriers for women's entry into construction are detailed in Part 8 of the report and focus on:

Remove the stigma of trades

- Educating parents and schools on the structure of a trade and the opportunities it offers. It is envisaged that removing the stigma of trades will require a coordinated approach between Apprenticeships Victoria, Department of Education and Training, Career Education Association of Victoria, the construction industry and associated industry groups, RTOs, and secondary school career educators.

Schoolgirls are capable and able

- Primary and secondary school curriculum incorporates opportunities to develop skills and knowledge in trade-based skills for all students irrespective of gender to (i) develop the awareness of trades as a possible occupation for women; (ii) develop the confidence and self-efficacy of girls through knowledge and skill development and experience; and (iii) educate boys that girls are capable and able and that they belong in construction.
- As part of career education, tradeswomen visit primary and secondary schools to share their experience, lead activities, and act as role models for schoolgirls who may be considering a

pathway into a trade. It is also envisaged that schoolboys, teachers and career educators will benefit from exposure to tradeswomen and learn that this is a potential career path for schoolgirls.

- Tradeswomen and tradesmen together visit schools to emphasise that a career in trades is gender inclusive, and that men and women in construction can work in a team collegially and respectfully.
- Increase visual representation of tradeswomen in construction through social media, construction-related websites, television coverage. Additionally, representation in the media, websites, and in the broader public domain which reflects that tradeswomen and tradesmen work collegially and respectfully together.
- Career educators actively promote trades as a potential career pathway for schoolgirls.
- The timing of career advice in schools, including career opportunities in existing male-dominated occupations and challenging gendered occupational norms, should be introduced earlier in the middle years (years 7-9) of secondary education and expanded more overtly into the social world of both schoolboys and schoolgirls.

Safe and inclusive workplace

- Implementation of regulations and policies and associated education and training across the construction ecosystem which supports the creation of a safe and respectful workplace for all workers, irrespective of gender.
- Drawing on the hierarchy of control model for controlling safety risks in the workplace (WorkSafe Victoria, 2020), develop and implement a hierarchy of control model for managing psychosocial risks in the workplace with a particular focus on gender. The model should be developed in conjunction with all industry stakeholders, including but not limited to employers, industry associations, unions, and health and safety representatives (HSRs), and must include men and women in construction roles.
- Provide training for HSRs and union delegates on the hierarchy of control model for managing psychosocial risks in the workplace.
- As required under the OHS Act, employers must provide and maintain a work environment that is safe and without risk to the health of their employees, so far as is reasonably practicable. This legal obligation includes protecting women from harassment and discrimination through work practices that focus on the perpetrator being held accountable for their behaviour, and that appropriate consequences are applied for unacceptable behaviour. This is particularly important as women remain in a gendered minority group on site and have limited positional power to control and influence their work environment.

Safe and inclusive classroom

- Trainers be educated in classroom management to support respectful and inclusive behaviour.
- Trainers model respectful and inclusive behaviour for their students.
- Recruit more women into trainer roles in VET.

- Add a module/competency unit on safe, respectful, and inclusive behaviour to construction-related VET training packages which all students complete.
- Consider alternate methods for class attendance which is inclusive of women with child caring responsibilities and those who do not have an RTO close by.

Teaching skills to support learning in the classroom and workplace

- Support the development of adult education principles in instructional design for trainers and employers.

Employing women into apprenticeships and traineeships

- Challenge employers' perception that women are not capable and able through the creation of industry partnerships with secondary schools and RTOs.
- Implement recruitment, hiring, and advancement practices which do not disadvantage women.
- Earlier we made recommendations around the creation of a safe and inclusive workplace to encourage schoolgirls to enter a trade. It is expected that a shift to a respectful and inclusive workplace culture also will encourage more employers to employ women, as there will be no longer an expectation that women will need to "survive" in a toxic industry culture or that employers will need to "accommodate" women.
- Workplace industrial instruments that enable work practices that are flexible and support the various life and family stages of women so that they can retain a trade-based career in construction.
- Implement financial incentives for employers to take on adult-aged women into apprenticeships. This is particularly important as the majority of our participants commenced their apprenticeship as an adult.

Supporting women across the apprenticeship

- Develop a formal training program where tradeswomen who choose to become mentors are provided with training.
- While women remain a minority in construction, allocate all women in apprenticeship roles with a mentor who is a tradeswoman.
- Connect apprentices and trainees with Communities of Practices (CoP) that specifically support women in construction.

A clear pathway into trades

- Apprenticeships Victoria, Department of Education and Training, Career Education Association of Victoria, the construction industry and associated industry groups, and RTOs engage with career educators to provide information on pathways into trades.

- Promote websites to schoolgirls, teachers, and career educators that raise awareness and provide information on trades in construction. Information should be easy to find and clearly outlines the steps required.
- Communication is developed by schoolgirls for schoolgirls on the possibility of a career in a trade or skilled role.
- Partnerships between schools and RTOs, construction organisations, and tradeswomen can facilitate a greater awareness among students, teachers and career educators which raises awareness and promotes the participation in trade-related education, further training and future employment.

Navigating the apprenticeship governance system

- Auditing of the compliance of employers, apprentices and RTOs to ensure contractual requirements are met which enables a safe and supportive workplace that facilitates learning.
- Increased active outreach to apprentices which provides support that is valued and effective.

1.6. Report structure

The report is organised into 9 parts, as summarised:

Part 1: Report summary	A brief overview of the report is outlined.
Part 2: Brief literature review	Previous research is examined to position our research and identify our contribution to the evidence base.
Part 3: The voice of schoolgirls	Findings of focus groups with schoolgirls are presented.
Part 4: The voice of career educators	Findings of interviews with career educators are presented.
Part 5: The voice of apprentices and trainees	Findings of interviews with apprentices and trainees are presented.
Part 6: The voice of trainers, employers, and stakeholders	Findings of interviews with trainers, employers, and stakeholders are presented.
Part 7: Apprenticeship structure and governance	Key stakeholders, regulations/standards/guides, and programs associated with Victorian apprenticeship and traineeship programs are outlined.
Part 8: Discussion and recommendations	Key barriers for women entering apprenticeships and traineeships are outlined, along with associated recommendations.
Part 9: References	All references used in the report are cited in this section.

2. Brief literature review

2.1. Introduction

The construction industry is facing two interrelated challenges. One is an under supply of skilled workers in the industry (Infrastructure Australia, 2021) and the other is the low participation rates of women (Workplace Gender Equality Agency, 2020). Women in construction are an under-utilised resource who have the potential to address current and projected skills shortages. Yet, attracting more trades and semi-skilled women into the industry remains a significant challenge. In this chapter we draw on the literature to position our research. We start by outlining the participation rates of women in construction-based trades. Given that multiple stakeholders contribute to the apprenticeship model, we introduce a systems framework which can be applied to the apprenticeship ecosystem. We then consider how school-aged children are influenced to choose a construction-based trade. We go on to examine the experience of women who have entered trades. Finally, the initiatives supporting the entry of women into trades are considered.

2.2. Increasing women's participation using a systems approach

It is estimated that women make up 3.1% of trades in the construction industry (Workplace Gender Equality Agency, 2020). Table 1 shows the number of commencing female and male apprentices and trainees in construction, plumbing and services, and electrotechnology across Australia from 2017-2021. For all years and in all age categories, the number of commencing males was higher than for commencing females.

Table 1. Apprentice and trainee commencement by age and sex in Australia from 2017-2021

	2017		2018		2019		2020		2021	
Age group	*Male*	*Females*	*Males*	*Females*	*Males*	*Females*	*Males*	*Females*	*Males*	*Females*
≤14 years	60	0	55	0	45	0	45	0	65	5
15 - 19 years	19,815	375	21,530	445	19,600	490	18,110	545	25,495	845
20 - 24 years	6,905	260	7,400	320	6,460	330	6,180	340	9,210	505
25 - 29 years	2,850	135	3,140	145	2,920	170	2,565	170	4,185	255
30 - 39 years	2,155	80	2,300	130	2,275	135	2,155	135	3,360	215
40 - 49 years	635	35	635	45	615	55	570	45	955	80
50 - 59 years	155	15	155	10	125	15	145	10	220	15
60 64 years	15	0	15	0	20	0	15	0	20	5
≥65 years	5	0	0	0	5	0	5	0	10	0
Not known	5	0	5	0	5	0	5	0	0	0

Source: National Centre for Vocational Education Research (2022)

One of the key aims of the *Women in Construction Strategy: Building Gender Equality* is to increase the number of trades and semi-skilled women in construction. To implement change within a system, it is helpful to first understand the various interdependent layers of that system.

The size and breadth of the system which acts to inform the experience of trades and semi-skilled women is highlighted by Bridges et al (2020) who identified factors related to the formal and informal regulation of gender, organisational practices, family beliefs, schools, and self-efficacy. Further, the training model for construction-related trades involves multiple stakeholders operating in disparate roles. These stakeholders along with cultural, individual, and structural factors interact to create a complex set of conditions. This can mean that compartmentalised research into isolated factors of the system may not provide clear insights into the complex nature of these challenges.

Research focused on multiple aspects of the system may identify the interaction between structural and individual factors that can create barriers for women entering trades. As will become apparent through the findings, the system which shapes the attraction and recruitment of women into apprenticeships and traineeships in construction consists of multiple stakeholders from multiple levels across the system. As will also become apparent through the findings, the structure and governance of apprenticeships and traineeships is informed by a complex system consisting of multiple stakeholders which interact to inform the experience of apprentices and trainees. To create sustained change, an understanding of the system is required, along with interventions that will modify the system to enable an increase in the recruitment and retention of trades and semi-skilled women.

McLeroy et al. (1988, p.355) proposed a systems framework in which behaviour is understood to be determined by the individual as well as the environment in which the individual is located. The five levels of the systems are:

(1) intrapersonal factors: characteristics of the individual such as knowledge, attitudes, behaviour, self-concept, and skills. This includes the developmental history of the individual.

(2) interpersonal processes and primary groups: formal and informal social network and social support systems, including the family, work group, and friendship networks.

(3) institutional factors: social institutions with organisational characteristics, and formal (and informal) rules and regulations for operation.

(4) community factors: relationships among organisations, institutions, and informal networks within defined boundaries.

(5) public policy: local, state, and national laws and policies.

In recognition of the importance of taking a holistic approach to understanding the barriers facing tradeswomen, Gyarmati et al. (2017, p.30) used an ecological conceptual framework in their study of tradeswomen in British Columbia that incorporated four levels:

(1) Individual: knowledge, beliefs, and attitudes.

(2) Interpersonal: attitudes and behaviours of coworkers, family, peers.

(3) Organisational: practices, policies, norms, standards.

(4) Macro/system-wide: structures, systems, and cultural norms.

The framework used by Gyarmati et al. (2017) is very similar to the framework of McLeroy et al. (1988). The key difference between the two frameworks is that Gyarmati et al. (2017) appears to have consolidated the community and public policy levels outlined by of McLeroy et al. (1988) into the fourth level referred to as macro/system wide.

In the brief literature review that follows, we consider the various parts of the system which can shape the entry of women into a construction-related trades and semi-skilled roles. We also incorporate women's experience in the classroom and workplace.

2.3. Schoolgirls entering trades

2.3.1. Age

Turner and Lapan (2005) explored non-traditional career choices in adolescents. Children form gendered occupational preferences at a young age, with boys being inclined to hold more rigid preferences than girls. Struthers and Strachan (2019) argue that gender schemas that classify behaviours as feminine or masculine are developed in childhood and that this early development can influence self-efficacy, specifically that girls without encouragement in STEM will have lower self-efficacy in relation to STEM later in their lives. These gendered schemas were found to be translated into specific views on types of work that were suitable for girls and boys by year 8 and were set rigidly by year 10 (Struthers and Strachan, 2019).

2.3.2. Beliefs about acceptance in non-traditional roles

Struthers and Strachan (2019) undertook focus groups with 68 secondary students during 2013 and 2014. They found that female students reported feeling intimidated at the thought of joining male dominated vocational education programs. While some girls understood that VET was an option, they doubted they would be accepted in a male-dominated VET classroom and believed that they would "cop flak" (p. 11) and be labelled as unfeminine. Girls also expressed concerns that by entering a trade they would also be labelled as a lesbian or as being butch.

The career choices of girls are informed by their expectations of being accepted in the workplace, and they will avoid careers where they believe they will face gender discrimination in the workplace (Construction Sector Council, 2010). Given the physical nature of skilled labour and trades in construction, there is a view that women are not suitable for these type of roles (Bridges et al., 2020) which can impact on the attrition of women in apprenticeships as well as retention post-completion of training (Holdsworth et al., 2020). Together, these issues have an impact on the visibility of women in the industry and the availability of role models and mentors who are women, which are identified as key enablers for attracting girls into apprenticeships.

To address gendered work socialisation and counter negative gender stereotypes, Francis and Prosser (2012) argue that young people, parents, and careers educators must be able to access information about construction-related work and opportunities from those working in the industry

2.3.3. Parents

Family responses and beliefs about trades hold a significant influence on girls and young women's career choices. Moore and Gloeckner (2007) identified that parents who believe that careers play an important part of self-fulfilment were more likely to be supportive of their children's career choices

regardless of the nature of the career. Simon and Clarke (2016) found that parents with rigid gender beliefs acted as a barrier to girls entering male-dominated fields. Similarly, Taffard et al. (2019) found that parents did discourage their daughters from pursuing a trade and instead recommended pursing a traditionally feminine career.

Girls who enter the construction industry are likely to have family members with strong connections to the industry. This connection to the trades was found by Taffard et al. (2019) to be beneficial if a parent in a trade was active in engaging their daughter in trade-related activities, e.g., teaching their daughter how to weld or having their daughter to help with tasks, or by passive exposure to the industry e.g., being present on site with their parent. Additionally, Taffard et al. (2019) found that having a mother who engaged in any non-traditional training or who was active in, for example, house renovations, also had a positive impact on girls and young women considering a trade.

Families with limited or no experience with the construction industry were likely to reinforce stereotypes and hold beliefs that construction was not a safe or suitable career option for women. Similarly, Struthers and Strachan (2019) found that girls in secondary school expressed the view that their lack of experience on the tools was a barrier in considering a trade as a career option, with the exception of girls whose fathers were in a trade and had introduced them to the tools at a young age.

An additional complexity that parents face is the tension between encouraging their daughters to pursue careers in trades and concerns about the culture of the construction industry. Bridges et al. (2020) found that parents face a dilemma, pulled between a belief that girls can achieve and thrive in any role and a desire to protect their daughters from risks of harassment that may arise from entering a masculine workplace. Bridges et al (2020) also found that concerns about mistreatment is justified and this presents an ethical dilemma for recruitment strategies.

2.3.4.Careers counsellors and teachers

In their research exploring tradeswomen's experiences in New Zealand, Taffard et al. (2019) found that school could provide a positive experience in terms of introducing girls to trades. Of benefit was classroom learning focused on a trade such as building a coffee table, and teachers who were supportive and focused on developing confidence in trade-related skills. However, some participants were exposed to gendered stereotypes, reporting that when they undertook a woodwork class there were very few other women and their presence in the class was constantly questioned and undermined.

A study exploring the perceptions of career counsellors and teachers identified that girls weigh up their ability to do well in a non-traditional role, e.g., their self-efficacy and how the work would affect their self-identity. Self-efficacy is believed to be influenced by experiences in relation to exposure to trades (Struthers & Strachan, 2019).

Taffard et al. (2019) found that career advisors play an important role in matching girls with an interest in trades to appropriate training and career pathways. However, career advisors are not always viewed as supportive, and in some cases are a barrier for girls and young women seeking careers in the trades. In O'Donnell's (2008) research, participants from both school and employment programs expressed strong criticisms of their career counsellors. This criticism included being provided with inadequate advice on training and receiving advice that reaffirmed gender stereotypes. Jenkins et al. (2018) found that gender norms underpinned some of the advice provided to girls at school regarding career pathways, and more generally that higher education was the primary focus of many career advisors due to a limited understanding of the trades. Simon and Clarke (2016) found similar results

from their survey of Australian students who believed that their career counsellors lacked the knowledge to properly inform girls about the full range of career options available to them. Importantly, the gender stereotypes held by career counsellors and their lack of knowledge on career options can be a critical barrier for girls to enter trades (Bridges et al., 2020).

The gaps around the range of career choices for girls presents as a missed opportunity to counter some of the gendered norms on a societal level. Turner and Lapan (2005) found that interventions focused on career choices of middle school students can help enable them to explore a range of career options and reduce the impact of gendered beliefs on career choice.

Careers counsellors who understand the importance of trades expressed difficulties in overcoming misconceptions about trades as being only a “hands on” job which did not require a level of intelligence (Struthers & Strachan, 2019). Counsellors also expressed limitations in terms of time and resources available to support students to enter a trade. Bridges et al. (2020) observed that the pathways into university and subsequently into professions are formalised and relatively straightforward, whereas entry into apprenticeships depends on securing employment.

2.3.5.Friends and peers

Taffard et al. (2019) found that friends and peers could be sources of both information and encouragement for women entering a trade. This support could come in the form of encouraging women to “go to tech with me” (vocational education) or passing on information about job options in the trades. Their research included women who had entered trades as mature-aged apprentices, therefore the findings may not be generalisable to secondary school-aged students. School-aged students may not actively support and encourage their peers as they may not have the knowledge of trades or confidence in making recommendations to peers.

Research into secondary schools and gendered views highlights some specific concerns that are relevant to the environment in which schoolgirls are making career decisions. Connolly (2022) focused on children and teenagers and found the existence of sexist bullying directed at boys who didn’t display masculine behaviours and young women and girls based on feminine gender norms. However, further research is needed to understand if gender-based bullying amongst peers in secondary school is explicitly linked to career aspirations.

2.3.6.Vocational versus higher education

O’Donnell (2008) identified that vocational training and education was seen by parents and students as inferior to higher education and held a belief that such training would offer fewer career prospects. Simon and Clarke (2016) found that female students perceived their school as being focused on pathways to university with either no encouragement towards vocational education or, where there was discussion of vocational education, this was presented as an option for those “who were not felt to be capable of achieving a university entrance” (p. 587). Jenkins et al. (2018) found reason to question whether class assumptions also underpinned the preference for higher education, with the prevalence of views that trades require less intelligence and are therefore stigmatised.

Struthers and Strachan (2019) also argue that VET is perceived as having low status. They contend that within Australia, there is a belief that university offers better career pathways. Taffard et al. (2019) suggest that the low status of VET has led to a decrease in enrolments. Data from Switzerland, Germany, Australia, Denmark and Norway show that VET uptake from secondary students is steadily decreasing (Taffard et al., 2019).

Jenkins et al. (2018) report that VET providers were concerned about the presence of gendered assumptions, and assumptions about vocational education generally in secondary schools. Some VET representatives felt that some schools only targeted boys with information about VET pathways and excluded girls or else did not present VET as a viable pathway to any students.

From the literature, there appears to be the potential for class-based assumptions and misunderstanding about the career prospects and earning capacity from trade-based occupations. This can play a part in shaping advice provided to school-aged children.

2.4. Women entering trades

The nature of construction work is a key attraction for women. Construction trades enable creativity, stability, problem solving and collaboration (Taffard et al, 2019). Awareness of the salaries associated with trades has also been reported as a significant driver for women to enter a trade, however this knowledge was not common amongst young women who were deciding on their career pathway (Construction Sector Council, 2010; Taffard et al., 2019). O'Donnell (2008) reports that schoolgirls who were aware of the financial benefits of working in construction were concerned about the manual labour involved.

Women's perceptions of their own ability and the skills and knowledge required to begin training can be a barrier for entry into apprenticeships (Taffard et al., 2019). Taffard et al. (2019) found that women can lack confidence in practical skills which can arise from childhood experiences and a lack of hands-on play and practice with construction-related activities which boys may be exposed to. This barrier can arise because of gendered views about appropriate work at a societal level that can emerge at multiple points of a child's development. Perceptions can be informed by parents, teachers, career advisors and peers/friends (Trades Women Australia, 2019). These views can then reduce the opportunities for girls to develop construction related skills and, and as a result, they do not see themselves as capable of a career in the construction industry later in life (Trades Women Australia, 2019; Taffard et al., 2019; Construction Sector Council, 2010). Women's perceptions of the construction industry and expectations of a male-dominated workplace culture can also deter women from considering trades as a career option.

Taffard et al. (2019) identified recruitment practices as a key barrier for entry into the trades for women. Part of the problem with recruitment is that it is often informal, meaning that people with connections to the industry are more likely to be considered and offered employment. This is potentially a barrier for all prospective entrants who lack industry connections, regardless of gender. A second obstacle is that where recruitment is formalised, there has been a noted tendency to advertise job availability in a way that favours men, and by advertising on platforms that are more likely to be viewed by men (Taffard et al., 2019).

A key consideration when seeking to understand the experience of tradeswomen is the life stage at which the individual enters trades training. Young people, usually during or immediately after secondary school, are targeted for recruitment into apprenticeships and traineeships. However, many women enter construction-related apprenticeships and traineeships as mature age apprentices. Mature-age apprentices are classified as those who are aged 21 years or over. There are many barriers to increasing the recruitment of school-leavers who are women but there are additional challenges in recruiting women in later stages of life. Taffard et al. (2019) note findings from research conducted by the Ministry for Women in 2015 that older women lacked awareness of job opportunities or viewed the construction industry as 'jobs for men'.

Jones et al. (2017) contend that employers can be resistant to taking on mature-aged apprentices as they receive adult wages. Employment is an essential requirement for commencing an apprenticeship and about 30% of women commence after the age of 24, which means any resistance to taking on mature-aged apprenticeships could have a disproportionate impact on the recruitment of females into the industry. Stanwick et al. (2021) suggest that there is a link between the decreased number of commencing apprentices over the age of 25 and the increase in pay rates for adults, suggesting that pay rate is a significant factor in employment patterns for mature-aged apprentices.

While the opportunity provided by apprenticeships to 'earn while you learn' is a significant attraction for women who have just left school or who have not been in the workforce, women who entered apprenticeships as a change of career often struggle with the reduction in pay while they are on training wages (Taffard et al., 2019). Although this challenge is not gender specific and would occur for anyone moving from a more highly paid position, is it noted that women seek trade roles as a second career at a higher rate than men. The Construction Sector Council (2010) identified that women entered trades as a second or third career choice or after pursuing university. This also means that women commencing training may also have family responsibilities compared with cohorts entering training directly after secondary school, which can increase the stresses associated with training.

Apprentices with dependent-aged children can face challenges with scheduling study time and attending class. Taffard et al. (2019) found the female apprentices reported losing family time due to travel time to class or from attending evening classes. The additional demands of studies and apprenticeships on parents is not inherently a specific barrier to women and could affect all parents in apprenticeships, however, research consistently shows that women perform a larger share of parenting responsibilities (Kane, 2018) making this a barrier that can be expected to disproportionally impact female apprentices.

2.5. Initiatives supporting the entry of women into trades

2.5.1. Role models and mentoring

Simon and Clarke (2016) found that women and girls believe that female role models can have a significant influence on career choice. Role models were viewed as a way of demonstrating what women can achieve in male-dominated industries, as well as providing trustworthy advice on pursing these careers. Having female role models was also seen as a way to counter gendered parental views and limited advice from career counsellors and teachers. Bridges et al. (2020) found that mentors and role models were consistently identified as important for increasing the number of women entering and staying in a trade.

2.5.2. Community interventions

Conducting women-only information sessions and training days with female mentors and role models was found to be a powerful intervention for recruiting women into trades (Bridges et al., 2020). Additionally, Jenkins et al. (2018) argue that hands-on workshops aimed at children, especially girls, can help to normalise women in trades and potentially counter traditional views on this type of work.

2.5.3.Industry-school partnerships

Partnerships between industry and schools was found to be viewed as both a way to increase female entry into trades and to foster longer-term change in the industry (Simon and Clarke, 2016). Struthers and Strachan (2019) also highlight industry partnerships as a way to support careers counsellors who have limited resources and time but who want to provide connections between students and trades. Additionally, Bridges et al. (2020) highlight research indicating that industry involvement with schools may help to address parent's concerns around their daughter entering a male-dominated workplace.

2.5.4.Increased status of Vocational Education

Bridges et al. (2019) argue that there needs to be efforts directed towards increasing the value attached to student achievement in VET. Citing Toppin (2018), Struthers and Strachan (2019) argue that trades training needs to be seen as meaningful rather than menial. As has been discussed, vocational education is seen by some parents and careers counsellors as lacking status. Although this is not a barrier that is specific to women, it has been seen that women have less exposure to the trades and encouragement to pursue an apprenticeship than males, meaning that this belief and stigmatisation of vocational education could compound gender-specific barriers.

2.5.5.Recruiting mature age women to apprenticeships/traineeships

Many women in construction-related trades come to industry as a change of career and begin training as mature-aged apprentices. It is therefore argued that recruiting adult women who have embarked on other careers or training and who want a career change is key to increasing the participation of women into the industry (Construction Sector Council, 2010). Specifically, the Construction Sector Council (2010) found that where industry key informants targeted college-aged women to enter a trade, the results were positive, leading the authors to call for more efforts to recruit from this demographic as a path to increasing women's participation.

2.5.6.Incentivising employers to take on mature aged apprenticeships/traineeships

Jones et al. (2017) and Shrewing (2009) emphasise the importance of incentivising employers to take on mature-aged apprentices who are women. This is aimed at countering the reluctance that some employers have towards taking on a mature-age apprentices due to the higher wages these apprentices receive. Additionally, they argue that apprenticeships should be restructured to enable recognition of the previous workplace learning of mature-aged women.

2.5.7.Pre-apprenticeships

Taffard et al. (2019) contend that pre-trade programs are a key way to overcome barriers for women entering apprenticeships. Pre-apprenticeship programs need to be well-structured so that they enable women to develop the confidence in securing employment and apprenticeships as well as developing trade-related skills.

3. The voice of schoolgirls

3.1. Introduction

This section of the report outlines the findings of focus groups with schoolgirls. Key themes emerging from the data consist of: career aspirations, career influences, secondary education pathway, barriers for entering construction-related trades, and attracting more women into trades. Each of these themes is described and illustrative quotes from schoolgirls are used to provide context to the findings.

3.2. Participants

Participants comprised of 40 schoolgirls completing years 9-12 from four Victorian secondary schools, and 5 women undertaking their first year in a project/construction management degree at a large urban university. Table 2 provides additional information on the schools and university attended by participants.

Focus groups were conducted with schoolgirls and university students to explore their career decision making process, and to identify associated learning pathways. As the university students were asked to reflect on their experience while at secondary school, the umbrella term of “schoolgirls” is used in reporting the results and in the subsequent sections of the report.

Focus groups and interviews were recorded, transcribed verbatim, and thematic analysis was undertaken.

Table 2. Schools and university attended by participants

School/University	Region	Students	Participant numbers	Participant Year level	Career Support
Victorian Government School	Outer-Metropolitan, North of Melbourne	Co-educational; low–medium socio-economic status	15	Year 10: 4 Year 11: 11	Career preparation Yr 10, inc. up to 5 days' work experience. Trade courses are taught off-site. Offer white card training to students.
Catholic School	Inner-Metropolitan Melbourne	Co-educational; low–medium socio-economic status	6	Year 10: 2 Year 11: 4	Career preparation Yr 10, inc. up to 5 days' work experience. Trade courses taught off-site
Victorian Technical College	Outer-Metropolitan, North of Melbourne	Co-educational; low–medium socio-economic status	5	Year 10: 1 Year 11: 3 Year 12: 1	RTO and all technical and trade courses taught on-site. Offer white card training to students.
Catholic Education	Outer-Metropolitan, North of Melbourne	Co-educational; low–medium socio-economic status	14	Year 11: 14	Career preparation Yr 10, inc. trade taster subjects. Trade courses are taught on-site. Offer white card training to students.
Large Urban Victorian University	Inner-Metropolitan Melbourne	Co-educational	5	1st year university: 5	Career preparation while at school: Yr 10, inc. up to 5 days' work experience
Total number of participants			45	Year 10: 7 Year 11: 32 Year 12: 1 1st year university: 5	Average age schoolgirls: 16 yrs Average age of university participants: 19.5 yrs

3.3. Schoolgirls

3.3.1. Career aspirations

The majority of participants (77%; n = 34/44[1]) recognised a difference between a job and a career, 5% (n=2/44) thought they were the same thing, while 18% (n=8/44) stated they did not know the difference between the two.

Students explained that a career was a dynamic pathway made up of a series of jobs that would allow them to increase their knowledge, skills, responsibilities, and bring financial reward. For example, one student commented, *"a job is a short-term thing, you're not going to be there the rest of your life, and a career is long term, something that you find fulfilling and do with a view into the future."* Many students

[1] While there are 45 participants, in this case one participant did not answer the question. This is the case for sections where a total of 44 is used.

worked while studying, and this helped to inform their understanding of the terms, as reflected in the following comment:

> *"…for me personally, I have a casual job right now. But a career would be something I'm passionate about. I enjoy it not just because of the outcome and the money earned, but because it's what you love to do, it's what you want to do with your life and pursue it until you retire."*

As reflected in the preceding comment, a job was identified as something that was undertaken to earn money, and a career as a pathway that brings growing financial rewards and fulfilment. While earning potential associated with a career was identified as important, schoolgirls prioritised a career pathway that aligned with their interests and provided them with a high level of task satisfaction over money. One schoolgirl commented that a career was something *"that you'd like to pursue because you're passionate about and that you're interested in."*

The preceding comment reflects a recognition that as part of a career, decisions and opportunities depend on a person's interests and skills and that a career could take many paths. However, participants also recognised a career involved ongoing skills development and lifelong learning, as reflected in the following comment:

> *"A job is something that you do to earn money, and it might be just a short-term thing, whereas a career is something that you keep on building your skills and building your knowledge over time, and you have this lifelong pursuit of that."*

These findings reflect the literature on career development, which suggests that a career is a pattern of work experiences comprising the entire life span of a person and is generally made up of several phases reflecting the transition from one stage of life to the next (Weinert, 2001).

Of the girls we spoke to, all but the university students and one VCE student had a clear idea about what they wanted to pursue as a career. Interestingly, all the university students had transferred into their current degree from other degrees they had identified while still at school.

All of the schoolgirls identified their aspirational careers in the later years of primary school and early middle school. All girls said that by year nine, they had selected a career to pursue and had chosen their subjects accordingly. Our findings align with those of Hughes and Karp (2004), who identified middle school (years 7 – 9), as a time when students can benefit the most from career exploration. However, girls in our study had settled on a career in the early years of middle school rather than later years which has implications for careers education.

Participants identified a range of career paths they were preparing for through the selection of school subjects:

- Education: childcare, teacher, teaching aide
- Hospitality: pastry chef
- Health: paediatric nurse, midwifery, disability services, paramedic, adult/child psychology
- Beauty: beauty therapist.
- Public service: Protective Services Officer, Customs officer, Homicide detective
- Fashion and photography
- Building, Construction, Property: furniture maker, project/construction manager, real estate, mechanic, electrician, software, mechanical engineer, carpentry
- Arts: singer, actress, film production
- Business: administration

- STEM: environmental scientist/conservation, Veterinarian, Criminology

Students recognised that their identified careers would require the completion of either higher education or vocational education and training and were enrolled in the relevant senior secondary certificate (VCE or VCAL).

3.3.2.Career influences

Participants' career selection was influenced by family, friends, interests and experience, potential career earnings, self-identified skills, and television and social media. The table below presents the key factors which directly influenced our participant's career choices.

Table 3. Career influences

Influence	Percentage (n=43)[2]
Personal interests and related hobbies/activities	40% (n=17)
Self-identified skills related to selected career and associate jobs/tasks	14% (n=6)
Television/social media	12% (n=5)
Family	9% (n=4)
Friends and family	7% (n=3)
Family, friends, personal interests, and income potential	5% (n=2)
Family and personal interests	5% (n=2)
Family, friends, and personal interests	2% (n=1)
Friends and personal interests	2% (n=1)
Not sure	5% (n=2)

Students' career decisions were influenced by family, friends, and personal interests rather than by school. Family and friends provided girls with exposure to work and associated careers, which heavily informed their decision about (i) what would be of interest to them and (ii) provide a satisfying and rewarding career.

Several participants acknowledged their father's occupation in influencing and informing their career decisions. One student commented: *"Because my dad's a tradie and I usually work for him part-time, and he has a lot of friends who are either tradies, engineers, construction workers, it inspired me to be an engineer."* Another reflected: "*First [I wanted to do] electrical, because of working with my dad as a plumber, when I'd work with him, I'd watch all the electricians work, and it looked really interesting."*

These quotes illustrate the importance and influence of exposure to construction workplaces and experience in trade-related tasks for girls' career decision making. Exposure to a particular occupation and access to information based on a parent's work experience shaped and informed the decisions of many of our participants.

The family of schoolgirls also influenced their career choices and helped them to understand what they didn't want to do, as reflected in the following comments:

> *"My mum used to be an emergency room doctor, and I always thought that was cool, and I looked up to her, but as I got older, I was like I don't really like that stuff…it's too clinical, and I would feel suffocated."*

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2 43 out of 45 participants responded to this question.

And

> *"I started off wanting to be a teacher, but my mum's a teacher, and she constantly says, 'Oh, don't do it. It's not worth it anymore. It's changed from what it used to be.'"*

Personal interests and hobbies were also identified as having a significant influence on the career choice of schoolgirls. One schoolgirl commented that she chose her identified career path because *"I find it fun, it's interesting, the hands-on nature. It's something I wanted to do in the future."* Another schoolgirl identified that her lifelong passion had led to her career choice:

> *"Ever since I was a really little kid, I've always been interested in animals and the environment, and I used to watch a lot of Steve Irwin, which got me really interested in animals and conservation, and it still hasn't changed."*

Friends also influenced the career choices of schoolgirls. For example, one schoolgirl commented:

> *"a friend is a paramedic, and she loves her job, but I also have a pop who gets sick a lot and seeing the paramedics come out and what they do is amazing, helping him get better, but also supporting the family."*

Another schoolgirl settled on her career in hairdressing due to personal interest and, again, contribution to society, as reflected in the following quote:

> *"I used to do cheerleading when I was younger; all the older girls would do our hair and stuff. I have naturally curly hair, so they couldn't really understand it and do it, so I started watching tutorials on how to braid, and I eventually got good. I just want to help people with their natural hair."*

Students identified television shows as having a key influence on their career choice, as it exposed them to a wide range of occupations. For example, schoolgirls commented that their career choice was informed "*from shows and off television*"; "*I just watch a lot of shows,"* and "*I do want to go to university to study criminology and forensic psychology*. "*I do watch a lot of crime shows, so it did stem from that, especially Criminal Minds.*" Schoolgirls career choices were also influenced by social media (such as TikTok and Instagram).

3.3.3.Secondary education pathway

Students can select from one of two secondary education certificates[3]:

- Victorian Certificate of Education (VCE)
- Victorian Certificate of Applied Learning (VCAL)

Of our participants, 47% were completing VCAL and 53% were completing VCE.

VCAL and VCE are different types of qualifications that involve a varied depth of academic study. VCAL is a hands-on option for students in Years 11 and 12 and can lead to apprenticeships, TAFE and training courses, or a job. VCE is designed to allow students to apply for tertiary education or seek employment.

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3 As of 2023, the Victorian secondary certificate will merge into one. Students will still have the option to pursue vocational education as part of a vocational major. Despite the restructure and rebranding, all students will complete the same certificate, they will still need to make decisions about the subject selection that reflects the existing VCL/VCE dualism with the same assumptions associated and influencing their choices.

Students identified that their family and school played a crucial role in guiding their choice of secondary certificate selection and associated subject selection as aligned with their career preference. The guidance provided by schools and parents varied, and was informed by a range of different assumptions that viewed either VCE and/or VCAL as providing valuable and beneficial learning and pathways to further learning.

Billett (2014) contends that TAFE and VCAL are associated with low status and negative societal sentiments, and this was reflected in comments made by the university students who had all completed VCE. The university students commented that at their schools: *"the default pathway was VCE"* and that students studying VCAL were in the minority: "*only three girls in my year level did VCAL, and there were 200 of us."* This student explained that *"there's kind of a bad stigma around VCAL,"* yet despite this, she commented this was unjust as *"it [VCAL] actually can give you a lot of options, and it's a different way of learning."* However, within her school, *"everyone just thinks all the dumb people do VCAL."* Another student concurred with these sentiments, commenting that *"it's so ingrained [to do VCE]. The entire school was just like do med or do law, and if you do anything else, you're stupid."* This participant commented that she had inquired about the availability to pursue other learning opportunities such as VCAL and was told, *"If you're at [stated school], why would you do VCAL? And if you do VCAL, you're incompetent."* Another university student was aware that VCAL was offered but:

> *"they promoted VCAL to anybody at my school at least, was when they saw that a student wasn't responding to VCE, wasn't trying in VCE, clearly did not care, then they'd say, 'Hey' – give you a tap on the shoulder 'We think you should join VCAL.'"*

Interestingly, all of the university participants reported feeling unclear about their career path, and all had commenced another degree before transferring into a project/construction bachelor program. While they had completed VCE and STEM-related subjects, they felt their access to career information and opportunities at school was limited. For example, one student commented:

> *"I didn't find it [career education] very helpful because they were trying to rush through 200 students, so it was very quick. I didn't get to have that proper in-depth conversation, which didn't help with my confusion."*

All university students commented that none of their career educators had mentioned the degree they were currently enrolled in. They had identified it themselves when exploring tangible careers associated with science-related careers.

Girls undertaking VCAL, on the other hand, were very clear about their chosen career and the stages of education they would need to complete to attain their goals. Two of the participating schools had invested significant effort in working to promote VCE and VCAL as equally valuable learning pathways. These schools had developed initiatives to give students experiences in trade occupations and vocational learning environments. Students from these schools recognised the value of these experiences in helping them confirm their chosen career and secondary certificate path, as reflected in the following comment: *"The teachers and the work the environment, that helped me choose as well."* Further, students were able to identify how their chosen senior secondary certificate met their learning needs and post-secondary education pathways. One student commented that:

> *"For me, I didn't want to do VCE because I saw you have to do all these exams. I know school's not for me, so with VCAL I get to go once a week, and I flick over and do something like going to do beauty [training]."*

This comment reflects the learner's recognition of their learning needs as best suited to VCAL. A second student made a similar comment stating:

> *"I work more hands-on to things. I like to see things to learn. I can't look at a book and say, 'this is what you have to do', I have to be shown how to do it."*

In addition, students commented that there was less pressure associated with VCAL but still a positive career outcome. For some students, access to senior school education of this nature meant they remained in school and had identified a future career path, as reflected by the following comment:

> *"I never really liked school, my attendance was getting bad, and I figured that if I get two days off a week doing something that I like [going the TAFE], and I had to work hard to get me a great job I figured it would be better for me. Further, when I finish school I've got something that I've already worked towards, and I can just get a good job straight away."*

In addition to learning needs and preferences, students identified that awareness of alternatives to further education, other than university, empowered them to pursue a career. For example, one student commented: *"for me, I don't think I'd work well in University."* Students also noted that TAFE did not preclude them from a university degree, and while it may take longer, they would still be able to achieve their desired career outcome but in a way that would meet their learning needs. One student commented: "*I'm doing VCAL. And I want to do nursing as well."* The student explained that she would complete a division 2 nursing diploma at TAFE and then continue to division 1 nursing by undertaking a bachelor degree at university.

Participants indicated that parents influenced their decision to pursue VCE or VCAL. One student commented that her parents believed that *"your child has to go to university to be successful."* Another student commented that *"my mum's like 'I want you to have a good future, but that means you have to work hard and go to Uni and get a degree you need and then get a job that you actually want to do.'"*

Another student commented that her father assumed that her work environment and opportunities would be better if she completed VCE and went to university, as reflected in the following comment:

> *"my dad wanted me to go to University. He wants me to become like those who work in offices so it's [work and life are] easier for me because he thinks I'll have more time for myself and get paid well if I do that."*

While some students described their parent's concern about undertaking VCAL, others acknowledged their parent's support. One student recalled talking to her mother about VCAL instead of VCE, stating:

> *"mum was on board with it. My older sister did VCE and she struggled and my brother did VCAL and he did great, so she was like, 'Yeah, if that's what you want and you can get a career out of it, like you get something out of it then yeah, go for it.'"*

Interestingly at one of the schools, students commented that their parents supported their brothers in pursuing VCAL and VET-related courses. In contrast, they wanted their daughter to complete VCE and go onto university.

3.3.4.Barriers for entering construction-related trades

Family:

A key barrier preventing schoolgirls from pursuing building and construction-related trades was a lack of support from their parents. Of the 36 participants who responded to question:

- 44% (n= 16/36) said both of their parents would not support them going into a trade. Of this group of parents, 28% (n=10/36) had a family member in a trade.
- 8% (n=3/36) said their fathers, but not mothers, would support them going into a trade. Of this group of parents, 8% (n=3/36) had a family member in a trade.
- 6% (n=3/36) said their parents but not their brother would support them in a trade. Of this group, 3% (n=1/36) had a family member in a trade

According to participants, some parents believed that a career in a trade was not suitable for young women as they would not be accepted and would be treated poorly. This was particularly the case for some of the fathers who worked in trades and had observed how poorly women were treated. Other parents considered that construction-related trades are "*a boy's job.*"

However, and counter to the literature, it was identified that some parents would support their daughters in entering a trade. For example, 42% (n=15/36) of students said their parents would support them going into a trade and of this group of parents, 31% (n=11/36) had worked or had a relation that worked in a trade.

Lack of information on building and construction trades:

Students were asked to reflect on the information provided to them by their careers educators and schools concerning careers in building and construction trades. Students from the school that did not prioritise year 10 – 12 VCAL and technology-related subjects cited a lack of opportunity to study trade-related VCAL subjects. The lack of educational opportunity motivated them to leave their original school and transfer to the current school. One student recalled at her school:

> *"they used to allow you to go to different schools to do VET, but you're not allowed to do VET at my old school anymore or leave the school to go do that [complete VET related subject elsewhere]."*

Further, there was limited information about such careers promoted to students, as reflected in the following comments:

> *"I feel like it's not talked about much because there is an expectation that many boys go into the trade. It's just a given for them, and then it's just not really spoken about for us [girls]."*

And

> *"Many teachers don't even know. I asked my school for help, and they had no idea about how VCAL or trades or anything; they were like, 'I don't know.'"*

Sexist and inappropriate behaviour from schoolboys:

Students attending the schools with trade-related year ten subjects and work experience programs recognised the opportunities associated with VCAL, and while they did consider a building and construction career, many did not pursue such a pathway. Of the forty schoolgirls interviewed, only eight were currently enrolled in building, construction and auto mechanic-related subjects as part of their VCAL program. Key reasons schoolgirls cited for not pursuing such a career path included;

- Sexist and inappropriate behaviour in class from both teachers and fellow students;
- Concern about the future work environment; and
- The perception that others would deem them physically incapable.

While many students cited support from their parents and school in pursuing trade occupations, the experience of sexist and inappropriate behaviour in class from male students deterred them from continuing a trade education. One student commented:

> *"when I did get my white card, I got bullied pretty bad by the boys for wanting to go into a trade. A lot of them made some nasty comments about me, like, 'Why are you even getting your white card? You're a girl.'"*

Another schoolgirl commented: "*Even boys our age, 16/17, and we are in 2021, they're still like, No, it's [trades] a men's thing.*" The lack of acceptance of girls by male students resulted in girls being laughed at when in class and not listened to when they spoke, as it was assumed they could not contribute anything valuable. One schoolgirl commented:

> *"Even in class the other day, I started speaking because I was answering one of the teacher's questions, and the whole class just started laughing because I was the only girl in the class, and they were just laughing because I was female and they were like, 'Ha, ha, ha.'"*

Ironically, one schoolgirl commented that after her experience in year ten, she chose not to follow a VCAL path. Her fellow male students, when realising she was studying VCE and reflecting on her technical skills, asked, "'*Why didn't you choose VCAL? Why didn't you apply for VCAL?' And we're standing there like, 'You made fun of us when we wanted to" and now they call us boring because we're in VCE.'"*

Many schoolgirls commented that while the male students meant no harm, their constant "joking" and "belittling" made them decide not to pursue trades because they did not want to learn in that classroom environment or work in an environment where they would need to prove themselves constantly. In one example provided by a schoolgirl, she felt fully supported by her school and her father, yet she chose not to pursue a trade education because of the attitudes and behaviour she received from male students:

> *"Don't get me wrong, it's not all of them [boys], but the majority of them, they're not very kind to us girls. And they don't care. And then they'll say, 'It was a joke. It was a joke', but they'll continue doing it."*

Some schoolgirls indicated that if they complained about the inappropriate behaviour they experienced by the boys in class, they would be punished, as reflected in the following exchange:

> *Schoolgirl 3: I feel like a lot of times that happens, especially with sexism stuff, because it does happen; I feel like what happens, though, is guys do it, but then girls get the punishments.*
>
> *Schoolgirl 5: Because I go off at someone, if they make a comment to me, I'll yell at them, and I'll get in trouble because I've made a big deal or I made a big scene out of it.*
>
> *Schoolgirl 2: Yeah, and they're like, "You just overreact about everything."*
>
> *Schoolgirl 5: Yeah, that's what we're told. I've been kicked out of class because I lost it at a boy once making a comment to me.*
>
> *Schoolgirl 2: The thing is, we wouldn't report it to a teacher because it creates a bigger problem.*
>
> *Schoolgirl 5: Yeah. Then they keep going around, "See, all you do is sook" because you've gone and reported it.*

Teachers' behaviour:

The schoolgirls indicated that teachers questioned their ability in trade/technology classes because they were girls. These experiences had negative consequences on the continuation of trades education and related career path. Girls studying technology-related subjects explained that their teachers could be inappropriate in terms of their use of language. Additionally, schoolgirls reported that teachers were sometimes overly helpful in ensuring they felt comfortable in class. Schoolgirls commented that there was an assumption they would not be able to keep up with the schoolboys due to gender-based differences, so the teachers gave them extra attention. Rather than benefitting the schoolgirls, this additional attention led to (i) the schoolgirls questioning their own ability and (ii) the schoolboys questioning the schoolgirls' ability. One schoolgirl commented:

> *"Male teachers would say my measurements were the best, but then they would ask me to do something, and then it'd be like, 'Can you do this? Are you sure you know how to do that? Do you need me to do this?' and I'm like, 'I can measure this. I've been doing this for two years. You think I've just forgotten how to do this? I still know how to do it.' I raised this with some of the students in my class, some of the guys, and one of them was just like, 'You're just imaging it', or whatever, and I was like, 'I don't think so.' Then this other person goes, 'No, I've seen him doing it; he's literally been sitting over her shoulder the whole entire class, not letting her do her work herself.' It made me feel like I wasn't capable of doing it."*

While the issue mentioned above had an unfortunate and unintended consequence, more negative overt behaviour was displayed by some teachers. One schoolgirl recalled:

> *"the class was full of boys, and just the environment was really sexist, and it was not a good environment. It was all the remarks the boys made and stuff, it just like puts you off a bit, and like even the teacher, he was trying his best to accommodate me, it just felt like he would exclude me a little bit."*

Construction work environment:

Schoolgirls were concerned about the construction work environment due to a fear that the sexist and disrespectful behaviour displayed by schoolboys and teachers in the classroom would be replicated in the workplace. One student commented that she did not want to work in construction as she was concerned all the men onsite would be: *"thinking I'm not good enough, I'm not worthy"*, which mirrored the behaviour and treatment she received in the classroom. These experiences led girls to change their career aspirations. For example, one schoolgirl stated: *"I wouldn't want to work in that environment for the rest of my life."*

Students were concerned about the workplace based on feedback from family members working in the building and construction trades, as explained by the following two comments:

> *"My auntie actually worked at a construction site; she was a traffic controller. So she worked at a construction site with men, and the stories she came back with were just very off-putting; they were very racist, like casually racist, sexist and maybe sexual remarks towards her. And so she just said it was just a really bad environment."*

And

> *"sometimes my brothers - there's a girl on the site where my brother works, and don't get me wrong, my brother's not sexist or anything, but he sometimes says stuff that's a little bit sexist towards her, and I didn't like that kind of environment. I want to feel safe in the environment I'm working in."*

When asked why women did not enter the industry, schoolgirls commented on their awareness of an existing gendered stereotype associated with building and construction work. They recognised that the ridicule they faced in class would also be replicated on the worksite. Schoolgirls were also concerned about being judged, their treatment by colleagues, and their safety when working in a male-dominated industry, as reflected in the following quote:

> *"I feel like the only thing you hear about girls on a job site is just like – when you're talking to people about wanting to be a girl in a trade, you get warned, 'The men on site are going to be creepy to you.'"*

Male-dominated workplace:

Schoolgirls commented that whenever they went past a construction site, they observed that most of the workers were male, "*so automatically you think trades are for males*." Students further commented that "*even in advertisements as well on TV, there's very like lack of representation."*

The lack of representation by women also acted as a barrier to attracting schoolgirls into the building and construction trades. As one participant stated, "*they [women] might just completely not even consider a trade"* or *"sub-consciously thinking 'oh that's not for me.'"* Lack of representation may also lead to reluctance, as the lack of representation of women in trades *"may result in women being scared to take that step and go and pursue it."*

However, girls also felt that while women in trades were *"frowned upon, I think now times are changing a little, I guess",* and people are becoming a little more *"progressive"* and *"open-minded"* with women "*now seen as equals."* Schoolgirls believed that working in a trade would be rewarding, pay well, provide a good social environment, and offer good working hours.

Physicality of the work:

Schoolgirls also cited the physical impacts of working in a building and construction trades as a deterrent to entry:

> *"It's very repetitive, and I see my dad, it's the same hours every day, and he wakes up so early, and it's just like it just seems so demanding, and they get so tired."*

And

> *"my dad owns his construction business, and I see how tired he is all the time and my brother; he's so tired all the time and always sore. I don't have any interest in it."*

3.3.5. Attracting more women into trades

In recognition of the lack of women entering the industry, girls were asked what was needed to attract more women into a building and construction-related trade. Girls were very clear about the need to communicate a strong message to both schoolgirls, women, and men that women are capable and to highlight the existing supports so the "how" is visible. One student reflected: "*I feel like the only thing being said is, women can do it, but there's nothing to support them."*

Schoolgirls recognised that gendered roles were nurtured from birth, and this prevents women from *"know-how".* For example, one schoolgirl commented: "*We're not being brought up like that to be introduced [to a trade]. No one's bringing us out to the car to change the oil; they bring their sons out. We know we're capable of it."* Schoolgirls suggested that what is missing is the opportunity to learn

how to use tools and develop required skills to give girls the confidence to undertake trade-related subjects and courses at school and pursue associated occupations.

Schoolgirls suggested that the curriculum in primary school could be modified to include building-related activities so as to ensure that boys and girls were exposed to such activities from a young age. This is important because as one student reflected: *"I feel like a lot more girls will want to do stuff from primary school if it's given to them."*

Schoolgirls also identified the importance of active building-related curriculum in mainstream middle school curriculum (year 7 – 9) that allows girls to gain experience in building with the male students. Skills development in building within the middle years would not only nurture confidence but an attitude and appreciation within the school community that everyone is capable, as reflected in the following quote:

> *"I think that's good for the females doing it and the males because then they [male students] get to see it [women developing building skills], and also the females get to believe in themselves more."*

Schoolgirls suggested "*a workshop that you're not obligated to do, but everyone is encouraged"* could provide such opportunities. Other suggestions included tradesmen and women speaking together in schools about their work, as reflected in one student's comment: *"male and female coming to a school and talking to kids about how they work together."* The key, participants felt, was the need to raise awareness of women in trades across all age levels, as one student explained:

> *"At the end of year nine, they took us to the trade centres and showed us around and if we want to pursue any of those options, year nine is too late… if we're introduced to that kind of stuff right when we start high school, then we have more than just one or two years to think before choosing whether we want to go into VCE or VCAL."*

In addition, girls indicated that women in trades needs to be communicated to the whole of society. In relation to educating the broader society about women's participation in trades, one student commented: *"I think it's more around the men to be honest"* and their belief in a women's place and capability in a trade role. Promotion of trades also needs to include the range of trades available, the roles and tasks undertaken, and the benefits experienced from a women's perspective. Communication platforms suggested included social media such as TikTok, Instagram, Snaphat, Facebook, Twitter and YouTube to capture the attention of the youth audience specifically.

Girls recognised the power of social media, however the only posts they have seen are women in traffic control positions. One student reflected:

> *"I feel like it [women in trades] needs to be acknowledged because I've rarely seen a girl in tradie uniform doing some type of construction that isn't holding a lollipop stick."*

The following quotes indicate the influence of social media but also the limited information available:

> *"I only see girls doing traffic control. And she says they make good money and stuff. I was thinking about that, I was like, 'I want to do that job. It's easy and it's good money.'"*

And

> *"Like that traffic control thing. When someone posts about it and everyone just keeps seeing it and about how good money it is and how they just don't do a lot, they just stand there. That's how it was on the TikTok."*

And

> *"So we see a lot of girls doing traffic control but not other stuff."*

Information girls suggested as valuable to include on social media ranged from "a day in the life of", how a woman entered the industry, and presenting men and women working together in a positive way. Importantly, these messages needed to be *"entertaining, fun with a bit of information but not a lot of information because that will get boring."*

Social media was also seen as increasing the acceptance of women in the industry more broadly, as *"Instagram and Twitter all those types are important because if people actually see it and then read up on it they'd be more like accepting towards women in trades."*

More traditional advertising was also identified as important. However, at present much of the advertising featured males, reinforcing the idea that men dominated, as reflected in the following comment:

> *"I remember seeing some ads about construction work, safety and there'd only be one female on the ad while the rest of the people are males."*

And

> *"on TV it's usually just one girl and just a whole bunch of guys and I think it would be better if there are more girls so it would be an equal subject."*

Communication of women in trades was also needed in schools to raise awareness for students and act as an education campaign for teachers. One student commented that:

> *"I think the guidance counsellor we had should have been more versed in them [construction-related courses]… they did not know, so she just dismissed it because why would she talk about something she doesn't know?...She genuinely had no idea what it was, which was like, "Oh, okay. So there's probably not any jobs in it for me then."*

Participants also believed there was a need for "*advertising or actual stuff in school to teach your male classmates how to treat women."*

It was suggested that in addition to advertising, more women in the roles of trades/technology teachers would *"bring in more females",* and *"encourage more girls",* as *"girls support girls."* In addition, women in teacher roles would help challenge the attitude that girls can't or shouldn't as *"it shows that a woman is teaching men in the class too, so the men can't say anything because they're learning off her."*

4. The voice of school career educators

4.1. Introduction

Career education plays a central role in matching girls' skills and interest with future careers. However, the literature suggests that career educators are not always viewed as supportive, and in some cases are a barrier for girls and young women seeking careers in non-traditional occupations, especially the trades. This section of the report explores career education as delivered and understood by Victorian career educators in relation to the promotion of career choices for girls. The findings are reported according to three themes: career development, influences on students career path and its impact on schoolgirls pursuit of trades, and how to attract more girls into non-traditional trades.

4.2. Participants

Four career educators from three Victorian schools participated in an interview to explore how career education was delivered, the key areas of focus, and whether construction trades were promoted as a viable career pathway to school-aged girls.

4.3. Career development

Participants viewed career education as essential to assist students in identifying their future careers, post-secondary institution, the associated senior secondary certification and required subjects. Career educators reflected that their approach to career education followed the Victorian Education Department guidelines and Framework. Within Victoria, the Victorian Curriculum and Assessment Authority has developed the Career Education Framework. The Framework aims to enrich teaching and learning programs to facilitate effective career education for students. The Framework is structured around six steps to guide career development across years seven to twelve:

- Year 7: I Discover
- Year 8: I explore
- Year 9: I Focus
- Year 10: I Plan
- Year 11: I Decide
- Year 12: I Apply

At each step, goals are organised into three stages:

- Self-development: young people understand themselves, build their experiences and achievements and develop their capabilities.
- Career exploration: young people locate, investigate and consider opportunities in learning and future work options.
- Career management: young people make and adjust career action plans and manage their life choices, changes and transitions.

The role of career educator was recognised as not only important to assist students in identifying their future career pathways, but though the alignment of interests, skills and careers to ensure students in

their middle years remain engaged in school and learning. One career educator commented, *"I think it's about years eight and nine where a lot of students start to lose their way, and they start to drift behind."* Career educators identified a difference in the career developmental stages between schoolgirls and schoolboys, hence the importance of careers education from year seven through to year twelve. One career educator commented that while boys recognise the value of academic pursuit aligned to career aspiration by year ten and eleven, *"girls are already at that stage by year nine."*

While all schools offered career education from year seven, access to work experience and exposure to career discussion and taster subjects becomes much more of a focus in years nine and ten. However, given the lack of focus on their future careers and *"laissez faire attitude"* adopted by boys in middle school, one career educator reflected that *"the boys get all that attention at a co-educational school"* in career education programs. Consequently, schoolgirls may miss out on access to information required to help inform their career choices in their formative decision-making stages.

Two career educators identified the Morrisby career profiling tool provided by the Victorian State Government as central to the generation of data within their year cohort. The tool is *"used to inform decision making around electives for students."* Interestingly, only two of our schoolgirl participants remembered undertaking the Morrisby test and commented that it did not inform their career choice. The Morrisby test is undertaken in year nine, and as one career educator commented, it provides the students with career suggestions which are *"not gender-biased"* but aligned with *"what your skills tell us that you're good at."* The alignment between the career suggestion and student's skills is then discussed. For example, one career educator commented:

> *"I always talk about an industry, and the job in the industry, and go and look at it and see what the key skills are, see what the key knowledge is. And then the salary, long-term employability, and the certificate or diploma required. What is it about that industry that you're interested in? As opposed to only boys do this job. So that's never a part of my conversation."*

Career educators indicated that without the Morrisby career profiling tool connecting students to careers, industry would need to "*fill that void by talking about what it's like and what opportunities are there for girls and boys in particular elements of the industry*." However, while the Morrisby profiling tool helps students connect their skills with a compatible career, not all students complete the test as it requires *"parental permission",* which can be *"impossible"* to obtain. While the profiling was identified as a useful exercise, it was critiqued by one career educator who commented that:

> *"I don't like it because I think kids are vulnerable. If they're told at 15 that, 'You should do this based on a test that you sat and you couldn't be bothered doing at the time,' do you know what I mean? I don't like those sorts of things. I mean, they're okay if you're curious. I just feel sorry for some kids who take them as gospel."*

Career educators indicated that not all students have the ability or the aspiration to complete higher education and follow a professional career. The career educators identified that part of their role was to ensure students made informed choices about completing VCE or VCAL. Career educators spoke of the importance of nurturing an attitude within the school that VCAL *"is a good program"* and, from year seven, establishing clear *"pathways."* However, depending on the socio-economic background of the student cohort, there could be skewed enrollment in either VCAL or VCE at the school.

Each school highlighted the need to help students *"explore their goals, their beliefs, what they know, where they see themselves in the future concerning subject areas of interest."* As part of career education, students in years ten to twelve experienced external speakers, university open days, TAFE

taster days and careers expo *"so they get to walk around and talk to people",* helping to inform their career choice.

A clear path and a well-developed level of respect for VCAL across the wider school community was identified as essential to ensuring students find a learning path that suits their needs, skills and interests.

Careers educators explained that parents don't necessarily connect VCAL with the provision of higher education pathways. As such, it was identified that schools played an important role in providing parents with a better understanding of VCAL and trades as a potential career path. One career educator felt that parents *"don't see trades as a learned skill"* or that *"there is actually a lot of learning that needs to be done in order for you to complete that trade, to be able to do that trade."* One career education commented that there exists:

> *"misconceptions about the kind of work that a tradesman or woman would undertake, and that still requires a higher level of skill than simply picking up something, or hitting something with a hammer."*

Consequently, two of the participating schools invested significant effort in deliberately challenging the belief that VCAL was a lesser educational pathway within the school community, promoting VCE and VCAL as equally valuable learning pathways. These schools identified that it was not the certificate itself but the assumption that the associated careers were less valuable as they are not aligned with academic/professional occupations.

It is vital to ensure that students can connect their interests, school curriculum, and future career path and remain engaged in their education regardless of whether this is vocational. One career educator reflected, *"They [students] say, 'Well, I'm going to be a plumber, why am I doing Shakespeare?' and they might start to have issues in the classroom because they're not engaging."*

4.4. Influences on a student's career path and its impact on schoolgirl's pursuit of trades

Careers educators believe that women can make a meaningful contribution to building and construction-related trades. One career educator commented that women make an *"invaluable"* contribution to the building industry. Further, this participant cited that women in the industry are *"critical",* not simply adding to the economic output of the industry, but also from a cultural perspective stating that *"workplaces are better off with women in them…their workplaces changed [for the better]."*

Career educators were clear that they were gender-neutral when discussing career opportunities with their students. However, the career educators we interviewed did not view the non-gendered approach to career education as the norm amongst all career educators, commenting:

> *"I have come from other communities where it [career gendered bias] is more pronounced. I live in the eastern suburbs, and I know it's more pronounced when you talk to career practitioners about where they're driving particular roles and decisions. And when I go out and work- network with career practitioners in all schools across Victoria, it's interesting the language that is used… some of the gender biases that might naturally just come into the conversation without realising."*

The preceding quote illustrates that career education can become embedded with the gendered beliefs of the career educator, which can then influence the advice given to students. Career educators commented that the promotion of building and construction-related trades was addressed in

relation to the opportunities associated with completing VCAL rather than explicitly to girls from a gender perspective. However, it was acknowledged that gradually, more girls are expressing an interest in trades as a career path. One career educator reflected that "*more girls coming forward saying, 'That's what I want to do [pursue a career in building and construction trades].'"* Additionally, one career educator reflected that when their students:

> *"do their Year 9 Morrisby assessment, the girls often do – those trades come up, and the counsellors that come into the school advocate for them to go into a trade. And they often communicate to me that these are the kids that recognise that a trade is for them and they're interested, what can you do to bring women in trades talks and supportive interventions like that into the school?"*

While career educators we interviewed were conscious not to influence students with gendered biases around work, they also identified that they did not actively promote building and construction related trades to their schoolgirls. One career educator commented, *"that's probably something we could do more, but again, we just promote trades; we don't promote them as a gender-specific trade."* Another stated: *"We haven't done anything formal, but it's across our radar. I guess my approach is trying to catch the broad spectrum of everybody as opposed to trying to offer something that is gender-specific."*

Career educators indicated that gender would not stop students from pursuing non-traditional careers if they were interested, as reflected in the following comment:

> *"I don't know that that barrier's really present. Yes, we should make it more front and centre, 'These are your options,' but I'm not sure there's a huge barrier there at the moment of them choosing that. There's certainly not the barrier of, 'Oh, I'd be scared to go there,' or, 'I'm going to be the only girl,' or the only boy for that matter."*

One issue identified by a career educator was the opportunity for schoolgirls to undertake a positive work placement in the building and construction industry. Careers educators were conscious of the need for careful placement of schoolgirls to ensure their experience was positive, as reflected by the following comment:

> *"if I do have female students wanting to go into trades, I really want them not to be alienated or go onto a large worksite because it will end in disaster. And the employer's going to wonder what they did wrong and why it didn't work out, and not have the answers because they just don't have that cultural sense of why it's difficult."*

In these instances, the career educators take on the role of *"educating the employer about how to look after the student because that's not written anywhere for an employer."* While work experience is important in providing schoolgirls with an insight into the industry, it also presents a recruitment opportunity.

Given the awareness of the male-dominated nature of the construction industry, career educators acknowledged that they had a role in "*building within them [schoolgirls] a sense of confidence and knowledge that they are not standing alone, that there are other organisations around that will have their back*."

The transition from work placement to employment presents a gap that schools currently fill, and offers opportunities to engage more women in construction trades. From the career educator's perspective, employers and the support of women transitioning into the industry need to be improved, as does the attitude towards women.

In addition to formal career education initiatives undertaken between years seven to twelve, participants identified that their students, in the process of identifying their chosen career and study path, were influenced by subject teachers and parents, as reflected in the following quote:

> *"I think it's just good advice from here [school], but I wouldn't have thought peers come into that so much. I'd say a big combination of [career educator] and the teachers, or [career educator] and trust the teachers and parents."*

Career educators felt that in addition to school, *"parents have a big part to play"* in influencing the students' career preferences. Parental preferences based on their experiences influenced their daughter's decision to pursue HE and VET. For example, one career educator commented:

> *"we have a lot of kids who come from migrant backgrounds whose parents didn't necessarily have the opportunity to do higher education, or go on to further study, or even finish their schooling. We've got a lot of refugees who just didn't even finish their schooling. They have come to this country for the children to get a better life, to get a better education and not do physical, manual labour work, and want them to go to uni, and so, therefore, they must."*

Career educators identified that gender bias towards careers and work environments also influenced parental preferences for their daughters to undertake HE, VET, and professional and trade careers. Career educators commented that both parents and students' religious and cultural backgrounds further polarised what is acceptable work and career choices for girls. One career educator commented that girls pursuing any trades within some religious communities were viewed as *"just not acceptable."*

Career educators reflected that parents of girls studying construction-related subjects within their VCAL certificate, while supportive, were also *"concerned about them going into these industries."* This career educator reflected on parental concerns that trade-based jobs in the construction industry could be problematic for women:

> *"Fundamentally [parents] see them as being male-dominated. And I have to be honest and say they are. And they are going to encounter misogyny, and I'm very honest about it."*

Career educators identified that parents developed knowledge of construction from their own experience working in the sector or from industry stereotypes, as reflected in the following comment:

> *"The industry doesn't help itself either. That they need to be much firmer about the requirements around harassment, bullying and discrimination, and they're not."*

There were mixed views on the influence of peers over career choices. One career educator felt that *"no, I don't think it will be their peers"* that influence schoolgirls' decision to take up a trade. Another career educator believed *"those who are easily influenced"* would be somewhat influenced by what their friends and fellow students thought was an appropriate career path.

Despite the negative influence of the hypermasculine culture of the industry and its influence over schoolgirls' decision to pursue a construction-related trade career, career educators had not sought to ask their male students on their view of women undertaking trades. Career educators broadly believed that schoolboys would accept schoolgirls in trade-related classes, commenting that they did not think boys inside and outside the classroom would influence girls' career decisions. One educator felt that:

> *"the boys are probably very accepting of girls being in the space and doing the work. They don't tend to make a judgement, because they're not being challenged by a female being in the space. I think it might be a bit different when you got to a work site, or the female was more competent in that particular skill."*

This comment differentiates boys in school from men onsite regarding attitudes towards women working in construction. When career educators were asked about how their male students interact with and think about the contribution women can make in the industry, responses included:

> *"I don't think they [the boys] notice. It's never been a topic of conversation…I've never thought of it."*

And

> *"I haven't asked them. Just in terms of their general acceptance, I would say so because they're [schoolgirls] broadly accepted."*

And

> *"I've never asked them, to be honest with you. I've never really asked them that question. I should. Didn't even think of asking them that."*

Likewise, it was assumed that while social media would influence some student's career choices, career educators were unsure of the how influential this medium was:

> *"I don't know about social media; I'm not really into what the kids go onto, I wouldn't have a clue, but I'm pretty sure it's happening there, too, in social media. I'm not au fait with all the sites that kids might join."*

4.5. How to attract more girls into non-traditional trades

Careers educators were conscious of the perpetuation of societal gendered career stereotypes that influence girls career decisions from birth, as reflected in the following comment:

> *"it's all through their childhood that the gendering process starts off early... But it's really critical that it's addressed at the junior secondary level where colleges start to open up much more than what they currently are."*

Another career educator identified the importance of "*challenging those cultural norms*" and that schools played a role in "*influencing parents, employers, students*" to ensure there is "*broad community awareness across all those different groups that are either saying no, or doubting themselves because they can't see or are not aware of the positivity around the kind of work [building and construction trades] that they [girls] could be doing…not just one particular gender*."

As reflected in the preceding comment, career educators identified the importance of career education from early in a student's secondary experience. Schools were conscious of promoting trades to all students because, as one educator reflected, "*there's a large proportion of boys that don't go into a construction industry either*." As such, career educators identified that they had not considered how to promote building and construction-related trades to schoolgirls. One career educator commented, "*to be honest, I haven't put much thought into it until today*," continuing, "*I'm going to have to snuff out whether there are barriers [faced by girls] first, and then what are they*?"

Career educators also recognised that in their role, they could not be the only voice advocating for girls to pursue non-traditional careers and that there was a need for *“more visual supports, like posters to put up around the place*” and “*women tradies that go around to schools and educate girls*.”

5. The voice of apprentices and trainees

5.1. Introduction

Apprenticeships and traineeships combine on-the-job and formal training for qualifications in a wide range of industries. Generally, an apprenticeship provides training in a skilled trade, while a traineeship provides training in a vocational area. Information on how apprenticeships and traineeships differ is available from this link. While apprenticeships and traineeships have been reviewed over recent years to determine their role and efficacy as a learning model in Australia and internationally, there exists limited research that explores how women in apprentice and trainee roles experience both paid on-the-job training and formal study with their RTOs (Couldrey & Loveder, 2017). This section of the report presents the findings of interviews women in apprentice and trainee roles. During the interviews, we explored the factors which attracted women to pursue a trade in building and construction, and how their experience has informed their learning journey and ongoing retention upon the attainment of their qualification. Findings are presented according to the following themes: factors informing women's decision to enter a trade, pathway into a trade, workplace expectations and reality, need for support in the workplace, expectations and realities of the classroom, challenges of being a women in an apprenticeship, career longevity, attracting more tradeswomen into the industry, and the capability of women in construction.

5.2. Participants

Thirty participants were interviewed. The average age of participants was 28 years, ranging from 20 years to 47 years. Of all participants, only one had children.

Participants consisted of four trainees and 26 apprentices:

- 21 of the 26 apprentices commenced their apprenticeship as an adult. The average age of apprenticeship commencement for adults was 25 years old.
- For the trainees, the average age of their traineeship commencement was 32 years old, with the youngest being 24 years and the oldest 46 years.

Participants studied at one of eleven RTOs, in one of the following areas:

- Apprenticeships: carpentry, plumbing, electronics and electrical.
- Traineeships: air-conditioning and refrigeration, bricklaying, crane operation, fire protection (sprinkler fitting), horticulture, locksmithing, painting and decorating.

In addition to the thirty interviews with apprentices and trainees, three interviews were conducted with women working in traffic management to understand how these women accessed pathways into skilled roles.

5.3. Factors informing women's decision to enter a trade

5.3.1. Why pursue a trade?

Factors for pursuing a trade in construction

Participants were attracted to a trade in construction for a variety of reasons, as summarised in Table 4.

Table 4. Attraction to a trade in construction

Attraction to a trade in construction	Number of participants (N=30)
Nature of the work • Hands-on • Creative • Clear delineation between work and home • Workplace with no interaction with public	19 16 7 2 2
Financial rewards	8
Career independence	3
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Did not want to go to university	2

Note: some participants provided more than one reason for why they were attracted to a trade

Nature of the work

The most cited reason participants were attracted to a trade was due to the nature of the work. This included aspects such as hands-on tasks and the need for creative attributes, the delineation between work and home, and a workplace that requires little interaction with the public.

Participants enjoyed the "hands-on" nature of the work, referring to the physicality of the work itself: "*using your hands every day, rather than sitting behind a computer screen"* (Apprentice 2). The variety of work a trade offered was considered attractive. For example, Apprentice 9 commented: *"doing something different nearly every day… meeting new people, you're going to different sites…you work in prisons, cop shops, shopping centres and apartments."* Participants identified that the nature and type of work required mental agility which offered a challenging and rewarding career.

Many participants enjoyed the problem-solving nature of the work. Working in a trade required participants to continuously and actively *"think and problem-solve"* (Apprentice 20) and, therefore, *"learn new things"* (Apprentice 18). Apprentice 10 commented that she enjoyed *"solving tangible problems."*

Several participants noted that working on tasks with tangible outcomes helped to build their confidence as they moved through their learning journey. Apprentice 12 explained that the apprenticeship model helped her to not only learn her trade but develop her confidence as a person:

> *"Learning and just being so – I don't know – confident, I guess. If 19-year-old me could look at me now, I'd be absolutely flabbergasted with how much I've changed and grown as a person."*

Apprentice 22 also highlighted how her confidence had developed as a result of the learning process:

> *"For the last 18 months or so, I have seen myself develop so much more confidence… the way I interact with people; my decision-making has been amazing. It's been awesome, and growing that confidence reflects in my work; I have more pride in my work. It has a massive compound effect everywhere."*

Participants were also attracted to a trade due to its site-based nature and the resultant delineation between work and home. For example, Apprentice 10 commented:

> *"if you are at work, you're at work. And if you're not at work, you're definitely not at work. There's that clear delineation. No one tells a welder 'Take those pieces home and have them back on Monday.'"*

The separation between home and the workplace, as described by Apprentice 10, was viewed as a valuable contributor to a good work-life balance.

Financial rewards

The second most cited reason participants were attracted to a trade was the financial security. Participants identified that a trade would enable them to generate an income that would allow them to live comfortably, cover expenses and eventually be debt-free with some savings. Apprentice 19 explained that when working in hospitality, she *"would never be able to afford a house."* Yet, she had male friends *"24, 25 [years old] that had already paid off a mortgage on one of their houses and had a second and third mortgage"* which prompted a career change for her. Similarly, Apprentice 17 stated that one of her reasons for taking up an apprenticeship was *"money definitely, I just thought that's where the money is going to be long term."*

Despite the financial difference in wages between a qualified tradeswoman and an apprentice, some participants reporting earning more money while training than in their previous employment. For example, Apprentice 4 commented that "*the apprentice rate was already better than what I was getting [in another role], and it was going to be a consistent rate, and I'd know my hours*". Some participants were surprised by the wage, as stated by Apprentice 11:

> *"I went into my apprenticeship thinking I was going to get paid absolutely nothing because that's all you hear in apprenticeships, and I was quite surprised at the rate the mature age apprentices get, so it's not much less than being a nurse."*

Apprentice 21 discussed her ability to earn while she was in the early years of her career trajectory, and that this would put her on a path of financial independence:

> *"I'm third year and you take $1,200 home a week, that's after tax. Like, it's amazing. I can afford to pay my mortgage and I can probably afford to raise a small family and get married and do all that sort of stuff and I think it's really good for younger kids to get to the point of like 'Wow, I can take to the next level and buy myself a house and all that, as an apprentice.'"*

The traffic controllers who were interviewed had all entered the construction industry as a second career, and identified the potential income as a key attraction and benefit of the industry. Semi-skilled participant 1 stated:

> *"My brother is in a trade, my uncle's in a trade, so just seeing their success rates in life, … They own their own houses, they've got family, and they've got their lives together …I struggled to see much progression when I was in hospitality, especially when it comes to the pay scale of things."*

Participants acknowledged that the security of work, hours and regulated wage made apprenticeships and a career as a tradeswoman a financially attractive proposition. It is important to note, however, that there were a variety of wages earned among participants relative to the sector of the industry they were employed e.g., EBA/unionised site, domestic or commercial, size of organisation, trade or task, nature of employment, and employer discretion.

Career independence

Participants identified that the construction industry presents multiple career opportunities for women in trades. Some participants also considered the ability to start their own business. For example, Apprentice 25 commented:

> *"there's always work, and your pay is a decent amount. Then there's a potential to have your own contracting business... that was really appealing to me."*

The ability to self-determine and shape their own workplace culture and workload was identified as empowering from a pragmatic perspective as well having an altruistic purpose. Apprentice 9 stated that she was pursuing a trade so that she could not only empower herself but to *"help people because there are some people that won't get hired, due to discrimination."* Further, participants reported that organisations were starting to recognise that employing women into trades *"might actually be a useful point of difference for a business"* (Apprentice 10) in relation to their marketability.

Alternative to university and opportunities for women

Participants stated that a desire not to attend university coupled with a desire to learn while working had led them to consider a trade as a career path.

Nearly a quarter of participants were very deliberate in their choice of a trade. They had considered both their long-term physical capability and the longevity of the trade itself as related to the likelihood of the trade becoming automated or not.

Planned career change

Sixty-seven percent of participants (n=20/30) had commenced an apprenticeship/traineeship as part of a planned career change. This career move occurred early for some participant's, having only worked for a few years in their first career. For other participants, this career change came about after decades of employment.

Participants identified that their career change was motivated by the following reasons:

- didn't like their existing job and its associated and limited career trajectory;
- didn't like their chosen career;
- liked their job and career path but not the work environment; or
- liked their job but did not see a viable long-term career.

For example, a semi-skilled participant moved from a job in hospitality to a traffic control job. She was inspired by her partner who had moved from an office-based role into a role in construction. For this

participant, the nature of the work and hours were appealing, especially when compared with the tough working conditions in hospitality.

5.3.2.Why not pursue a trade?

Trainees and women working in semi-skilled roles such as traffic management were asked why they hadn't pursued an apprenticeship. Various reasons emerged:

Apprenticeship not available: Various occupations in construction are not aligned with an apprenticeship, such as crane operator, locksmithing, painting and decorating. For example, Trainee 1 identified that she had a very specific role she wanted to pursue [stated occupation] that did not align with an apprenticeship.

Wages: Semi-skilled participant 2 began in a traffic role and was undertaking ticket training in order to move from a traffic management role into a ticketed site-based role. She had initially thought that an apprenticeship would be appealing because it would package the training necessary to move into other roles in construction, however the lower apprenticeship wages prevented this transition: *"I would have looked at doing one of the apprenticeships …but because of the lower income I can't afford to do it being the sole parent".*

Access to training: Trainee 2 reported that she had wanted to pursue an electrical apprenticeship when she was 18 years old, but she was in a small rural town and there was no opportunity to pursue this training.

Overseas qualification: Trainee 3 had completed an electrical engineering apprenticeship overseas but due to the requirements to change over her qualification, she had pursued work in a ticketed site-based role in the construction industry.

Career advice: Women in traffic management reflected on their experience of career advice, and reported that this was gendered as well as influenced by class. When asked why she had pursued a career in hospitality out of school, semi-skilled participant 1 stated that the career advice she had received in secondary school was based on gender stereotypes with boys being pushed into woodwork and girls into hospitality. She also believed that knowledge of the varied apprenticeships that are available is not widely known. For example, she said that trades like carpentry and plumbing are recognised as opportunities, whereas waterproofing is not.

Rural and urban differences: Trainee 1 reflected on secondary school experiences in a city school and a rural school and found that trades were promoted much more in the rural school, which she attributed to the rural school being a *"lower socio-economical sort of town … they're trying to get people jobs when they finish school… They know a lot of those lower-class people aren't going to be going to uni."* Trainee 1 felt that the careers advice provided in an inner-city school was inaccurate, stating:

> *"Both my sisters went to uni, and one of them's an accountant, one of them's in a government job. Not being blasé, but I make more money than both of them, and that option was just never portrayed to us. Or even girls especially. You would never think a girl could make money in this industry, when, yeah, you can."*

5.3.3. Apprehension of entering a trade as a women

Twenty-seven percent of participants reported being apprehensive about enrolling in their vocational certificate, citing concerns about working in the construction industry. These concerns stemmed from participants' perception of a lack of women's representation in the industry. The greatest concern women identified was being denied support given their minority status, as reflected in the comment made by Apprentice 22, who *"expected the people I worked with to not be particularly supportive."*

Participants also held concerns for their physical safety and were aware that they may encounter inappropriate behaviour while working in the industry. Inappropriate behaviour was described as either being bullied (physically or verbally) or excluded, resulting in limited workplace opportunities. Women were also concerned about their physical capability in both the short and long term.

Like the apprentices themselves, their friends and families held similar concerns regarding their choice of trade as a career path. Specific concerns related to their wellbeing and treatment by men in the industry, and this stemmed from a perception of an industry dominated by men and a hyper-masculine culture. For example, Apprentice 23 commented:

> *"[Dad] goes, 'You're not doing anything it the construction industry,' and I was like, 'Why?' and he said, 'No. Men are pigs and men are this and they'll treat you bad and it's backbreaking and it's no. No. No.'"*

Similarly, Apprentice 4 commented:

> *'[Dad had] been around a bit of that stuff, and he was like, 'No, there's a lot of gross men.'"*

As reflected in the above quotes, women whose male relatives worked in the industry were concerned based on their own industry experience. Other apprentices explained their parents, without connections to the industry, were also concerned about how they would negotiate a male-dominated workplace, as reflected in the comments made by Apprentice 6:

> *"Mum was a bit iffy at the beginning because it's a male dominate trade and stuff…Just how I was going to cope with it."*

Other apprentices cited gender-related work stereotypes as polarising their family's attitude to the suggestion of becoming a tradeswoman:

> *"My mum and my grandma were mortified. My grandma is pretty old school. She wants to see her little baby girl in pretty dresses behind a desk because it's what women do."*

Despite these initial reservations, once the apprentice had begun their training and the unfamiliar became the known, this reservation was negated by positive experience. For example, Apprentice 6 commented: *"once I did the pre-app, and she [my mother] saw how happy I was she was all for it."*

However, not all participants experienced a negative reaction to their choice of a trade career. Fifty percent (n=15/30) of participants experienced support from their parents. Trainee 2 explained that her parents *"encouraged me to go do it because they knew that's what I wanted to do"* and Apprentice 18 said that her parents *"supported me 100%."*

Of the group of participants who experienced positive support from friends and family, 87% (n=13/15) commenced their apprenticeship or traineeship as a mature age apprentice compared to 13% (n=2/15) who entered directly from school. Women who experienced support explained that those who

knew them felt the skills required and the type of work they would undertake as a tradeswoman would suit their ability and personality.

5.4. Pathway into a trade

5.4.1. Discovering a trade in construction is an option

Participants explained the various methods by which they discovered trades as a potential career and went on to commence their training.

Just under a quarter of participants (n=7/30) stated that while completing post-secondary education, they recognised that they no longer wanted to follow the vocation pathway they had chosen and moved into a trade-based vocational pathway.

10% (n=3/30) considered a building-related career while at school and directly enrolled into a vocational certificate.

27% considered a building-related trade while at school but were actively discouraged to pursue their chosen career path. Ironically, these women were dissatisfied with their educational and employment pathways, and have now enrolled and commenced training/work in the construction industry as adult apprentices/trainees.

50% cited friends and family as the source of their knowledge about the opportunities offered by a career in trades.

Despite 27% of participants completing a VCAL, only 13% identified this vocationally aligned secondary pathway as providing them (while at school) with knowledge about vocational training in the construction industry.

10% discovered an apprenticeship through Centrelink, and one participant discovered her trade via social media.

5.4.2. Pre-apprenticeships

Sixty-two percent (n=16/26) of apprentices had completed a Certificate II pre-apprenticeship course before embarking on a Certificate III apprenticeship. Participants stated that they had completed a pre-apprenticeship to gain exposure to a particular trade and/or develop skills associated with a specific trade.

Participants stated that the pre-apprenticeship gave them insight into the type of work and learning they would experience if they pursued a trade as a career. Apprentice 1 said that she used her pre-apprenticeship to "*get a feel to see if an apprenticeship was something I wanted to do."* Similarly, Apprentice 8 commented on the pre-apprenticeship:

> *"it gave me a feel for it [chosen trade] to see if I'd actually like the trade… it set me up for the first few weeks of actual work. It gave me an idea of what I'd have to do every day."*

Importantly, Apprentice 8 notes that the pre-apprenticeship nurtures skills that prepare applicants to transition into the workplace. Additionally, where an apprentice had limited trade or workplace experience, this skill development was central to the successful identification of the right trade for

them, their subsequent transition, and increased confidence that they had chosen the right trade. Further, Apprentice 14 noted that her Certificate II experience provided insight into the diverse nature of her trade: *"you don't have to be stuck in a specific job."* This insight is important as it increases the apprentice's confidence that they will find the right "fit" for them within the industry.

Sixty-two per cent (n=16/26) of apprentices cited undertaking a pre-apprenticeship to develop trade/industry-related skills. Forty-six per cent (n=12/26) of participants stated they were motivated to develop industry-related skills to increase their chance of gaining employment.

Participants identified that many employers were more confident in employing apprentices who had completed a Certificate II (pre-apprenticeship), as the apprentices' expectations were more aligned with the reality of the trade. This had the impact of increasing the retention rate in the first year of employment. For example, Apprentice 20 explains her perception of the concerns held by employers:

> *"[employer] had a lot of people drop out of apprenticeships within the first year, because it wasn't what they [the apprentice] expected… so if people [the apprentice] have done that [a Certificate II], they know what they're getting into, and you've got less dropout rate."*

Participants also recognised that a Certificate II added to employers' confidence in the apprentice as they had developed some of the required skills and were better prepared to commence their employment. For example, Apprentice 2 commented: *"when you go job hunting, you can say to your employer, 'I've done the Cert 2.' So, it's reassuring to an employer, that you know the business end of a screwdriver."*

It is difficult for women to gain access to employment which is required to commence an apprenticeship. Participants cited a pre-apprenticeship as (i) increasing their chances of accessing employment through their RTO, and (ii) giving the employer confidence they are committed and capable of the work.

Forty-two percent of apprentices cited their RTO as central to them securing employment after completing their Certificate II (pre-apprenticeship). Both Apprentice 3 and Apprentice 4 explain the central role played by their RTOs in the transition from pre-apprenticeship to apprenticeship:

> *"when you finish your pre-app, he [employee of the RTO] will ask you what field you want to go into, whether it's domestic, commercial, civil…. he'll send your resumé out to those sort of fields. Then they [the building company] got back to him and then I got a phone call and got invited for an interview. And it was pretty straightforward from there and two weeks later, I started on the job site."* (Apprentice 3)

And

> *"… the teachers have all worked in the industry, so they know a lot of people working in the industry. So, if you can prove yourself… you'll usually be recommended by a teacher to one of their mates looking for workers. So that's how I got my first job."* (Apprentice 4)

Forty-six percent (n=12/26) of participants who had completed a Certificate II (pre-apprenticeship) felt that the knowledge and skills gained had improved their confidence in seeking and transitioning into employment. Apprentice 18 recalled her apprehension at the thought of starting her apprenticeship and credited the Certificate II as providing her with the confidence to "*take the risk and do it.".* Apprentice 22 also credits the pre-apprenticeship and teaching staff with her confidence to continue into a trade:

> *"I did the pre-app, I was the only girl in the class. I had a couple of standout teachers who showed me there are people who will support me… I was like, I can do this, and I can be good at it. So yeah, the pre-app was a success."*

While there were benefits associated with completing a Certificate II, participants also identified a number of limitations, commenting that the Certificate II training was only held on weekdays during working hours and therefore could limit attendance. Apprentice 11 noted that she *"went straight into it [an apprenticeship] because I was working and I had a mortgage and couldn't afford to take time off to do a pre-apprenticeship, so I was very lucky to actually get the job in the first place."*

Given the value provided by pre-apprenticeships, a range of flexible delivery options will enable participation and completion in the context of other work and life commitments.

5.4.3. Labour hire companies

Women in traffic management roles considered labour hire companies as a steppingstone into the industry. For example, semi-skilled participant 1 was inspired to make a career change and entered the construction industry via a traffic hire company as a way of getting her foot in the door. However, semi-skilled participant 2 believed that informal hiring practices were a significant obstacle to securing work saying, *"Sadly, it's who you know, always; a bit of your personality, definitely; you then got to get your foot into a labour hire company."*

5.4.4. Accessing new roles through training

Women in traffic management roles reflected on their ability to access training and move into different site based role. For example:

Semi-skilled participant 1 started in a traffic control role and with additional training moved into roles such as scaffolding and electrical spotting. She reflected that people onsite as well as the union were helpful in exploring and accessing training for different site based roles. However, this participant felt that the pathway into a trade was not clear. If she decided to pursue a trade she would conduct her own research by accessing TAFE websites.

Trainee 2 entered the construction industry in a traffic management role. Through union connections she was able to access training that enabled her to work towards a role in the crane crew. Trainee 2 reflected that cranes had been an interest of hers from a young age and she was finally able to pursue this work once she was onsite in a traffic management role.

5.4.5. Barriers to securing an employer

Regardless of their own experience, all participants identified the difficulty in securing an apprenticeship. A lack of personal connections to the industry compounded the situation. Apprentice 4 reflected on the challenge she faced not knowing anyone when trying to secure employment, describing the process as *"really overwhelming"* because so many people accessed work through personal connections. Apprentice 4 recalled: "*I'd heard so much about it being, this bloke's dad was a [stated trade] and that's how he got into it, or this chick's dad was a [stated trade] and that's how she got into it."*

While some participants had little trouble accessing employment as part of their apprenticeship, others experienced extended periods of rejection, as explained by Apprentice 26:

> *"I wanted to do carpentry, but I couldn't find anyone that would give me an apprenticeship. I started messaging people with jobs ads, being like, 'Hey, I've seen your job ad. This is what I've done. I'm really interested.' and they'd be like, 'Oh my God, amazing. You sound perfect. What's your name?' and I'd be like, 'My name's [stated name],' and then I would just hear nothing. As soon as they realised I was a girl, that was it… brick wall …but before I told them my gender, they were really interested."*

Employers held several concerns about hiring a women into an apprentice role, as explained by Apprentice 23 who had witnessed a discussion between a potential employer and another male colleague:

> *"He [the potential employer] goes, 'I can't have a girl working here' And then XXXX [co-worker] was like, 'Why? Look, she'll probably be a better worker, she'll be smarter, she'll work harder. She'll probably be a lot more reliable.' [the employer then responds] 'But look who I have already employed. The guys will harass her. Who the f**k knows what they'll say to her? More or less, she's a liability. It's not worth it, so I'm just not going to hire her.'"*

Even after securing an interview and proving their ability, employers were hesitant to give the job to a woman. Apprentice 22 recalled that after her initial apprenticeship interview, she was asked to attend a further two interviews as the employer, from her perspective, *"was scared to put on a woman."* To validate her capabilities and ease the potential employer's concerns, Apprentice 22 asked if she should bring her father to the next interview as she had worked for him in his [trade] business over the years. Apprentice 22's prospective employer took up her offer to meet with her father to check whether she would be able to cope with the workplace culture rather than validate her abilities to undertake the work associated with her trade:

> *"He didn't want to speak to him about work at all, he just wanted to speak to him about will she be okay if A, B and C happens? How will she deal with A, B and C? And they were social questions - definitely about me being female."*

Participants also recalled being asked personal questions related to their gender and ability to commit to the apprenticeship as they approached childbearing years. Apprentice 20 recalled in one interview how she was asked if and when she was going to have a baby:

> *"…they said to me, 'So have you got any life plans in the next few years?' I wasn't picking up on it at all… and then they just said, 'Are you planning to have a baby in a few years?' And I was like, 'Oh, god no. No.'… it wasn't until afterwards that I was really angry."*

The gender-based barriers to securing employment where experienced by many apprentices, and this reinforces the importance of the pre-apprenticeship in assisting women to access employment and commence their apprenticeship. As acknowledged by Apprentice 4, the pre-apprenticeship provided her with "*connections to get into the industry, which is a big reason for doing the pre-apprenticeship*."

5.5. Workplace expectations and reality

5.5.1. Expectations of the workplace

Participants were asked about expectations of their workplace and employer prior to the commencement of their traineeship or apprenticeship. More than 70% (n=21/30) expected to experience a structured learning environment where they would be taught by their employer. For

example, Apprentice 13 commented: *"I expected to learn, and I expected him [employer] to teach me as much as he knows."* There was also recognition of the need to work independently and self-direct aspects of their learning, with support provided when required. For example, Apprentice 26 commented on her expectations of learning in the workplace: "*teach me everything that I need to know, but also be able to have some trust to let me do it on my own but being there supporting."*

Central to self-directed learning is the need for a trusting relationship with feedback provided regularly. For example, Apprentice 26 described her expectations of receiving feedback in the workplace: *"weekly or fortnightly or a monthly meeting where someone comes out from management and they just individually pull you aside ask you what you've learned and see how you are you progressing."*

In contrast, Apprentice 19's expectation at the beginning of her apprenticeship were simply about access to work which she now realises needs to be meaningful and guided:

> *"I just thought their responsibility was to ensure I had eight hours a day of work. I didn't even look at it as training. Now I look back, their obligation is as an employer and a trainer is to train me, not to do the shitty jobs they don't want to do…to train me how to be an electrician or a plumber and all the stages and steps of being that tradesperson."*

As reflected in the previous comment made by Apprentice 19, 57% (n=17/30) of participants expected meaningful workplace opportunities where apprentices and trainees are not *"just used as labour." (Apprentice 1).* Apprentice 1 reflected that some apprentices she knows *"found jobs, and then they ended up having to leave because they were just being used as labour."* Meaningful work opportunities included access to a variety of experiences that aligned with the different stages of the apprenticeship. Apprentice 17 explained that she expected her employer to *"expose me to a range of different things"* so that upon completion, she would have the ability to undertake all aspect of her trade with confidence.

Thirty percent of participants cited their expectation of a safe workplace, as reflected by Apprentice 13: *"not forcing me to do something I don't feel safe doing"* and Apprentice 11 expected that her "*health and safety is going to be upheld at all times."* Twenty percent of participants expected to be treated equally in the workplace, as reflected in the comments made by Apprentice 21: *"I expected to be respected as well as the boys would be on site."*

While many of these expectations were met this was not the case for all workplaces or participants.

5.5.2.Minority status

Participants identified that women working in building and construction were a minority group on all construction sites, as described by Apprentice 26: *"I think it's such a boys' club, those worksites."* Apprentice 26 explained that this often resulted in an assumption that all workers onsite are male and this is innately and unconsciously embedded in the day-to-day language used:

> *"the amount of times someone's said to me, 'Hey, mate, how you going?' or, 'Hey, boys.' They just don't realise that there's a girl in the group, and then they're like, 'Oh, shit, sorry. Didn't mean to do that.' That type of stuff happens all the time and I'm like, 'Oh, yeah, whatever, doesn't matter.' But then there's definitely the type [of language] that is just directed at making a joke or showing off or whatnot."*

The last part of this statement indicates that sometimes gender bias is conscious, and language is used to point out the difference. Apprentice 14 recalled: "*you always – especially after a new start - get*

looked at or [hearing comments like] 'There's a girl'" and as a result, she *"didn't like going to new sites."* While Apprentice 26 described no more than a mild irritation at this deliberate use of language, Apprentice 14 said that her minority status presented as the *"biggest challenge… just trying to fit it because I was the only girl"* and often felt *"judged just because I was a girl".*

Being a minority in a work setting can be intimidating and can create apprehension and nervousness, as experienced by our participants.

The importance of seeking and forming connections onsite for women in apprentice and trainee roles was heightened for those frequently sent to sites unsupervised. While not the experience of all apprentices, some participants cited that when starting a new job, they *"weren't with a supervisor... you would be sent to a job site by yourself." (*Apprentice 14) For those working for GTOs, Apprentice 14 explained that when *"you went on to a different host, you'd have to meet new people and work with different people all the time."*

Given the contractual nature of work in the industry, apprentices commented that the anxiety associated with being the minority gender onsite manifests in every new job, as reflected by Apprentice 1: "*it's kind of nerve-wracking each different contractor I go to, because there's a different experience with each one."*

When participants had established a connection, they felt protected and included, as described by Apprentice 17:

> *"My team is my team. I think on the sites [when I am with my crew], I feel safer and I'm probably a bit chattier with the other trades and stuff. Whereas those sites [when I am alone], I'll just keep my head down."*

Apprentice 20 echoed the sentiment of Apprentice 17 and reflected that different workplaces had different cultures. Cultures were dependent on the male employees and their attitude towards and acceptance of women as co-workers. Apprentice 20 explained that *"there are people with horrible attitudes towards women, and that seeps into everyone who's around. Even people who wouldn't usually be like that, it modifies the culture."* Consequently, she and others reported vastly different workplace cultures and experiences dependent on *"what teams you're working in."* Apprentice 4 concurred with the comments made by Apprentice 20 and explained that in her experience:

> *"there is not really any overly pronounced sexism, but there are definitely things that have happened to women in the company that wouldn't have happened to men. The construction industry is really bitchy. Men in the construction industry are really bitchy, but the thing is that as soon as a woman is there - if there's a way to turn her into a witch, that absolutely happens."*

Participants suggested that males do not want women on construction sites as they would be required to modify their behaviour. For example, Apprentice 25 commented:

> *"I think it's just because they've got their boys club and they just don't want a woman there, because they think they have to change their behaviour and be more polite and that sort of thing."*

Some participants explained that being accepted into the *"boys club"* exposed them to behaviour that still left them feeling *"like I was on the outside"* (Apprentice 20). Apprentice 20 explained:

> *"younger guys on site tend to treat you the same as everybody else, but it also means you're privy to things that you don't really want to hear…it's not so much the swearing…comments about treating women as objects, also racist and misogynistic attitudes...for me personally, those things make me feel like an outsider and made me feel like I wasn't part of the team, because how you can work next to me as a woman and yet that's the way that you talk about women. This culture then reduces the people that you feel like you can align yourself with comfortably, and makes you question if you have their respect."*

Ironically, being included could isolate some women even more from their male co-workers due to their overall misogynistic behaviour towards women more broadly. When women were accepted on site and in their crew, they were subject to conversations that were sexist in nature. Although this was not directed at the woman, the women could still feel socially isolated due to the culture/nature of the conversations that were taking place.

Apprentice 4 explained that the boys club culture and poor attitude towards women was used by males to bond: *"it's really easy to attack a woman as a way of bonding with [other] men."*

Despite these negative experiences with men onsite, participants felt that the workplace culture is slowly improving as a result of the influence of the women working onsite. For example, Trainee 1 commented:

> *"You can't expect men to just change overnight? They're only going to learn off what they see you do? … you can't beg for a man to respect you. They'll respect you by seeing that you do the same things that they do."*

Along with the negative experiences associated with being a woman onsite, there were also occasions where colleagues attempted to look out for and protect women in the workplace. For example, Apprentice 20 commented that *"people are kinder to you because you're a female."* However, this can be problematic if not well managed. For example, Apprentice 15 recalled feeling isolated and disadvantaged because her manager treated her differently from her male colleagues. Apprentice 15 explained how her manager treated her male colleagues: *"if someone did something wrong, he would go off at them…it was really bad…no one should be yelled at.. that's not how you learn."* However, because she was a woman and her manager *"was scared to make me cry,"* he would treat her *"like a princess"* and not subject her to hostile and aggressive behaviour. While being treated differently than her male co-workers made her *"experience a lot better and a lot easier"*, it was problematic as it limited her development: *"if I did something wrong, then I need to know it so I can fix it."* Further, it resulted in resentment from her crew as her co-workers felt that she was treated better not because she *"deserves to not get yelled at… but [because] you're getting excused because you're a woman".* Apprentice 15 recalled that she "*always wanted to be treated just like everyone else…Don't treat me like a girl."*

Interestingly, participants reported that co-workers acknowledged the poor treatment of women onsite and questioned their decision to enter the industry. Apprentice 17 commented that her co-worker said:

> *"'I never realised how many creeps there were onsite until I worked with you. Because every time I turn around, someone is looking.' But it wasn't leering, it was just like, 'Oh my God, there's a girl and she's doing a trade!' I think a lot of the looks were curiosity."*

Apprentice 11 reported:

> *"I can't say I've ever been disrespected on site. I've probably been questioned more than anything, like why would you want to come and work with us idiots. I think they're more concerned for us."*

Despite being treated with kindness, women could still feel excluded and as a result often felt the need to prove themselves. For example, Apprentice 20 felt the pressure of "*having to prove to them [male co-workers] that you can do the same things as everybody else."* Similarly, Apprentice 4 commented that the attitude towards women in apprentice roles left her feeling that *"as a woman you have to be really good… at everything... there's a lot more pressure on female apprentices than male apprentices."*

While women are still a minority group in construction, participants indicated that more women are gradually entering the industry. Apprentice 1 commented that when she commenced her Certificate II, she noticed *"six females"* in her class, and this has a positive impact on site culture as observed by Apprentice 4:

> *"there are so many more women coming into it the industry, most of our apprentices are women, and men are becoming more and more conditioned… it's become more and more normalised for there to always be a woman on site, so I think that in itself changes the culture."*

Apprentice 21 explained that this evolving culture is slowly nurturing an attitude that individuals should be judged on their capabilities rather than gender: "*it's becoming familiar that girls are doing it, and that is becoming the norm… people just 'Oh, it doesn't matter. She's a girl. You're a guy. Same thing. You can both do the same job."* As a result, some of our participants had never been treated differently due to gender. For example:

> *"If I need help, they'll help me. They treat me like one of them as well, so that's good, no discrimination or anything. Yes, there is a blokey culture, but it is not as bad as some people make out… I think it's very normal now for a lot of women to be in construction, so I think they're [male co-workers] aware of that compared as to when they were apprentices, there were no women."* (Apprentice 3)

Participants noted that there is an increasing awareness of the skills and abilities women can bring to their work. Apprentice 8 reflected that *"I've been told that my boss actually likes the girls more than the boy apprentices… he just loved how we were always on time and motivated and just really enthusiastic about everything."* This employer was cited as actively hiring women *"to encourage the boys to have that attitude."* Further, Apprentice 8 commented that women onsite bring a level of emotional intelligence that can *"uplift the boys… If they're pretty down, they don't talk to each other as much as girls do. So, I feel like we're always there to emotionally support them."*

Participants indicated that attitudes towards women onsite differed according to the age of the male co-worker:

> *"the younger the person, they're definitely more accepting…. old white men are definitely more sceptical and take longer to get to come around… they have their ingrained perception of women… they've been brought up like women are in the kitchen type thing."* (Apprentice 25)

Despite small improvements in the workplace culture, being in a minority group in construction has specific consequences for women related to the behaviour they experience, the pressure to perform, and the support they require.

5.5.3.Pressure to perform

Participants articulated feeling pressure to perform their work tasks at a consistently high level despite the recognition they were employed to work and learn on the job. Apprentice 1 explained that she needed to *"always try a little bit harder so then they [male co-workers] don't think I can't do this."* Participants explained the pressure to complete their work at a high level was not always viewed as a gender issue, but one applicable to all apprentices and trainees, as reflected in the comment made by Apprentice 11:

> *"I think it solely has to do with the person, to be honest. If you go there [to work] and you've got a really bad work ethic and you're not willing to learn then the company is just going to put you on menial tasks."*

Similarly, Apprentice 20 felt the pressure to perform at a high level and believed there was a relationship between high performance, access to meaningful work, and remaining with your work crew, stating: *"I never felt I would lose my job, but I've always had the pressure to perform so that you can get rehired…and stay with my team because they are supportive."* Apprentice 20 explained that access to a variety of workplace opportunities was important, otherwise *"you just end up not learning very much, because you end up just doing the same thing over and over again."*

Women reported the need to consistently perform at a high standard as there exists an assumption among some co-workers that they are physically incapable of completing all the tasks associated with their roles. Apprentice 16 explained that her employer told her that *""I've never had a girl onsite, so I don't know. I'll just see if you're able to handle it. You might be stronger than all of us, but we'll just have to see how you go".* Apprentice 16 went on to explain that she felt there is *"definitely an element of having to prove myself that I wouldn't expect to be happening if I were a man."*

Apprentice 24 explained that one of her male colleagues did not think that women were *"as strong, or as good on tools or know what we were talking about"* and consequently "*he did not hire women."* Apprentice 24 recalled that when she worked for a particular male employer, she had to stand up for herself and told her employer that "*I'm as capable of doing this job as you are, or anyone else doing this job."* Adding to the pressure to perform at a high level is a workplace culture that is quick to judge and unforgiving of errors. Apprentice 20 explained that she felt people in the industry *"can be quite judgemental."* If a mistake is identified, there is an immediate assumption that "*this person's useless"* and there are limited attempts to discover "*why that mistake been made?"* or to "*work out why it's happened. It's like…all right, we've seen you do that… now you're done."* (Apprentice 20)

Apprentices and trainees are, by definition, workplace learners. Learning takes place when individuals take risks, and this inevitability will lead to mistakes. Learning from mistakes is central to the apprenticeship and trainee model, and a workplace that fails to support fledgling learners creates a culture of anxiety and pressure. Ironically, participants who were supported or had worked hard and were rewarded with complex or desired workplace opportunities explained that their co-workers simply assumed *"that only happened because you're a girl"* or *"you only got to this place because you're a girl."* (Apprentice 23) Additionally, if a mistake had been made and the individual was not punished, it was assumed "*it's because you're a girl… girls get away with anything."* (Apprentice 23)

Participants reported feeling like they could not ask for assistance because they didn't want to be either annoying or not thought of as incapable. For example, Apprentice 25 commented:

> *"I feel like I can't accept help as much because I feel like a male apprentice probably wouldn't ask for help or annoy them [co-workers]. They would help me, for sure, but I just don't like to ask because I don't like them to have that on me."*

Pressure to work harder to achieve the same outcomes as their male co-workers also related to a workplace set up by men for men. Participants described the need to develop skills and strategies to overcome a workplace that caters to men and ensures they are perceived as doing the same work. Apprentice 11 described how she used a trial-and-error approach to develop a work routine that would suit her physicality:

> *"every day I try and do things that I think I might be too weak to do, so undoing a really tight nut and bolt or pushing a wheelbarrow full of concrete, it's just like I'll try before I decide no, that's too hard, I'm going to get someone to help me and then next time I know either I've got to do it a different way just getting that perfect balance."*

Apprentice 24 also described how she *"always finds a way around things,"* and even when her male co-workers offer to help, she refuses as they often complete the task for her rather than showing her how to do it herself. When men undertake the task for women rather than providing feedback, women cannot develop the skills and independence that must evolve across an apprenticeship/traineeship. What is needed is support and opportunities to make the mistakes or trial different ways of undertaking tasks until they can find a way to get to the same outcome.

In summary, participants cited feeling pressure to perform, which would earn them respect, access to work opportunities, and acceptance as part of the crew. Respectful relationships led to a perception of safety. Feeling safe at work resulted in participants being confident in taking the required risks to learn and grow, such as embarking on new tasks relative to their developmental stages and seeking advice or asking for feedback.

Participants explained that to earn respect, they needed to demonstrate:

- a strong work ethic.

"If you go there and you've got a really bad work ethic, and you're not willing to learn then the company is just going to put you on menial tasks." (Apprentice 11)

- respect for yourself.

"guys are there to work, they don't want you going up to them and flirting with them. Just leave them be…, if you don't respect yourself they're not going to respect you." (Apprentice 6)

- proof they had the physicality to complete the require tasks.

"My partner is a labourer on a job site and he noticed a lot more women getting into traffic control and labouring and stuff like that. He gets very frustrated when a female labourer gets put on because physically, she can only do half the work he can do and she's still getting paid the same amount. My mentality hearing that going into my role was to make sure that I work just as hard as the guys worked. I'm finding I get more respect from the older guys on site." (Apprentice 17)

- proof they had the capability and required independence by not asking too many questions.

"I think they're [male co-workers] a little bit scarred from the old female apprentice because I think maybe she asked for help too often? So, they sort of were expecting that of me. So, it sort of took a while to realise that I wasn't like that, I wanted to do it myself. So yeah, so now they've realised that, they're very good." (Apprentice 25)

- acceptance of, and an ability to cope with the existing workplace culture.

"I don't want to come across as you treat me this way because I'm a girl. You can't go in with that attitude…boys will be boys, they're going to talk the way they talk, and I'm not going to go don't talk to me like that. I've got that respect for them, they've got that respect for me." (Apprentice 6)

- the ability to stand up for yourself.

"you can't rely on other people in the industry, especially if you're a girl. Lot of boys will –it's in their nature to protect you, and you will appreciate it, but you've got to have the ability to stand up for yourself when people do make those snarky comments." (Trainee 1)

To be treated as equals, participants identified that they needed to earn respect from male co-workers and clients. Apprentice 11 commented she had seen *"women get treated lesser than men – especially when I was working in domestic our clientele would always assume that I was the plumber's daughter."* Apprentice 14 shared a similar experience when she stated that despite the customers being supportive of women in trades "*you felt some customers were, 'Does she know what she's doing?'"* The experience of Apprentice 14 was echoed in the comment made by Apprentice 12, who explained that people asked her regularly when on the *job "Do you know what you're doing? Are you okay?"*

5.5.4.Consistency of workplace

Participants identified that their apprenticeship experience was strongly influenced by the workplace consistency they experienced in terms of the site they worked on and their immediate work crew. Remaining in the same workplace with the same crew allowed our participants to nurture positive relationships where they felt respected and safe. Apprentice 3 explained:

"When I first started, I would be with different people every day, but I always wanted just one person to work with because once you get to know them and they know you it's easier to do things more hands-on and be practical and learn a bit easier."

Similarly, Trainee 4 commented: *"I have been lucky. I've had one particular operator I've worked with a lot, and he's so patient and he's so calm, and he's taught me so much."*

Consistent supervision coupled with respectful relationships nurtured over time facilitates increased workplace learning opportunities and growth in the learner.

Participants sometimes felt isolated and unvalidated, which led to a feeling of pressure to perform to gain respect from their co-workers and subsequent inclusion in the workplace and/or crew. Apprentice 12 explained the value of consistent workplace could have on the development of relationships and the issues associated with being regularly moved from crew to crew or site to site:

> *"once I started getting in the rhythm of something and I started getting to know how that person worked and getting to know the person I'm working with, I would get moved somewhere else, and then I had to start that process all over again. It was like two steps forward, one step back every time I got put somewhere new, I'm like, 'I have to start again.' It was just a constant trying to get my footing in this new career."*

The experience of Apprentice 22 further highlights the issues presented when workplace learners experience a high level of inconsistent supervision: *"for the first two years I'd get thrown around from person to person, and it was really, really inconsistent, every time I thought I had something down pat somebody would come along and change it."* Despite being exposed to various tasks, the lack of clear and consistent instruction saw Apprentice 22 experience a decline in her *"confidence over those first two years"* because *"everything I did was wrong"* depending on her co-worker.

Twenty-nine per cent (n=8/28) of our indentured participants had more than one employer due to either redundancy or poor workplace experiences that had resulted in the individual actively seeking alternative employment. The need to find alternatives negatively affected these participants. While they were unemployed, they were no longer accruing days towards their Certificate III requirements, and many struggled to find work.

Participants indicated that one of the benefits of a GTO was that it could place women in various workplaces through a host employer. Given the difficulty women experience in gaining employment, this was seen as an advantage. However, some participants explained that they were moved to different hosts frequently with little to no feedback regarding their performance, leaving them feeling *"like I was just a labour-hire."* (Apprentice 12)

Participants indicated that at times they would be sent to a new job with limited knowledge of where or what they would be doing for short periods of no more than a few weeks. Apprentice 12 stated that *"usually I just got a text on a Saturday that said, 'Go here on Monday morning and ask for XXX.'"'* The sudden end to a placement with no feedback also left the apprentice feeling confused and insecure about their capabilities. Apprentice 12 explained the limited feedback she received from her GTO when moved from one site to the next:

> *"Are these people not wanting me? Is it because of me? and they're like, 'No, they just don't need you anymore, 'but I'm like, 'But why?' I never really got answers of if it was me, or if it was them."*

Frequently being moved from site to site, as explained by Apprentice 14, was *"probably the downfall of [stated GTO] as you're always with a different host and you'd have to meet new people and work with different people all the time."* Apprentice 14 stated that she had been moved *"about eight times",* with the shortest lasting *"a week, maybe two weeks"* and the longest *"eighteen months."* The lack of a consistent workplace delayed the development of the participants, highlighting the delicate balance between workplace opportunity, confidence, and skill development.

5.6. Need for support in the workplace

A key aspect to a positive apprenticeship and traineeship experience identified by women was being supported in their workplaces by their colleagues across all levels of the organisation. Women explained that support in terms of their onsite acceptance manifests in a respectful relationship. Participants recalled that feedback and meaningful work made them feel at ease in the workplace given their minority status coupled with their limited work experience, consequently enhancing their

day-to-day learning. Participants also cited the importance of their co-workers in supporting them when experiencing inappropriate behaviour.

5.6.1.Workplace belonging

As earlier discussed, women in apprentice and trainee roles, despite increasing in number, remain a minority group onsite. Of our participants, 57% (n=17/30) were the only women employed as an apprentice or trainee at their organisation. Twenty per cent (n=6/30) of our participants were the only women employed within the entire organisation and the first employee who was a woman. Given the anxiety and pressure experienced by the women we spoke to, it is not surprising that participants stated the importance of supportive co-workers. Apprentice 1 explained how support from a co-worker was so important when she started a new job:

> *"I had a little cry in the car beforehand because I was a bit stressed and nervous. But I walked in, and then I was looking around, seeing if there were any other females there to kind of just like connect to. There's another female engineer, she's the project engineer on our site. She works for [stated organisation] as well. The first day, she came up to me straight away and was like, 'If there's anything you need, let me know. Come to me straight away.' That was just like a huge relief, to kind of have that person."*

Apprentice 22 described the effect of an unsupportive workplace where *"there was a lot of yelling, even if it wasn't your fault, or sometimes even if it wasn't you"* on her well-being, explaining that *"I was crying on my way to work sometimes, and not wanting to go, and being too scared to call in sick, even when I was sick."* Apprentice 17, when discussing the importance of work relationships, highlighted the need to *"feel safe"* and that within her organisation her co-workers *"always checked in on me every day and made sure I was always with [person]. They made sure I got to know the [name] team so I felt safe."*

Feeling supported within one's organisation and work crew was essential to participants working as sub-contractors, often placed in unfamiliar work sites. Apprentice 21 also identified that support was important across the work site. Hence, she knew who she could ask for assistance from workers such as *"shop stewards, and union reps*" as they were there *"to help you."* Apprentice 21 also identified *"there's a Blue Hat program as well, which is people you can go and talk to if you've got mental health issues"* which reflected on as *"fantastic."* Developing supportive relationships within an organisation and across a worksite ensured fledgling workers felt supported in terms of task-related questions, site-related questions, and personal issues associated with work and home.

5.6.2.Workplace opportunities

An essential part of an apprenticeship and traineeship identified by participants was access to a variety of work tasks commensurate with the requirements of each stage of their training. Participants identified support in accessing such opportunities as vital to their learning journey and this was often left up to the *"foreman, leading hand and the qualified [trade] I'm working with."* (Apprentice 11) Access to a variety of opportunities, however, were not always provided to apprentices and trainees, as Apprentice 11 explained: *"with this company [current employer] and the XXX company [past employer] I absolutely have [had workplace opportunities]. With the company I was first placed with, I didn't."* Apprentice 22 also experienced a range of workplace opportunities, commenting: "*I got a pretty good range of exposure in that job.... Better exposure in that first two years than I'm getting at this place now."*

Apprentices and trainees articulated the need to actively seek meaningful work when onsite, as explained by Apprentice 11: *"I wasn't learning, and I was asked to do a really menial task continuously for months". A*s a result, the apprentice approached her employer (a GTO) *"and asked if they had something different"* for her to complete. Apprentice 1 also highlighted the need to actively seek out work for fear that it looked like she was "*not doing anything"* and because she was *"not learning anything."* Apprentice 1 was concerned that her small workload *"reflected badly"* on her as "*an apprentice."* Apprentice 12 explained the impact limited workplace opportunities had on her development:

> *"I was finishing my second year and was moving into my third year, and I worked at [company] where I learned so much there [compared with my previous employer] and the boys were great… super supportive, it was a turning point for me where I was like, 'I'm finally somewhere I can be comfortable.'"*

In this statement, Apprentice 12 refers to her ability to access meaningful work in a safe and secure environment. This was important to her as Apprentice 12 explained that she left her previous job as she had experienced a *"mental breakdown"* due to being "*bullied for over a year by my colleagues."*

Support also took the form of being assigned workplace opportunities with responsibilities commensurate with their skills and apprenticeship stage. For example, Apprentice 20 explained the stress and anxiety she faced when given a task beyond her experience:

> *"I had a really hard time in the last year of my apprenticeship. I was really burnt out, and my foreman put a lot of pressure on me and had me running this area, and it was all on me to work it out, which is fine. I enjoy problem-solving and working it all out, but it was under really, really intense time pressure, and nobody learns well under time pressure. It was really hard, and he couldn't see how damaging it was for me and how bad I was getting emotionally. As a result, I've become really scared of work."*

Apprentice 14 explained that she was undertaking fourth-year jobs unsupervised when she was a second-year apprentice and *"had no idea what I was doing"* which she found very stressful. In another instance, a first-year apprentice was responsible for managing a large volume build site because she was mature-aged. Her employer told her that he employed her because he:

> ***"…****could put more responsibility onto me. Within three months, I was running the job, in charge. I could have three or four apprentices working under me at a time, some more experienced than me - they might be third years or something and I was a first year. But because I was older and getting paid more, I was supposed to be organised and mature. I would never see my boss and he never taught me anything."* (Apprentice 26)

As a result of this experience, Apprentice 26 commented that when she left and started a new job she was *"so far behind"* in her development and felt *"bad for the kids that are still there"* as they will finish "*their apprenticeships and they're not going to know anything."*

Not all participants held concerns about the lack of workplace opportunities. For example, Apprentice 25 explained that her supervisor is *"very supportive of getting as much experience as I can, and knowledge."* Apprentice 17 explains that within her workplace:

> *"my director… keeps on top of what I need to learn and what I'm learning at trade school, he always tries… where he can try and get me some experience that aligns. It is the same with the other apprentices as well and gives them the exposure to those jobs."*

However, as Apprentice 17 continues, *"he relies on us to tell him. It's not like he's across our programs,"* again highlighting the need for apprentices to self-manage their learning journey. Trainee 2 also described a workplace that provided her with a range of learning opportunities, explaining that she is *"given opportunities all the time to learn... they'll throw me in, they'll teach me things."* From the perspective of Trainee 2, this is a consequence of her **"***company's attitude, they're all a lot younger, so they remember being at the stage."*

The experience of our participants highlights the need for apprentices to be self-motivated in the management of their learning experience and active in the pursuit of meaningful work relative to their certification requirements.

5.6.3.Workplace learning

The apprenticeship model is founded on situated workplace learning, where learners acquire and integrate knowledge and attributes as aligned with their chosen vocational practice. Knowledge and attributes are acquired through interactions between individuals' abilities and the social and physical environment where the learner works and confronts problems. Central to the learning process is that the learning is valued, and the apprenticeship or traineeship allows for the interplay between observation, scaffolded learning, and increased independence in workplace activities. In this context, it was not surprising that participants acknowledged that being shown how to undertake a work-related task by their colleagues was integral to their learning.

For some participants, learning in a supportive environment was the most enjoyable aspect of their apprenticeship. For example, Apprentice 20 explained:

> *"working and learning from supportive people. I had such a ball when I was in my – probably the second and third year of my apprenticeship because I was just surrounded by supportive people. And I was learning so much. I felt comfortable to ask questions. To make mistakes. And to work it out together with people."*

The comments of Apprentice 20 reflect the fundamental objective of the apprenticeship model and illustrate the value of work-integrated learning when in a supportive workplace. Other participants also noted the importance and value of both co-workers and teachers in contributing to their learning and their enjoyment of their learning journey and the trade.

The level of detail and the quality, however, of support and instruction was spasmodic and dependent on an individual's workplace and co-workers. An Apprentice gave an example of the difference in instruction from one trainer. One the one hand he would "*go above and beyond to teach me anything",* and on the other hand when asked questions he showed "*no interest in listening."* Apprentice 17 provided a second example where her foreman *"tended to stand back, tell me what to do, show me what to do and ask me what I think I should do."*

In addition to experiencing a variety of instructional styles, participants also experienced contradictory task explanations which often left them confused about the "right" way to undertake a task. Apprentice 22 explained that *"every time I thought I learned something, someone else would tell me it wasn't right, or I should do it this way, not that way."* Participants found the contradictory instruction

frustrating, and this was further compounded for some by a lack of feedback. For example, Apprentice 21 explained that *"without asking, you don't get a lot [of feedback relative to task]."*

The pressure that apprentices feel to perform is heightened when there is a lack of clarity concerning how they should complete work-related tasks, how they will be assessed, and the level of feedback provided. Apprentice 22 commented that *"you couldn't tell whether you were going to get yelled at or told it was a reasonable job. There wasn't much positive reinforcement there either…and this impacted my confidence*."

Auditing was suggested as one way the quality and consistency of workplace learning could be improved. For example, Apprentice 9 discussed the need to more effectively audit the apprenticeship, commenting:

> *"more monitoring from companies and maybe from schools, just to make sure that the apprentice is getting whatever they can, in order to excel and to grow, in what it is they're doing."*

Participants suggested that auditing could also focus on more frequent feedback on apprentice's workplace performance. This should take the form of both formative and summative feedback.

While increasing the frequency of feedback was important, the way it is delivered is also important and this is one area of the apprenticeship that could be improved. Making a mistake is an inherent component of the learning process. However, some participants were treated very poorly by workplace supervisors when a mistake was made. For example, Apprentice 12 commented: *"if you do something wrong you get yelled at."* The hostility apprentices and trainees experienced when they made a mistake was identified by participants as an OH&S risk, as it could lead to accidents onsite. Apprentice 2 explained that the *"yelling and associated pressure causes accidents in the field".* The negative impact of being abused for making a mistake can have negative impacts on apprentice's mental health and well-being.

Not all participants felt they lacked positive feedback, however in many instances feedback had to be actively sought. Apprentice 8 explained: "*we can always ask them [co-workers] if we want them to check what we've done and get feedback on it to see what we can improve on."* Many participants stated that they only received formal feedback at the end of a job or as part of a yearly review. However, the lack of ongoing feedback left some apprentices unaware of performance-related issues raised at their annual review, leaving them feeling confused and frustrated. For example, Apprentice 7 explained:

> *"on the yearly review, they said that I'm slow and stuff like that. Usually, I don't get that feedback from the foreman that I work with and all of a sudden on a [formal] review, and they said you're slow, you need to pick it up and stuff."*

The annual review is one part of an effective educational instruction process, including purposefully developed plans by which the learner can gain knowledge and understanding and develop skills, attitudes, appreciations, and values. In the example provided by Apprentice 7 (above), ongoing feedback would have improved her educational experience and allowed her to develop strategies to improve her performance had she been made aware of any issues as they emerged.

As previously discussed, not all participants experienced a continuous variety of scaffolded learning workplace opportunities coupled with constructive formative and summative feedback. For participants to learn effectively, a safe learning space is required where continual feedback is provided. Participants recalled learning best when supported by their co-workers and when they had time to take

risks and reflect on the outcome. Apprentice 20, however, commented that she felt *"people tended to forget that when you're at work, it's a learning environment."*

Participants reflected on the negative and hostile workplace they had experienced, describing is as a *"pretty poor workplace dynamic dominated by a culture of fear"* (Apprentice 22). This type of workplace culture has a determinantal impact on learning. For example, Apprentice 26 recalled that the way she was treated onsite by her instructor: *"just horrific… I just wanted to go home."*

Participants identified that there was often a time pressure associated with their work onsite. Apprentice 20 stated that *"there is a lot of pressure and you kind of just feel a bit like a number… if you can't hack the work, there's just always somebody waiting in the wings."* This pressure left apprentices and trainees apprehensive about asking for feedback from their co-workers, who assumed they knew what they were doing if they did not ask. Time pressures additionally left participants concerned that they were learning how to "*cut corners"* rather than the craft associated with their trade.

Trainees and women working in traffic management who were in the process of developing their skill-set reflected on whether they had opportunities to apply their skills and to advance their career in alignment with their increasing skill-base. Semi-skilled participant 1 gained skills through the free training provided by her union, but faced challenges in being able to apply these skills and access jobs relevant to her training due in part to the resistance to hiring women. Semi-skilled participant 2 believed that the ticket training she was undertaking was a significant risk because there was a high chance she would not be given the opportunity to access the jobs that the training qualified her to do, saying: *"doing these tickets you could get 10, 15 tickets and you might not get an opportunity with the labour hire company or whatever company you're chasing…so you're going out on a limb big time."* Trainee 2 had a different experience and received support and encouragement from her co-workers and company: *"I'm given opportunities all the time to learn...when I was doing my course, you know they'll throw me in, they'll teach me things, yeah I get lots of opportunities".* Trainee 3 found that although some co-workers were focused on their task and not on helping others to learn, she did have many co-workers who were enthusiastic about helping her to learn and apply her skills, saying that three or four workers give her opportunities to practice. She reflected on this attitude from her co-workers who would often say:

> *'"oh, if we're not busy, jump into the crane and have a play around." And they'll show you what they know. But then, obviously, others, they don't want to do that. Or if you're too busy – because they can't do it all the time.' (Trainee 3)*

Trainee 4 discussed the challenges of learning on the job and believed that entering into a traineeship helped to minimise this obstacle, commenting:

> *"It's just a tough industry, and I think the traineeship just gives you that bit of protection to learn. Because I see other people that come into it without that and you've got to get really good really quick, because whereas the traineeship kind of nurtures you to learn and grow."*

5.6.4.Inappropriate workplace behaviour

Participants experienced a range of inappropriate sexist and misogynist behaviour as they undertook their day-to-day activities. Behaviours experienced included sexist language that reflected gendered work stereotypes and a lack of acceptance of women in trades. This attitude is illustrated by an exchange between Apprentice 17 and a male co-worker: *"women should be at home"* and *"you marry a woman, she breeds, that's what she's there for."* Participants also described a workplace culture that

accepts sexist banter and humour as both normal and appropriate communication between workers. For example, Apprentice 21 described a siltation in which she was subjected to inappropriate behaviour:

> *"I was walking past a concreter's shed and concreters use this big tool and it vibrates the concrete so the air gets taken out of the concrete and it sets quite fast and one of the guys, he was an older guy, said, 'Oh, I bet you haven't seen something as big as this before' and started laughing. 'You might want to take it home'"*

Apprentice 21 explained that the *"guys do joke around, and they do say some derogatory things,"* but because they are joking and it is part of a normalised site culture, *"you've sort of just got to go with it."* Of concern, Apprentice 21 explained that she wouldn't react even if offended (which she wasn't in this example) as "*you can't sort of be one of those girls that takes everything to heart or even a boy that takes everything to heart because they are joking."*

When women react to the normalised sexual communication used routinely onsite, they can experience a variety of negative responses:

- condemnation by co-workers;
- confirmation that women can't cope with the workplace culture;
- validation of the perception that women are overly emotional;
- consequences for the women such as being moved off-site, loss of workplace opportunity or ignored by co-workers; or,
- a combination of the above.

The responses of male co-workers serve to silence women and preserve the toxic workplace culture which is damaging for women.

In one instance, Apprentice 21 recounted how she had retold a "joke" of which she had been the target to her male co-worker. The male co-worker was offended by the intent of the joke and reported it to a senior team member, resulting in the removal of the male "joke" teller from the site. However, despite the actions undertaken to improve the treatment of women onsite and the overall site culture, Apprentice 21 felt embarrassed and upset, not by the "joke", but by the removal of her co-worker from the site, illustrating the complexity associated with changing workplace culture.

Participants also reported experiencing confronting sexist behaviour that left them feeling intimated and isolated at work. Apprentice 24 explained she had experienced *"a guy catcalling"* who proceeded to approach her as he "*took his shirt off."* Apprentice 24 commented that she is consistently watched by her male co-workers when onsite: *"you get a lot of looks. You'd be doing something, and there'd be a group of boys who would just stand together in a huddle and watch you."*

Apprentice 6 felt that while *"they [men in her workplace] don't say anything too bad, nothing to get themselves in trouble. But they'll make their crude comments."* The experience of participants reflects a workplace with conscious awareness of what constitutes appropriate and inappropriate gendered behaviour. Regardless of the intent, this knowledge is used to maintain a workplace culture that divides and separates co-workers based on gender.

Participants had experienced onsite behaviour that objectified and degraded women. For example, participants had been the subject of sexual rumours between male co-workers:

> *"this guy tried to have sex with me and I said no, and because 'no' doesn't mean anything he tried for ages. But he didn't want me telling anyone that he had tried and I'd said no, so, he got in first and was like, 'Oh, this happened and I said no, I didn't want to have sex with her.'"* (Apprentice 15)

Apprentice 15 further explained that another co-worker then *"spread a rumour"* about her and the co-worker that they *"had had sex."* The impact of these behaviours had long-term implications on how her co-workers viewed her:

> *"One of the younger boys, who I was actually friends with, thought that it made him look cool when a few of the boys were like, 'Oh, you've got* ***that*** *chick at your company.' And he turned around and he was like, 'Yeah, she's a sl*t.'"*

Participants reported receiving comments about their bodies from their male co-workers, as explained by Apprentice 4: "*there are women in my company that have been told that they are too fat by random dudes, I told I was too skinny.*"

The objectification of apprentices and trainees who are women can also impact on the collegial relationship between men and women. For example, Apprentice 17 explained that any time a male co-worker who was also a friend talked to her, others would make comments like: *"Oh, you're trying to f**k her..."* While this is problematic in terms of working relationships, it is particularly concerning in the context of apprentices and trainees given their workplace is their learning environment and male co-workers are often their workplace educators. For some of the participants, the sexual harassment experienced was so confronting that they left the workplace and the trade altogether. Apprentice 23 recalled that:

> *"I left [trade] because I was getting harassed by the foreman because he was always hitting on me…when he and I were alone… he grabbed me and tried to kiss me."*

Others recalled experiencing extreme misogynist behaviour and fearing for their safety. For example, Apprentice 19 commented: *"I don't know that I would have lived if I stayed there… because I'm sure at some point I would have been killed by one of these absolute idiots*." While at work, Apprentice 19 had experienced extreme violence and dangerous working conditions where her co-workers had screamed and physically threatened her, locked her in a portable toilet with the water shut off for hours in the middle of summer, and *"threw clumps of cement and bits of bricks at the toilet."*

Apprentice 19 recalled another situation in which she was maliciously treated by male co-workers:

> *"in the middle of summer, tradesmen would send me up into a roof, take away the ladder… drive away from the site, go to other jobs…and leave me in hot rooves in the middle of summer for four or five hours. That happened three or four times."*

Participants had also experienced situations where their basic rights were not met. For example, Apprentice 2 explained that as an adult apprentice, her boss had refused her overtime and Saturday shifts as she was more expensive than other apprentices. Apprentice 14 recalled not being paid for overtime worked, and Apprentice 23 expressed her ongoing frustration at the lack of adequate toilet facilities:

> *"the site I'm working right now there's 30 floors and there's one toilet for females… on level four… the amount of times there aren't sanitary bins because men don't use them they don't care. There are times when men are like, 'But you're the only woman on here, so we don't have to get one.'"* (Apprentice 23)

Participants cited the importance of support from their co-workers when dealing with inappropriate behaviour, and in some cases male co-workers intervened. For example, Apprentice 15 commented:

> *"A lot of the boys would say to me, 'If anything happens, let me know.' They said that right from the beginning. There was a few of them who, when I started working with them, said, 'There's a lot of guys here. They will walk past and stuff like that, if anyone steps out of line or says something, Come to me straight away.'"*

Apprentice 26 recalled:

> *"I was working on one job once, and there was a roof tiler telling me to go home because I didn't belong, and one of the boys high up came out and was defending me and was really angry and was like, 'This is not fair.' They were very welcoming, and they cared. They cared that I wasn't respected – as they respected me."*

Support when dealing with inappropriate behaviour took three forms:

1. Co-workers directly speaking to perpetrators.

2. Encouragement and advice provided by co-workers to women on how to best address the perpetrator. For example, Apprentice 22 explained that *"a senior person we were working under kept making gross remarks"* Rather than doing nothing, she went to her superintendent for advice, and he said:

   > *"'Well, that's absolutely not okay - if you're feeling like whatever's happening is not right. That's absolutely not what we want.' And he's like, 'The first solution is to speak to the person. I'm happy to go have a chat with them. I don't know if you're comfortable to have a chat with them.'"*

   Apprentice 22 recalled:

   > *"Knowing I had his backup, I went and spoke to that person myself… I felt really supported… knowing that it's not going to be considered that I'm speaking out of place. It's okay that I can pull someone up, because that was not the impression that I had from the last employer."*

3. The development and enforcement of workplace policy promoting respect, inclusion, and appropriate behaviour is recognised as vital to support women. The importance of active inclusion through recognised codes of behaviour is evident in the comment made by Apprentice 2, who described how the impact of inappropriate behaviour onsite results in her feeling that "*you get it in any workplace that you get mistreated, but being the only female onsite it's just like, 'Am I meant to be for this job?'"*

5.6.5. Capabilities required for success in the workplace: assertiveness and self-motivation

Participants identified assertiveness as an essential capability for negotiating an unsupportive workplace. Participants reflected that while their co-workers could be very supportive of their learning, they had to actively drive their own learning. Apprentice 11 explained that *"if you're afraid to ask a question, then you're not going to learn anything."* The perception of Apprentice 11 reflects the importance of women to be assertive and self-motivated in the workplace to attain their learning needs. Apprentice 11 explained that *"if you're not willing to tell them [co-workers] where you're at with your education and what you don't know then they're going to expect that you do know it."*

Assertiveness and confidence were also necessary when women encountered disrespectful and inappropriate behaviours. Inappropriate behaviour was often only addressed when the women instigated action.

Inappropriate treatment was often used as a motivator to work hard and prove the worth of women in the industry. Apprentice 12 explained that the disrespect shown by her male co-workers made it *"very hard and I'd be like, 'Why am I even bothering?' but then I'd just be like, 'You know what, I'll just use that to motivate me and I'm going to prove you all wrong.'"*

Motivated by their desire to work in their chosen trade, women learnt to ignore the "noise" and focus on what mattered to their development. Trainee 4 reflected that *"part of your learning is how to deal with all of this distraction and s**t that goes on around you…to filter out all the things you shouldn't be listening to, and that takes time to learn that."*

5.7. Expectations and realities of the classroom

5.7.1. Consolidating learning and practice

All apprentices and trainees expected their RTO to train them proficiently to enable them to pass their exams and prepare them for the workplace. Furthermore, it was expected that this learning would occur in the context of a safe learning environment. In terms of a safe space conducive to learning, participants felt supported by the majority of their trainers in terms of learning theory and in skill development. Most trainers had established and reinforced a respectful and collaborative classroom culture. Many trainers had provided assistance and support in addressing any skill or behavioural related workplace issue that had emerged during their apprenticeship. Apprentice 16 commented: *"9.5 out of 10 people that I've encountered have been really, really nice and supportive."*

In terms of their educational experience, many participants felt that their learning in the classroom and workplace was *"quite complementary"* (Apprentice 10), whereas others thought that there was a lack of integration. Apprentice 11 explained that "*what I don't learn onsite I often learn at school...[school] teaches you the very basics of what you need to know to become a [trade]."* As reflected in the comment made by Apprentice 11, participants identified that their RTO provided the theoretical component of their trade and some level of practical application in the workshops. Apprentice 6 reflected:

> *"TAFE provides that foundation for everybody, and because you're all working in different areas and locations, that then has to be contextualised based on what the expectations of your organisation is, and the jobs that you're doing."*

The workplace is central to the application of theory and newly developed competence in a systemic and integrated way. This highlights the importance of meaningful workplace opportunities to ensure apprentices and trainees proficiently learn their trade and avoid a situation in which Apprentice 21 found herself: *"I'm learning so much more at school than I'm actually learning on the job."*

Participants identified that increasing the relevance between the practical activities they engage with at their RTO and their workplaces would improve their learning journey. Some participants commented that the curriculum lacked industry currency with Apprentice 13 commenting: "*there are some things that we do learn in TAFE that we don't do on the job because it is just not done like that anymore."*

5.7.2.Quality of training and trainers

Quality of training was identified as vital to the quality of the learning experience. Participants expected trainers to be *"passionate about teaching and educating people"* and to *"understand how you and all your other classmates learn."* (Apprentice 24). Further, participants expected their trainer to provide them with opportunities and feedback *"in a timeframe that gives you confidence… schools should give you the time and the confidence to practice and learn, so you then can take that back to your workplace."* (Apprentice 24)

Trainers who nurtured the learning of students and supported their apprenticeship journey, including any onsite workplace issue, were recognised as having a beneficial impact on the apprentice. Apprentice 22 explained, *"I was the only girl in the class, but I had a couple of standout teachers who showed me that there are people who will support me, being the odd one out."*

Apprentice 23 commented that the help and support her trainers provided when she shared her experiences of being sexually harassed onsite was central to her remaining in the industry:

> *"I told one of my trade school teachers and he goes, 'That's not right..do you understand that that's sexual harassment? That's bullying. What he's doing is illegal and he can't do any of that.' I'm like, 'Yes,' and he said,'"And how long ago did this happen?' and 'Who have you told?' and he's said, 'You've been holding this in this whole time,' and he said 'This is really bad.' He goes, 'There's a school psychologist here. I'm going to book – if I have your permission, I would like to book you in, so you can – you need to speak to someone about this. You need some help.'"*

While all participants had some skilled and dedicated trainers, they all had encountered less able trainers. For example, Apprentice 25 reflected on her experience: *"sometimes it's good [class], some teachers are better than others, and sometimes it's [class] okay. Overall, it's not that smooth a learning experience."* Apprentice 20 explained the impact of a poor learning experience and the need to adapt due to perceived teacher incompetence: *"there were times when I was quite frustrated with poor teaching, or people who just chose not to teach. For me, it was fine because having done a degree I am used to self-directed learning."*

Participants commented that while they undertook theoretical learning in the workplace, their RTO plays an essential role in reinforcing and refining that knowledge. Apprentice 25 commented that her trainers had failed to understand her and her fellow students learning needs:

> *"I learn theory in my workplace, but I still don't get it when I come to TAFE, and I know that the rest of the class doesn't get it either because I can see they don't get it. Whatever the TAFE assumes [about the apprentices' learning] is obviously wrong because the whole class is sitting there not getting it."*

Further, Apprentice 5 commented that the theory she learnt at TAFE was only valuable and relevant to pass the *"exam at the end [of her apprenticeship]"* not for her workplace practice. Participants' experiences at their RTO raise important points about the relationship between the currency of national training packages, workplace learning, and practice. Additionally, the importance of self-directed learning is essential to workplace learning and crucial to a successful learning outcome within the formal education component of an apprenticeship or traineeship.

The ability for trainers to teach effectively is vital for apprentices to learn their craft. Additionally, participants identified that their trainers' ability to nurture a positive and safe classroom culture was also central to their successful learning outcomes, as they set the tone and culture of the classroom.

All participants had enjoyed most of their time in the classroom with their fellow students and trainers. Apprentice 1 described her positive experiences in class as *"it's pretty good, everyone's supportive, and no one really looks at you different for being a girl, which is good."* Similarly, Apprentice 16 commented that she felt within her RTO ***"there's a genuine drive to make sure everyone's comfortable."***

However, some participants expressed feelings of apprehension about being in a gender minority group in the classroom. For example, Apprentice 13 who recalled when she first started at her RTO:

> *"That was probably more nerve-wracking for me than walking into the company. Because it was so many more boys over 100…you can feel eyes on you, and you turn around and you can see people looking, but it's not like onsite… on site they look away, but these boys, they just kept staring at you. They're shocked to see you."*

To manage their minority status, some participants were very deliberate in their behaviours towards male students. For example, Apprentice 16 explained that she *"wouldn't want to participate too much in case they befriended me and wanted to interact with me inappropriately."* Consequently, Apprentice 16 would *"stay away from making friends with men in case of interactions that were misconstrued."* This conservative behaviour may have had learning implications given the active learning pedagogy that underpins trades training.

Some participants explained they were treated inappropriately by their trainers. Apprentice 13 recalled that her teacher *"put me down for the tools I had, and put down another student for his work quality."* Some trainers used an aggressive and offensive communication style when speaking to their apprentices. For example, Apprentice 13 explained her trainer's *"language was terrible"* and that she had "*never heard someone swear that much in my life, it was just terrible."* Apprentice 13 felt this trainer *"was a bad teacher and shouldn't be teaching"*. In some instances, such as in the experience of Apprentice 13, disrespectful behaviour did not discriminate between gender. However, in other scenarios provided by participants, the poor conduct experienced by students from trainers was driven by pre-existing gender biases. Apprentice 12 explained that one of her teachers was supportive at the beginning of the class but as time wore on, *"he just ignored me,"* forcing her to seek assistance from a fellow student who happened to be male, to which her trainer exclaimed to the whole class:

> *"you f**king girls, you always get the boys to do what you can't do"* (Apprentice 12)

Participants felt that some of their trainers believed that women in apprentice roles were not as capable as men. Apprentice 20 described how one of her trainers announced to the class upon discovering a male class member behind on a task, "…*even the girls can do it faster than you."*

Apprentices noted that these behaviours could create a microcosm of an existing site-based culture where women do not belong. Apprentice 22 explained that in her RTO:

> *"there was one teacher who was just as bad [as the male apprentices] and he was, I think, trying to get approval, and trying to be liked by the students, and saying all sorts of awful, inappropriate stuff… just being sexist or misogynistic or racist."*

This behaviour from both trainers and male apprentices made Apprentice 22 *"feel like I [being a women] was the problem"* and as a consequence:

> *"it got to the point where I was dreading going to school, I was removing myself from the classroom so that I didn't have to deal with hearing all the rubbish that was being spoken, or the way that they were offering to share Tinder girls, and all the gross comments."* (Apprentice 22)

Many women commence their apprenticeship as an adult and therefore can experience gender-related minority status as well as age-related minority status. For example, Apprentice 17 commented on her experience during her first day in the classroom: *"I remember the first day I rocked up and they [students] were so young and they were all boys and none of them would talk to me."*

A classroom culture that does not treat women as equal to men creates a challenging learning environment which legitimises, models, and perpetuates poor attitudes and behaviour towards women. Trainers play a pivotal role in developing a respectful classroom culture, and many trainers were recognised by our participants as doing this. However, an important observation was made by Apprentice 22 in relation to the classroom management skills of trainers: *"they're trained how to train and assess but dealing with social dynamics in the classroom was probably not a forte of many teachers."*

The behaviour of trainers can socialise and reinforce the gendered assumptions of women in construction. A hostile and disrespectful class environment creates a learning environment in which women feel isolated, intimidated, and not valued as members of their class or trade. The failure to create a safe learning environment compromises an individual's ability to learn and thrive. It perpetuates the perception that women don't belong and are incapable of making positive contributions to their trade and the construction industry more broadly. A hostile classroom environment reinforces the pressure women feel to prove themselves and can condition them to work harder than their male colleagues. Further, the lack of acceptance from experienced tradesmen in positions of power may result in women questioning whether it is worth continuing their apprenticeship.

5.8. Challenges of being a women as an apprentice

5.8.1. The biggest challenge

During the interview, various challenges were raised by participants which have been reported throughout this section. To explore what the most pressing challenge was for participants, we asked them to reflect on their apprenticeship/traineeship. The greatest challenge experienced by participants consisted of:

- Lack of inclusivity and equality;
- Feelings of inadequacy;
- Bullying onsite;
- Physicality of the work;
- Lack of amenity.

Exclusivity and inequality

Participants stated that one of the most significant challenges they faced throughout their apprenticeship/traineeship was gender inequality. Participants cited that many men in the industry viewed them as unequal and did not belong. Apprentice 14 stated *that "I think the biggest challenge was just trying to fit it because I was the only girl."* Apprentice 1 explained*, "there's always going to be*

some men on site that will be like, back in the kitchen, not say it to me, but have that mentality where it's women shouldn't be doing this."

Participants felt their gender influenced their treatment onsite with both positive and negative consequences. While not all workers in the industry treated women differently, the majority of participants felt they had experienced varying levels of attitudes and behaviours as a consequence of gender. The different treatment was perceived to be a result of their minority status onsite, and the belief that they were not capable of the work.

As a minority, participants stated that male co-workers would often adapt their behaviour around them in recognition that the workplace cultural norm was perceived as too offensive for women to be exposed to. For example, Apprentice 25 commented:

> *"I feel like they think they have to be polite, which is probably expected, they think they have to talk in a certain way, be nice, that sort of thing, which is probably fair, but they wouldn't be like that to their male colleagues."*

Participants felt that while the industry is changing, there was still an assumption by many that women did not belong in construction. Apprentice 26 explained: "*I think it's changing, but there's definitely people that think this is a male's job or you can't do this or do that, or you don't belong*." The belief that women do not belong in construction influences the behaviour of male co-workers in a negative way. For example, Apprentice 12 recalled:

> *"One of them [male co-worker] was 67 and the other one was 70, and they just hated me from the word go, and they used – it's pretty horrible – but they used to be like, 'Morning, you f**king wh*re,' and just teach me the wrong way to do things, and then I'd work with other people and they'd be like, 'What are you doing?' and I'm like, 'This is how this person showed me,' and they said, 'Well, that's wrong.' It was just a constant battle of me trying to prove myself to these people."*

Apprentice 12 reported the inappropriate behaviour she had experienced (outlined above) to her manager who responded with: *"You should have expected this being a female coming into this industry."*

Participants stated that the lack of acceptance was more prevalent within the older male generation than younger men both onsite and in class. Apprentice 1 reflected on her experience: "*it's only the older people that say it. They've lived through that sort of era, of women not being capable enough."*

Participants noted, however, that that once they proved themselves, attitudes generally changed. Changing attitudes about women in construction was gradually occurring as more women entered the industry. Trainee 3 reflected the thoughts of all participants when she stated: *'" we just want to be equal. We don't have to be, 'oh, that's the women in the construction, and that's the men.' We want to be part of just the team."*

The perception that women did not belong in construction resulted in women missing out on workplace opportunities and, in turn, learning opportunities. For example, Apprentice 12 explained how she was not given a chance to learn and develop because of her gender: "*I was not given a chance because I was a girl, and they didn't think that I could do anything."*

However, in many cases putting up with inappropriate treatment was a necessary element of undertaking an apprenticeship. According to participants, men in management positions held *"a lot of influence on how you go through your apprenticeship."* These "men in power" can affect the

opportunities presented to women. In contrast, *"male apprentices, they're just immediately respected, but most women have had to actually prove that they should be [allowed the opportunity]."* (Apprentice 4)

Feeling inadequate

For many apprentices, confidence was their biggest challenge. Participants identified that the combination of gender-based exclusion along with limited knowledge of the trade could result in self-doubt and inadequacy. For example, Apprentice 14 commented: *"I didn't want them to judge me just because I was a girl. I was just trying to fit in and make sure I can hammer something or nail in something – that I can do it."* Apprentice 6 explained that her biggest challenge was *"feeling not good enough".* As a way of overcoming her feelings of inadequacy in relation to her skill set, Apprentice 3 actively reminded herself that *"the people I'm working with, they've done it for years and years and years".*

Bullying

There was a perception that many apprentices were bullied, irrespective of gender. For some women, inappropriate aggressive behaviour was recognised as the biggest challenge they experienced. While many men and women are bullied, women were subjected to an added layer of gender-based aggression. For example, Apprentice 12 stated that *"bullying, definitely, was my hardest challenge to get past."*

Physicality

Participants cited their physicality as a challenge. Apprentice 17 stated: *"I think physically and being an older and female, that's definitely been something [I've had to overcome]*". Apprentice 11 explained that *"it took me a little while, but I had to find a way that was comfortable for me to work safely",* given the worksite is set up for men. The comment of Apprentice 11 reflects the challenges women can face when working in an environment designed for the male body.

Participants also reported that their co-workers held the perception that they were not capable of managing the physicality of the work and told them they should leave if they could not undertake all tasks as required of the trade. There was also an assumption that women required help with some tasks. For example, Apprentice 20 explained that when she was seen carrying heavy items, somebody might say, *"Oh, you should have someone else working with you".* Apprentice 20 noted comments such as these would not be said to a man: "p*eople might be trying to be helpful or try and pick things up for you, [but] they're not doing it to everybody else."*

Participants also reflected that those outside the industry also treated them differently, and questioned a woman's ability to undertake the requirements of a trade. Apprentice 14 explained:

> *"You felt some customers were, 'Does she know what she's doing?' But other than that, most of the customers were pretty good. They were especially the females, 'Good on you.' They were great."*

Lack of amenity

Participants cited a lack of amenity as a significant challenge. In some instances, there was no women's toilet onsite. Apprentice 12 commented:

"when there's no toilet whatsoever on site, it is the hardest thing possible. Literally, you have nowhere to go, it's not like you're a guy and you can go stand by the fence, you literally can't. So, it's hard when you have your period, what are you going to do? So, there's sometimes where I've had to walk a couple of kilometres, just to go to the toilet, that's the hardest thing working in the industry."

5.8.2.Improving the experience through mentoring and guidance

Mentoring, predominantly from other women in the industry, was overwhelming identified by participants as an initiative that would improve their apprenticeship experience. Participants suggested that delivery could take the form of a coordinated support network or mentor/role model program. Apprentice 16 explained: *"some sort of mentor would be pretty cool. Maybe from a female perspective as well."*

Participants explained that talking to someone with similar experiences would help them feel included and part of the industry. Further, sharing experiences and receiving feedback from others, particularly other women, would help them better understand how to navigate and negotiate relationships, understand and validate their experiences, and make them feel that they were not alone. For example, Apprentice 12 commented:

"It would just be nice to have someone that would listen and believe you because that's something that I struggled with; even if I did try and talk to someone, they wouldn't believe me unless they had witnessed [the act]. I think just someone that would listen and do something about it [the act discussed] would have made a world of difference to a lot of people."

As highlighted by Apprentice 12, support can take many forms but listening and acting on behalf of those who are not in a position of power was considered essential.

Other participants identified that ongoing workplace feedback would add a level of support currently missing from the lived experience of many of the participants. Apprentices clearly expressed the need for more guidance and emotional support, which would enable them to more effectively develop their skills and improve their performance. Some participants cited the need for increased provision of information about the apprenticeship model, associated organisations, workplace legislation, rights, and responsibilities.

Interestingly, 38% (n= 10/26) of apprentices indicated that the only mentoring they had received was from their Australian Apprenticeship Support Network Provider (AASNP). While the regulated "check-ins" the AASNPs provided are not designed as mentoring services, participants recognised that AASNPs were established to support them throughout their apprenticeship. Outreach took the form of automated surveys via phone calls, emails, or text message. Apprentice 10 explained that the information sought by the AASN provider was to determine if the apprentice was:

"… still working with your employer; still going to school; if everything was okay; did they feel like they needed support. Check yes or no [on the survey. If you checked the yes I need support [box], someone from some other team would probably give you a call."

Only one of the ten apprentices who cited AASN providers had used their support service. Apprentice 4 explained:

"I've had an issue before with workplace bullying, and I called up an officer, and yeah, they were actually surprisingly really helpful. So I would actually say it's pretty good support, it's there if you need it, but it's not directly in your face."

The lack of personal communication between the AASN provider and the apprentice resulted in many participants citing that they would not use the service if they needed assistance. For example, Apprentice 4 commented:

> *"I had a problem, so I went straight to the manager. I didn't even think, honestly, to go back to the Incolink people or the [*AASN*] people; it just didn't cross my mind. I forgot about them, honestly. Because we didn't have that connection, I didn't feel comfortable just going to someone who doesn't even know me or anyone else on site. I feel like it wouldn't really help that much. Whereas going straight to someone on site, who knows everyone else on site, is kind of easier, and I have that connection."*

Apprentices employed by a GTO commented that their GTO also provided them with a field officer to support them, in addition to their AASN provider. During her apprenticeship, Apprentice 14 was employed by a GTO and was indentured to an employer with different levels of support. Apprentice 14 recalled while indentured to an employer she received check-ins from her AASN provider a few times a year; however, when employed with a GTO, in addition to the AASN provider check-in, she was also allocated a *"supervisor who checks in with you all the time. They visit you onsite maybe once or twice a month and make sure that you've got boots. If you need pants, work equipment."* When indentured, Apprentice 14 explained that: "*you're on your own really, compared to being employed by a GTO."* Apprentice 23 also commented that her GTO field officer *"was actually there – throughout my apprenticeship, apart from my mum, he was the most supportive person that was there."*

While mentoring services exist within some AASN providers, these services must be requested, and as stated above, only one of our participants utilised this service. Eight participants had established mentoring relationships within their organisation either with a co-worker or a more senior colleague. These relationships were used in career planning, advice on how to deal with co-workers, workplace tasks, or to connect with other women to share experiences and increase their feelings of belonging.

Participants who were indentured to an organisation sought advice from the foreman when encountering difficulties in the workplace. If the advice from their organisation was not forthcoming, only then would they consider seeking assistance from their AASN provider. Apprentice 17 explained: "*I'd go to my employer first obviously, but if the problem was my employer, I would go to my apprenticeship company."*

Pay and entitlements

Participants reflected on the conditions that apprentices experience during their training, and identified ways that they could be better supported. Ensuring correct pay and entitlements was raised as an issue by many participants. Some participants discussed the issue of underpayment:

> *"this young guy, $5,500 he wasn't paid in a year, in one year. He actually had about $12,000 of underpayment through his whole apprenticeship. But $5,500, like I think the average apprentice I spoke to it was probably $1500 to 3000 that they were owed." (Apprentice 19)*

Apprentices employed by a GTO stated that they would speak to their organisation if the issue was behaviour-related, and if it were financial in nature, they would go directly to the GTO:

> *'If it was something happened to my pay, I would go to [GTO]. If I needed boots or anything like that I wouldn't go to the host I would go to [GTO]. There was one issue one time where I was questioned on my sexuality. And I had to go to the host foreman. And then he set it straight with the person and sorted it with the host employer at the time, and it was all good from there.'* (Apprentice 14)

Indentured apprentices reported that they did not feel comfortable speaking about money with their employer. Instead, they would either speak to someone at their RTO or their AASN provider. Apprentice 1 explained: *"if I wasn't getting paid properly, I'd go to the RTO over the actual builder."*

5.9. Career longevity

Twenty-four participants indicated that in ten years' time they expected to still be working in the construction industry. Of this group:

- 29% (7/24) hoped they would still be working for their current employer.
- 63% (15/24) expected to be still working on the tools.
- 37% (9/24) wanted to be in the construction industry but in another role such as management, a foreman, OH&S, design, mentor for women, or in a teaching position. Apprentice 1 explained:

> *"I feel like I definitely will still be in construction. I feel like it probably might not be on the tools, more leadership. I'm hoping to eventually go into OH&S, that's my end goal*."

Many participants were concerned about being pregnant and parenthood and the impact this could have on their career. Apprentice 24 was concerned about working while pregnant and not harming the baby, stating:

> *"Most females work in a trade where they're not required to lift or jump or climb up or that kind of thing; mine is somewhat dangerous if you were pregnant. Mine requires angle grinding and all that. So, light duties in my job are non-existent."*

Other women cited that if they were to remain on the tools post-pregnancy, they would be expected to return to work full-time. For example, Apprentice 22 stated that *"I can't imagine my workplace being able to cater to part-time".*

There was some concern that women who did not wish to return to work in a full-time capacity after having a baby would have to resign. Apprentice 13 stated that: *"I 100% won't be sending my child off to childcare as soon as they pop out. I'll be a stay-at-home mum until they're in kindergarten. So, that's nearly four years of [trade] gone"* leaving her concerned about her longevity in the sector.

Despite participants concerns about having children, one participant felt now was a great time to be a woman in the industry, stating:

> *"I feel like I've timed this really well. Everyone's pushing to have females on site, everyone's pushing to be the first company to put on a female foreman and, you know, if I can finish my apprenticeship and get a job with a big company like [name] I've got every opportunity of becoming that project manager in 10 year's time. So, I think as much as I think the only obstacle is going to be having that acceptance and not being treated like I'm lesser"* (Apprentice 11)

5.10. Attracting more tradeswomen into the industry

5.10.1. Engaging with schoolgirls and parents

Participants were asked how more women could be attracted into apprenticeships and traineeships. Overwhelmingly, women identified that more engagement with schoolgirls and their parents was required to promote the benefits and opportunities of a career in construction. Trainee 3 explained: *"it's teaching parents and telling the kids that there's opportunity out there, and to not just to stand for what your parents believe that you should be doing."*

Participants highlighted that promotion of a trade-related career in construction needed to occur during the primary school years, with messaging focused on ability and belonging irrespective of gender. For example, Apprentice 16 commented:

> *"I honestly think it's more about starting younger, just sort of making people aware that there are opportunities from a young age. Because growing up, I never imagined I'd be a tradie. In primary school, I'd never thought I'd be a tradie. While at the same time, most of my male peers probably thought to themselves, 'I might be a tradie.' So it's just something that's not seen for me as a female."*

A critical element of communication targeted for girls is the issue of physicality and the ability to undertake trade-related tasks irrespective of gender or body size. Apprentice 12 *stated: "I think a lot of people get scared that they're not going to be strong enough physically."*

It was also considered that the messaging needs to be delivered by women. Apprentice 23 explained, "*I think an actual woman who is a tradesman, should go into schools and say 'This is what I do… it should be not a man doing it'".* Apprentice 16 believed that bringing tradeswomen into schools would *"give visibility to the people that are already in the industry"* making it clear that women in trades is a reality and something that is achievable.

Apprentice 21 reflected on the impact she had on schoolgirls when she had visited a primary school to discuss trades as a career:

> *"I was talking about my trade…and the girls afterward came up to me, these little girls, nine-year-olds, and 10-year-olds, and said, 'You inspired me to want to do better' and I was like 'Oh, job done!' It felt really good, you've got kids of today knowing they can do it [work as a woman in a trade]."*

Participants also suggested that there could be more building-related subjects in the school curriculum as well as access to training programs. Apprentice 26 commented:

> *"if that you're not from an environment where people teach you about trades or talk to you about trades, someone in your family is a tradie, it's really hard to find the information out about apprenticeships, how they work, how to find a trade, what trades are available."*

5.10.2. Social media

Participants suggested social media as an appropriate medium to communicate to schoolgirls and women who are planning on returning to the workforce or considering a career change. Apprentice 23 explained the power of social media:

"what would get my attention is a short one or two-minute video, with someone talking about, 'This is who I am, this is what I do, this is what I've done, and you should do this,' and if that was on YouTube, Facebook and Instagram. Someone might send a link with a video saying "I think this [working as a tradeswomen] might suit you/her."

Some participants discussed the use of social media as raising the awareness of women working in construction, however some posts and stories tended to over-glamourise a small selection of roles and inhibited a broader uptake of trades by women.

Apprentice 17 was frustrated by the current messaging on social media which had raised the image of traffic management over other trades. The lower wages and misconceptions about working conditions associated with apprenticeships compared with traffic management, coupled with the current social media profile, attracted women and girls to a very small section of the industry. Apprentice 17 explained:

*"my friend's daughter came to me recently and told me she wanted to do traffic. And I shook her and said, 'What the f**k do you want to do that for?' And then she showed me TikToks of all these women bragging about how much money they're earning. And I said to her, 'Please, do a trade.' I said, 'I will do everything I can to get you into any trade you want. Do a trade, you'll be respected and you will have work for the rest of your life.' I said, 'These girls do get that money, but they'll get it for a couple of weeks here and a week there, and a week there, or they've got to know someone. There's so many women wanting to do it at the moment, it's really hard to get a job and keep one.'* "

While working in traffic is one way of attracting women with limited connections into the industry, Apprentice 17 also raised the issue that onsite:

"there's a real distaste for women in that role. It was always seen as a role that men that have worked in construction their whole life, step into when they want to start winding down. There's a lot of bad energy around women doing that role."

5.10.3. Wage subsidy for adult apprentices

Establishing a wage subsidy for adult apprentices was another way to increase women's participation in the industry. This would encourage more organisations to employ mature-aged women seeking a career change or who wanted to re-enter the workforce.

Improving the apprenticeship wage for adult apprentices was raised by participants as one initiative that could improve the apprenticeship model. Mature-aged apprentices had often come from an established first career, and the apprentice wage was a significant reduction. For example, Apprentice 17 was a mature-aged apprentice who reflected on her experience:

"it was a huge pay cut for me from what I was doing. I was just lucky enough to be in a situation that my partner could step in and support us.".

Participants noted that trainees received an equivalent qualified wage in contrast to apprentices who received a lower wage.

6. The voice of trainers, employers, and stakeholders

6.1. Introduction

The section presents the findings of interviews conducted with participant's involved in the apprenticeship delivery. Interviews were conducted with 20 participants, of which eight were women and 12 were men. Table 5 summarises what type of organisation the participant was employed, number of participants, and the role of the participants.

Participants from five RTOs participated in the study and of these, two were located in regional Victoria and three were located in metropolitan Melbourne.

For participants who were trainers, the average years of teaching experience was six. Six participants had more than 16 years of teaching experience, two had taught for 12 years, and the remainder had five to ten years of experience. Trainers had expertise in the following construction trades: bricklaying, carpentry, electronics and electrical, fire protection (sprinkler fitting), locksmithing, horticulture, painting and decorating, plumbing, and waterproofing.

Table 5. Participants organisation type

Type of Organisation	Number of participants	Participants' role
Registered Training Organisation (RTO)	13	Trainer
Group Training Organisation (GTO)	2	Employer
Australian Apprenticeship Support Network and Group Training Organisation (AASN/GTO)	2	Manager
Government/Industry	3	Governance

During the interviews, participants were asked questions relating to how women access and experience their apprenticeship or traineeship.

We present the findings in two sections. The findings outlined in the first section relate to all apprentices and trainees irrespective of gender. The findings outlined in the second section relate specifically to women.

6.2. Findings applicable to all apprentices irrespective of gender

6.2.1. Work-study model of education and training

All participants agreed that the apprenticeship model was an effective way to develop the required propositional and procedural knowledge due to its combination of work and study. For example, participant 2 from a GTO explained:

> *"I absolutely believe the apprenticeship model is absolutely not dead. It is the way to go. There is nothing better. Combining classroom and on-the-job training, a protected environment for a period of years, is absolutely crucial to learning the trade, and I don't think it's different for men or women."*

Similarly, participant 1 from an AASN/GTO believed that the apprenticeship model was an effective model of learning which had the additional benefit of being free of charge: "*vocational education allows somebody to learn whilst they're on the job"* while *"not incurring a debt".*

The 4-year apprenticeship model was perceived to enable apprentices with the time required to comprehend and integrate propositional and procedural knowledge required. Time was considered important as the apprenticeship model requires that the majority of the learning be undertaken in the workplace through active and interdependent engagement in occupational tasks, as explained by participant 8 from an RTO:

> *"the idea of working and learning side by side [from the person you are working with] is probably the best model because there's certain things that you can only develop over time. If it's a repetition skill and there's knowledge, you can't learn it and know it… you have to learn it over time… the only way to do it is definitely to work and be in that partnership where you're learning as well."*

Participants identified a distinction between the learning that occurred in the workplace and the training organisation. For example, participant 1 from an AASN/GTO commented *"employers are doing most of the hands-on training, and the RTO is doing the theory of the things that aren't happening on the job." However, s*ome participants reported some tension between workplace trainers and TAFE teaching. The same participant went on to explain that employers *"think they're going to [do] most of the training…they think they're the experts, not the TAFE teacher who has potentially been out of the industry for years and just does TAFE training"* (participant 1, AASN/GTO).

Participants perceived that some employers do not offer apprentices the opportunity to learn the full range of skills required to become a qualified tradesperson. In these instances where an apprentice is not exposed to all aspects of the trade and requirements of the training package through their workplace, the formal learning experience provided by the RTO becomes even more important as it *"gives them the opportunity to actually do some [trade] work… and those who don't do it perhaps, they learn off each other"* (participant 4, RTO) and the trainer.

The formal educational component of the apprenticeship model provides a space for learners to take risks, ask questions, refine or experience alternate approaches to learned practice in a safe space. In addition, learners can draw on the experience of their trainers who *"has a certain set of experiences broader than the apprentice or the employer generally"* (participant 1, AASN/GTO), which nurtures propositional and procedural knowledge complimenting that of the workplace. Participant 1 (ASSN/GTO) also identified the value of apprentices learning *"from their colleagues or the other students"* who learn different techniques in different workplaces. Further, as explained by participant 4 from an RTO, not all workplace learning aligns with the delivery of the RTO's curriculum. In this instance, students *"help each other a lot",* sharing procedural knowledge among the group. Peer

learning also exposed students to new practice techniques as "*some of the information they [apprentices] get [in the workplace] is more current as it is from their peers"* rather than their trainer who may no longer be working in the trade or area they are teaching.

6.2.2.Curriculum structure

One criticism of the curriculum structure was the funding model which led to individual units of competence being taught in isolation. Participant 8 from an RTO explained: "*RTOs get paid on completion of [individual] units"* resulting in RTOs *"delivering that unit and getting paid and then moving on to the next one to get paid"* rather than taking a *"holistic focus on what a [trade] needs to know [within the broader context], it's broken down into individual little tasks levels."* Teaching units in isolation from other units was raised as a concern by some participants as it impacted on the depth of student learning. For example, participant 8 from an RTO commented: "*the competency-based system has been lost and now it's just performing to a standard. So, once you've performed to that standard, it's tick, move on."*

Participant 8 from an RTO also believed that student engagement decreased when leaning was not undertaken in a consolidated and scaffolded way because the knowledge and skills learned was not always applied in subsequent units:

> *"You can teach them we're going to do this and they're like, 'Okay, I've built that but I have no idea where it goes, what it does, how it fits into the whole system'… and this drives disengagement and overall disinterest… that contextualisation is lost in the competency system…and I think the industry itself probably suffers a little bit because people come out learning to look with blinkers. They don't see the overall picture, they only look at that little problem in isolation because that's how we've trained them. They don't say, 'Okay, if I stand back and look at this, what could actually be the problem?' That problem solving and deep understanding I think that's what gets lost."*

An additional issue associated with training delivery is the lack of assessment of student ability. Many RTO trainers commented that the Language Literacy and Numeracy testing did not help prepare the trainer to meet the apprentice's needs. As a result of limited understanding of student ability and the diversity of workplace experience, participant 4 from an RTO commented that there was a need to *"deliver to the lowest common denominator."*

Participant 8 from an RTO added that the training package fails to educate:

> *"apprentices on how to deal with situations in the workplace…the apprentices aren't taught or prepared, that this is a reality, or this could happen in the workplace and these are some skills that you're going to need to be okay. There is no formal competency model on workplace behaviour, gender, or equity."*

Participant 8 from an RTO explained that while recognising the importance of and speaking out against inappropriate behaviour is advertised across the training campus, there is limited induction or awareness about the realities of the workplace and how to navigate these for students.

6.2.3.Teacher training and the quality of learning

Before entering the VET sector as educators, tradesmen and tradeswomen often have minimal education experience or qualifications. To deliver nationally accredited vocational training in RTOs, individuals must attain a Certificate IV in Training and Assessment (TAE40116). TAE40116 aims to develop skills in designing, delivering, and assessing vocation-based training. Trainers acknowledged

that the qualification provided them with experience in the development of curricula, however, education theory (andragogy), learning and teaching practices, and classroom management are absent. For example, participant 8 from an RTO explained:

> *"There's a whole range of the craft of teaching that they're not learning; group dynamics, personalities, learning methodology, diverse groups, diverse minds. Classroom management or conflict management is not taught… just here's how to unpack the unit of competence. Here's how to make an assessment. It's something that is definitely missing."*

Participants felt that *"a lot is missing in the whole TAE [Certificate IV], but especially learning about diversity in the classroom and how to manage classrooms"* (Participant 8, RTO). Participant 5 from an RTO concurred, stating "*within the TAE you need [to include] basic survival skills in the classroom."* Well-managed classrooms are pivotal to the learning experience of women given their minority status and the poor behaviour directed towards them by male apprentices and trainees.

There was a sense that those teaching in the VET sector required more than a Certificate IV in training and assessment. For example, participant 4 from an RTO suggested that a higher level of education was required: "*I would just make people do a Diploma of Education so they can learn how to be real teachers."* In addition to the lack of educational instruction in the TAE (Certificate IV) qualification, participant 4 from an RTO explained that some *"[tradespeople] think being a [stated trade] is enough, but it's not… they don't understand we're not [stated trade] anymore, we're teachers who teach [the stated trade]."*

The participants who were trainers acknowledged that the lack of andragogy (methods and principles used in adult education) and learning and teaching practice inhibited the quality of both training delivery and the student learning experience. Participant 2 from an RTO explained that while the TAE qualification taught them that there are different learning styles, it *"doesn't really identify how to deal with different learning styles though… and the problem we have is when a tradesman comes in to teach school, they think they know better than anyone else."* Participant 5 from an RTO explained that *"the demographic at Broadmeadows compared to Preston, Heidelberg and then to Frankston and Dandenong, are like chalk and cheese. It's like being in different worlds when you're dealing with those students."* Learning styles, cultural backgrounds, and socio-economic status all result in different classroom dynamics and learner needs. A trainer's ability to address all these needs will directly influence each student's learning experience.

6.2.4.Pre-apprenticeship programs

Participants noted that completing a Certificate II pre-apprenticeship helped prepare individuals (including at-risk and disengaged youth) for an apprenticeship. A pre-apprenticeship provided an individual with the opportunity to develop a deeper understanding of the trade and skills that would enable them to be work-ready. Participant 3 from an RTO stated that a pre-apprenticeship assisted individuals *"to learn the basic skills and knowledge that hopefully helps somebody gain a start as an apprentice."*

Some teachers and staff involved with pre-apprenticeship delivery were active in helping to secure the employment needed for trainees to move into an apprenticeship. Participant 10 from an RTO explained that at their organisation the pre-apprenticeship was redeveloped to provide students with access to potential employers as well as the development of skills required to access work successfully:

"there's two units where you prepare to work in the [trade] industry so you would research the [stated trade] industry to find out what you want to do and then there's another unit where you have to put your CV, resume together and you apply for a job. We're in the process of getting approved companies that have vacancies for apprentices and are looking for apprentices and we are getting the Certificate II [participants] to apply for real-life jobs."

6.2.5.Barriers to on-the-job learning

Apprenticeships and traineeships are learning modes in themselves. Apprenticeships engage the individual in the lived experience of the work community, building knowledge through a series of structured activities with low to high consequences. On-the-job learning is usually highly informal but focused on the interplay between practice modelled and observed, and activities are undertaken independently and scaffolded as the learning journey evolves. Therefore, the learning experience depends on appropriate supervision and parallel practice where work is strictly supervised or checked by an experienced worker before it commences. When practising, learners are coached and provided with immediate feedback on set tasks aligned to pre-determined skill levels until the required competencies are developed, and supervision is no longer necessary.

Participants identified barriers for on-the-job training originating from the lack of ability or inclination of the employer (essentially the workplace trainers) to educate on all aspects of the trade. The lack of ability or inclination of employers to educate apprentices and the impact on the apprentice is explained by participants:

"it's often subbies or other people on site that are doing the training… they might be experts in what they do, but it doesn't mean that they can share that knowledge or share that knowledge correctly to someone who's learning." (participant 1, AASNP/GTO)

And

"you will find a fourth year apprentice will teach a third year and a third year apprentice will teach a second year and a second year apprentice will teach a first year… the depth of knowledge, the required understanding is not there and the support is not there and this shows up in our final exams...in the results." (participant 10, RTO)

And

"some kids get taught by kids out on the field –[employers] are really taking advantage of the VBA's slackness or the easing of how many [qualified trades] you have to have to have X amount of apprentices. When I was an apprentice, you had to have one [trade] for one apprentice, that was it. If you want to have two apprentices, you've got to have two [qualified trades]. Now you can have one [qualified trade] who sits in the office all day and the second-year guy will teach the first-year guy out in the field – there's no [qualified trade] there." (participant 4, RTO)

At present, there exists no formal requirements for those employing or supervising apprentices to hold any training or education qualification. Participant 4 from an RTO highlighted that this is a problem: *"there are people out there that have made a business model on employing apprentices*." A qualified trade can take on more than one business, and in some trades, there exists:

*"companies very, very successful based on one or two [qualified tradesperson] and 20 to 30 apprentices. So, these apprentices aren't learning anything. They're just cheap labour, but they're being hired out and charged out as fully qualified [tradespersons]"(*participant 10, RTO)

The use of apprentices as cheap labour, highlighted by participant 10 from an RTO, limits the feedback and supervision apprentices receive as well as workplace learning opportunities.

Another barrier to workplace opportunity identified was increased regulation of licensed trades leading to task specialisation. Participant 4 from an RTO believed that an increase in specialisation acted to decrease the workplace opportunities for apprentices: *"it makes it hard for kids to get a more rounded education."* Some participants believed, however, that the regulation of trade practices due to licensing and registration requirements had resulted in greater expectations on both apprentices and employers for workplace learning. Participant 2 from an AASNP/GTO noted that *"more is expected of the apprentice."* Subsequently, this had improved the learning experience as *"the employer has the responsibility to sign off the apprentice is competent in every aspect"* and this is regulated as part of their registration upon completion of their apprenticeship with the VBA.

In Victoria, changes to the Victorian Building Act will result in several unregistered trades becoming registered over the coming years. Participants hoped the pending mandatory registration and licensing will improve industry practice and, in turn, a better level of training for the apprentice as they will need "*to be qualified to gain their license"* (participant 2, RTO). Participant 11 from an RTO also noted that increased regulatory requirements for some licensed trades had mandated a lower ratio of qualified registered trades to apprentices than in previous years: *"one trade isn't allowed to have more than two apprentices".* This participant believes the change in ratios will improve training outcomes for apprentices.

6.2.6.Rotations

Participants identified that some apprentices made employment decisions based on financial gain rather than workplace learning opportunities. For example, participant 11 from an RTO commented, *"sometimes it's just purely money they're chasing."* This was noted as problematic for the apprentice in terms of their development as they were prioritising money over skill development.

There was a sense of frustration from some employers when they had invested in the training and skills development of the apprentice who then moved on to a new employer. However, some participants believed that changing employers is important to develop the full range of skills needed to transition to a qualified tradesperson, as reflected in the following comment:

> *"I always say to them [apprentices], 'If you feel that you have learnt enough from this one employer, start looking now for another employer in another field and go with them. Don't think there's anything wrong with changing jobs.'"*(participant 4, RTO)

Despite the role of the GTO to provide an apprentice with a variety of learning experiences throughout their learning journey with several different hosts, participant 2 from a GTO explained this may not eventuate as:

> *"some GTO's set and forget, contrary to the group training national standards…you're not supposed to hire someone, put them with a host and leave them there. Rotations are required to be able to meet the requirements of the training plan."*

In addition to trade specialisation, the lack of diverse work environments and specific business models also limits learning opportunities. Participant 3 from an RTO explained:

> *"employers are running businesses and they want to earn money. If most of the work out there and where the money is easiest to be earnt is building houses for [named volume builder], that's what they're going to do. They're not going to change the work that they choose to do just to help train an apprentice. He's not going to say, "I need to find some other work that incorporates [activity] and [activity] and things like that, just so my apprentice gets better training." It's not going to happen…90% of our apprentices are all working on the big estates, doing houses for [named volume builder]."*

The number of rotations an apprentice might experience while working for a GTO was a common critique among participants. For example, participant 11 from an RTO stated: *"sometimes it [rotations] is a good thing, sometimes it's not so much".* The concern was if apprentices were rotated too frequently, they may not develop all the skills required. A participant from an RTO suggested, *"three or four times across their apprenticeship, it [rotation] is probably perfect."*

6.2.7. Overcoming the stigma of trades

Participants expressed frustration that trades, apprenticeships, and traineeships are often stereotyped as careers for those with low academic aptitude. Participant 2 from an AASNP/GTO reflected:

> *"It really grates me to say that, 'Oh, we'll put all our dummies into our trade.' That is not the case. To be an electrician, you have to have good physics and mathematics. And if you don't, you're going to fail. Same with plumbing. If you're not good at maths – Even carpentry, if you can't put two and two together – two measurements– you're going to fail."*

Participants identified that the low academic expectations led to low completion rates for trade apprentices, as apprentice's expectations of the work and academic requirements were much lower than is actually required.

Participants commented that the age of individuals commencing an apprenticeship has increased due to the increased skill requirement of the program. Participant 2 from an AASNP/GTO commented:

> *"gone are the days where we'll say, 'The kid's only done Year 10. We'll put him into an electrical apprenticeship', or, 'an [any] apprenticeship'. I would not put on an apprentice for an electrician or a plumber unless they had a Year 12 pass."*

Participant 1 from a GTO shared a similar sentiment to participant 2 from an AASNP/GTO stating, *"if you can get to Year 12, you're more likely to get an apprenticeship than someone that's finishing Year 10 because of those additional things that you're learning at school."*

There was a perception that trades become the default option promoted to students identified as being not capable of progressing to university or not academically focussed. This perception was a frustration of many participants. For example:

> *"I've quite often had chats with careers advisors at schools and said if students want to get a trade, if they want to do plumbing and electrical or carpentry, they need a better level of maths than what you're teaching them. If they're [the student] is not going to go down the VCE pathway and they're dropping into their VCAL thing, the stuff they call maths is nowhere near the target they need… all trades need maths."* (participant 11, RTO)

Interestingly, this last comment points to the fact that a higher level of maths is only perceived as required for those going to university. Therefore, trades are often not promoted to students

undertaking higher level maths or studying VCE. Participant 10 from an RTO stated that "*everyone needs to be given the correct [careers] advice as to what they can achieve or have they ever considered or thought of it"* regardless of the certificate studied or subject taken within a student's secondary education

Participants felt that the secondary system prioritised university over the VET system. For example, participant 5 from an RTO commented: *"I think our secondary schools are a problem where their incentive is to get everyone to the university, they want everyone to go through to university, so they don't promote trades at all."*

Parents and careers councillors are important groups to consider when overcoming the stigma associated with trades. For example, participant 5 from an RTO5 commented: *"parents are such a big influencer on what their child decides to do… So, I think sometimes the decision is not so much the person but it's with your parents."* Another participant highlighted the influence of parents on students' career decisions when describing a situation at a TAFE expo:

> *"this guy came up. He was a lovely young bloke, he'd just finished Year 12, and Dad was a doctor and Mum was a solicitor. And he says, 'I want to do a trade.' And I thought great. And he said, 'Can you give me all the information I could possibly need? Because I've got to convince Mum and Dad that I don't want to be a doctor or a solicitor.' He wanted all the ammunition to go back and show them this is what I want to do."* (participant 5, RTO)

6.3. Findings applicable to women

6.3.1. Employers' willingness to take on women in apprentice roles

Participants identified that government procurement contracts required a women's quota, and this was lifting the number of women employed in commercial construction. Participant 5 from an RTO commented: "*they've [the employing organisation] got quotas that some of the apprentices must be female, and that's because they've got government contracts."*

However, there remains barriers for women wishing to commence an apprenticeship. Given the importance of securing employment so that the apprenticeship can commence, it is important to understand the current perceptions of employers' readiness to take on women. Sixty-five per cent of participants (n=13/20) felt that while attitudes toward women working in trades was changing, employers still had difficulty in accepting women. When asked what the most significant challenge women faced when working in a non-traditional trade, the response of participant 5 from an RTO reflected the majority of participants' perspectives: *"getting the job in the first place."* This reluctancy stemmed from a belief that women don't possess the physicality required to undertake the work. Participant 8 from an RTO commented:

> *'They'd [employers] write them off straight away before they've even employed them saying, "Oh, she won't be able to keep up or won't be able to do this. This is heavy work."'*

Participants also perceived that employers do not employ women for a number of reasons:

- women will not be able to cope with the culture on a construction site;
- women will be a source of *"distraction on jobs"* for the male workforce;

- women will not provide a return on investment as they *"may get married, pregnant and leave the job."* (participant 2, AASNP/GTO)

These concerns are often conflated by employers, as highlighted by participant 1 from a GTO:

> *"one of the builders that we know is less inclined to put a female on for a few different reasons. Now, this is not saying that these are actually factual reasons; these are just what he's got in his head. So, needing to provide a toilet, a separate toilet for one woman when he's got a team of 40 blokes. A concern about how the boys will react having a woman on site, and potentially any – he doesn't want derogatory comments or anything like that. Plus, the physicality of the job– maybe the women can't do as much as the men can do, as far as lifting things up and moving them around and that kind of stuff."*

Participant 2 form an AASNP/GTO explained the difficulties she has had trying to find hosts for women in apprenticeships:

> *"I've had employers say, "I don't want a woman." They've come out and actually said, "Don't send me any women; I won't employ them."*

Participants noted differences in patterns of employment between men and women in apprenticeships. Participant 7 from an RTO, however, noted that *"females, unlike the male apprentices, don't change jobs to chase money."* Given the difficulty women have in finding work, establishing relationships, and gaining acceptance in the workplace, participants noted women tended to stay with one employer. This could restrict women from seeking new employment for greater pay, more appropriate training or in response to poor working conditions.

6.3.2.Connecting women to employment

Some participants reported being active in mapping out which employers would be open to taking on women from a pre-apprenticeship, and others reported providing targeted support for women in pre-apprenticeships in order to link them with an employer who would take on a women as an apprentice.

Participant 9 from an RTO explained how they facilitated the employment of women:

> *"And we all ask if we're talking to employers, whether they're interested in putting on female apprentices, the conversation goes back to 'We'll always put on the best applicant.' So, if we've got girls out there that are putting in applications, and they're the best applicant, that is what they say they'll do."*

In addition to RTOs, participants also identified GTOs' role in connecting women to employment. Participant 1 from a GTO commented that a GTO acts as "*the link between a host employer and the apprentice and trainee*." Participant 2 from a GTO expands on this role, explaining a GTO is:

> *"an employer, an intermediary and one apprentice could be shared amongst a group of host employers. And it wouldn't stuff up their training contract or change their employment status and all of their entitlements."*

A GTO is responsible for their apprentices' payment, PPE, training contracts, schooling, sign-up, host placement, and support and mentoring. Participant 1 from a GTO explained:

> *"we have ongoing contact, and it depends on the person how regularly you need to, but most of them it's at least monthly, at least over the phone. We go out and do visits to the sites once every three months, to make sure that there's been no significant changes or occupational health and safety stuff."*

Part of the host placement is to ensure that apprentices are well-matched with their hosts and the apprentice has the opportunity to meet all the competency requirements. In this context, GTOs were identified as well placed to connect women with employment owing to their strong relationships with industry. Participant 1 from a GTO commented that *"the hosts that we've got now we've worked with long enough to know them. And to know who they want and who they don't want".* This participant went on to explain that they were able to approach "*open-minded*" employers that would employ women, adding they understood that part of their role was to *"market women in non-traditional trades"* and in doing so *"dispelling any myths that might be out there."*

Participant 2 from a GTO commented that their organisation was *"very strategically using our marketing and promotions to normalise hiring women."* In this context normalising meant:

> *"increasing the available supply… making women feel comfortable and have a place or a refuge or someone to talk to if they need to… using the influencers within your association to start talking about their positive experiences and load them up with the information."* (Participant 2, GTO)

6.3.3. Age and pay

The increased wage associated with adult apprentices presented as an additional barrier to women's employment. Participants commented that many women commencing an apprenticeship were adult apprentices. Participant 1 from a GTO commented that there *are "more adults applying for apprenticeships than I would have thought",* and women entered the building and construction industry later in life because as young women they were told *'it wasn't a girl's job."*

Participant 2 from a GTO explained that regardless of gender, if you have "*hit that magic age of 21, it means you're paid a rate of a fourth-year from day one… a massive barrier*."

Ironically, while employers were less likely to hire mature age apprentices as they were more expensive, there was also a perception by some that mature age women were more likely to complete their apprenticeship: *"We [GTO] will hire women, because we know that they're making this decision later in life and are more likely to complete their apprenticeship." (*Participant 2 from a GTO)

6.3.4. Onsite experience and learning

Participants who were RTO trainers explained how women were treated onsite and the impact this presented to their learning. Several participants commented that their apprentices reported a lack of amenity. For example, participant 6 from an RTO explained: *"they [female apprentices] rock up on a site, and there's nothing there, and then the supervisors couldn't care less."* Similarly, participant 3 from an RTO stated: *"toilet facilities aren't brilliant out on construction sites."* The lack of amenities sends a message to women that they are not welcome and do not belong in the workplace.

Participants also commented that their apprentices reported that they had been subjected to inappropriate behaviour by their co-workers and managers, ranging from *"just in general chatter"* (participant 6, RTO) to *"builders seeing a female apprentice and basically degrading them because they're female, they're not a tradie, they don't know what they're talking about"* (participant 7, RTO).

Furthermore, sexual objectification had also been experienced by women as explained by participant 2 from an AASNP/GTO:

> *"when the girls are signing into workplaces, the male groups, they're writing down their details. And then, the men are looking them up on Instagram and saying, 'Look what I'm working with. She's hot.'"*

These behaviours create an unsafe workplace that is not conducive to learning and support for women.

Participant 11 from an RTO perceived that the culture onsite has improved with women in apprentice roles, reporting *"better stories recently than 10 years ago"* and observing *"a definite shift in the way they're treated on the job site."* Participant 8 from an RTO explained this shift is in part due to increasing workplace policies and HR departments. However, this improvement is primarily only seen in larger companies:

> *"So, I think the workers [in large organisations] are more aware of what is okay and what is not okay. They know that there are actual ramifications for anything doing wrong, whereas that smaller market it's a bit greyer."* (participant 8, RTO)

6.3.5. Acceptance and support for women in the classroom

Many participants noted that the majority of their colleagues believed women were a welcome and positive inclusion in the industry as *"their skill-base is out of this world compared to the boys… they're very precise and articulate....bosses like them in semi-managerial positions because they're more inclined to be fair and open to things than men"* (participant 2, RTO) and *"their eye for detail is better than men"* (participant 12, RTO).

According to participants, women have only recently started to enrol in VET. This has presented as a new challenge for some trainers who are not certain of how to best support women. For example, participant 8 from an RTO explained:

> *"I was teaching male apprentices for 12 years before a female apprentice entered the classroom, and as a teacher, I felt nervous. You thought well if I pay too much attention to her and I try and help her too much, then will she get a hard time from the other people. I don't want to be seen to be favouring her. So, I actually ended up doing the opposite and helping her less, which is probably worse than anything. They'd [the female apprentice] probably then feel a bit nervous, and I guess they felt the teacher didn't like having a female in their class or doesn't like me. It took a while to become a bit more comfortable having female apprentices in the classroom."*

Participant 2 from an RTO explained some of the challenges in maintaining appropriate behaviour standards towards women in the classroom:

> *"I've worked in TAFE and the trainers were worse than the kids, with girls. They acted more like kids than the kids… it was like they'd never seen a female before in their life… I would actually pull them aside and say, "you have to stop that." It would make the girls feel uncomfortable, and it was ridiculous to see a grown man act like a 15-year-old kid."*

Participant 3 from an RTO explained how women undertaking apprenticeships had raised the issue of unconscious bias towards women in teaching materials and in overall communication, recalling:

> *"The female student she said to me, 'I actually counted 64 connotations of you referring to the person climbing the ladder as a male.' And I said, 'Look, I'm really sorry. I don't really mean it.' It actually did shake me really, because I was trying to my best to teach but she really hit me with that one."*

The example provided by participant 3 from an RTO illustrates the gendered basis is innately embedded with many aspects of construction-related trades training. In addition to the absence of references to women in training materials, there are very few women in trainer roles. Participants noted the difficulty they faced in attracting and recruiting tradesmen, let alone tradeswomen, into training positions. Participant 5 from an RTO reflected on the impact of a male-dominated training cohort and the need for increased visibility of women in trainer roles and curriculum which features all genders:

> *"They've all been doing this for a very long time… they're probably all very traditional and conservative in their values. I wouldn't be surprised if I did have gender issues with them. It's not their fault; it's just the way they've been trained and bought up."*

Participant 11 from an RTO explained:

> *"I might have one or two old-school blokes on my list with 30 years [experience] that might hold a slightly different opinion. But none of my staff have ever walked away from having the girls in the class."*

Participant 11 from an RTO also commented that *"I suppose they feel that the trade… it's a man's world, but several of them always say how much better a class is to teach when you do have a female in there."*

While some participants are actively supporting women in the classroom, there is a perception that some trainers still believe that women apprentices or trainees don't belong. These attitudes have subsequently impacted on the learning experiences of women. For example, participant 4 from an RTO explained how the male-centric workplace culture could creep into the classroom, and highlighted the importance of trainer intervention to ensure an appropriate level of behaviour is maintained:

> *"Sometimes some guys [students] would say words that I personally wouldn't use around a woman or don't like to use any time, even around a man, and I'd pull them up on that and explain, 'I know that it's a [trade] workforce and that's dominated by males, but we as males have got to stop talking like that to start with, and please not around women.' I would just try and direct their morals a little bit."*

Other participants stated that attitudes which marginalise women create a less than favourable classroom culture for the women, as evident in the exchange between participant 4 from an RTO and the interviewer:

> Participant*: "I work with teachers who are totally and utterly sexist pigs, and I work with guys who think pornography is just a normal thing, and just like they've never grown up. "*
>
> *Interviewer: "Do those values get taken into their classroom and then inform the culture of that room?"*
>
> *Participant: "Yes, sometimes."*

Participants reported that there exists mixed feelings within their student cohort about the value of women in trades. Participant 11 from an RTO commented: *"there's probably a few [students] who have still got it's a man's job' type attitude."* This attitude coupled with the small numbers of women in class can leave women feeling isolated.

In terms of the ratio of men and women undertaking apprenticeships, one RTO participant commented that only one woman was enrolled within a cohort of 600 apprentices. Another RTO participant reflected that in ten years of Certificate III training, with an annual enrolment of approximately 100 apprentices, only ten were women. In relation to the number of women enrolled, participant 5 from an RTO stated, *"out of say 500 [students], you might get five*."

While women were the gender minority in class, participants felt it was important not to single them out or give them preferential treatment. Participant 2 from an RTO commented:

> *"If you highlight a girl in the class to the guys, the girl feels uncomfortable to begin with, and then the boys don't know how to react…I make sure that she understands that she's supported if anything goes on. Behind the scenes, you just have a quick chat with them [and say] 'listen, you're the only female in the class, just be aware that if you have any problems, come and see me. Don't be scared to come and talk to me.' And just make sure that they feel that they're supported, but also accepted as, just like everyone else."*

As time in the classroom progressed, participants reflected on the evolving collaborative classroom dynamic. Participant 2 from an RTO reflected on his experience:

> *"once the students get through the first few weeks and the males understand that they're [female apprentices] are better than them, they accept them [female apprentices] a hell of lot better. Because especially in the first part of the schooling, they do a lot of the communication stuff, the soft subjects, not a lot of prac, and the girls fly through it, so they're well ahead of the boys in the first place. So, they [male apprentices] all of a sudden [realise] "oh, can you help me with this? " Because they do it better. And the practical comes, and the girls need that help sometimes. So, there's a little bit of to-ing and fro-ing in where the dynamics of the group starts to take hold."*

Participant 6 from an RTO reflected on the *"calming effect" that female apprentices can have* on male apprentices. When women are in class:

> *'"some of the blokes…they're not as larrikin-like. And some of the stupid things they come out with, the girls will turn around and said, "Don't be an idiot' and it'll stop. Whereas if you get a group of blokes, then they just keep egging each other on."'* (participant 6, RTO)

Participants acknowledged that the culture of the industry is changing as a result of the presence of women in class and onsite, and these changes are influencing *"the way that people should be viewed…that everyone is equal."* (participant 11, RTO)

To facilitate the respect and support for women in the classroom, it was considered essential to set behavioural standards at the commencement of the training program, with participant 9 from an RTO commenting:

> *"When I go in and do an introduction, or a welcome to the institute when they start their apprenticeships, I say that "You're all in this together. Work together, help each other out. The more that you put into it, the more you will get out of it. Everyone is equal. Some are going to be quicker*

than others. But at the end of the day, we hope you will support each other. And that just builds that good relationship for you guys as you grow and get older."

It was acknowledged that having a greater number of women in trainer roles would help to shift the male-centric culture of the classroom. One limitation of recruiting more women into trainer roles was the requirement that trainers must be a fully qualified tradesperson. Participant 8 from an RTO commented: *"we have to have a fully qualified tradesperson and turn them into a trainer. We can't go the other way around".* Given the very small number of qualified tradeswomen, this meant the talent pool of potential women in trainer roles was small.

6.4. Attracting more women into trades

There was a sense that *"women aren't coming into the construction industry because it's a male-dominated environment"* (participant 10, RTO). Subsequently, participants believed that increasing the visibility of women in trades could attract more women into apprenticeships and traineeships. Participant 1 from a GTO stated:

> *"it's a Catch-22. We need more women in apprenticeships to encourage more women to be in apprenticeships, So, as far as general advertising we do need to be showing more females in apprenticeship roles."*

Increasing the visibility of women in trades would challenge the existing gendered work stereotype and send the message that women are capable and needed. For example, participant 3 from an RTO commented: "*if there was the exposure of more females as bricklayers, I think more females would think about it."*

Part of a communication strategy should debunk the misconception that women are not capable of the physical nature of the work. For example, participant 9 from an RTO stated:

> *"the conception of trades these days is that is a lot of physical work, but that physical capacity, probably isn't there as much as it used to be. And that is what industry needs to sell when they're looking to attract people."*

Another participant also identified the importance of challenging the stereotype of working conditions, stating: *"I think women may think that as a plumber, for example, you're handling poo - I don't know any plumber that's handled poo other than by mistake."* (participant 4, RTO)

Social media was identified as an appropriate platform to connect with women of all ages by increasing the visibility and opportunity. A participant commented on the different mediums which can be used to engage women from various demographics:

> *"you've got different demographics, so I think that [older] people tend to do social media more on Facebook; whereas my son, who's younger, he's 14, he'll go, "Ugh, Facebook!" Everything is Instagram, Snapchat and TikTok."* (participant 1, GTO)

To increase the number of women into trades it was considered important to communicate the opportunities presented by working in a trade to school-aged girls. Participant 12 from an RTO commented: "*if you want to get more women into a trade specifically, you've got to tackle them when they're young at school."*

It is essential to promote trades to schoolgirls and also women seeking to return to work or wanting a career change. A participant commented:

> *"Maybe they've always wanted to be a [trade] all their lives, and they got to 40 years of age, they've had a kid, or they've had a couple of kids, and they've gone, 'you know I really want to be a tradesperson. I've got my kids now they're at school, I can go out and do that now.' So, that transition from being a stay-at-home mum into the workforce, why not be a tradesperson?" (participant 2, RTO)*

Participant 2 from a GTO noted that to attract women into a trade as a second career, women in trades needed to be normalised and women needed to empower each other: *"let them spread the word and then have influencers also within whatever trade that you're talking about."* Importantly this participant stated that messaging to women needed to be *"authentic"*.

It was also suggested that a communication campaign could be led by the Federal or State government and be part of an up-skilling program.

7. Apprenticeship and traineeship structure and governance

7.1. Introduction

This research set out to understand the barriers and facilitating factors of recruiting women into trades and semi-skilled roles. To implement strategies to support women's attraction and retention in apprenticeships and traineeships, it's important to consider how apprentice and trainee programs are structured and governed, and how these workers are supported during their program. In this part of the report, we summarise the various elements of the apprenticeship and traineeship program in Victoria, Australia.

A desktop review was undertaken to understand entry points for prospective apprentices and trainees, the role and responsibilities of employers, identify stakeholder groups involved in development of curriculum and governance of programs, the policies and supports in place that frame the programs, and the mechanisms for accountability and transparency. The review was undertaken by examining state and national legislation, policy documents, and websites of bodies and organisations related to the apprenticeship program.

7.2. Multifaceted system

In the following sections we refer to a diverse range of stakeholders, regulations/standards/guides, and programs that are associated with the apprenticeship program. We summarise these in Table 6. As will become apparent, the apprenticeship system comprises various elements, many of which are interdependent.

Table 6. Stakeholders, regulations, standards and guides informing apprenticeship and traineeship programs

Stakeholders	Regulations, Standards, Guides	Programs and pathways
Apprentice Employment Network (AEN) Apprenticeships Victoria (AV) Apprenticeship Employment Network (AEN) Apprentice Support Officers (ASO) Australian Apprenticeship Support Network (AASN)	Australian Apprenticeships Guide to National Standards Australian Quality Training Framework (AQTF) Australian Qualifications Framework (AQF) Code of Good Practice Education and Training Reform Act 2006	Apprenticeship Pre-apprenticeship School-based Apprenticeships and Traineeships (SBATs) Traineeship Victorian Certificate of Applied Learning (VCAL)

Stakeholders	Regulations, Standards, Guides	Programs and pathways
Australian Industry and Skills Committee (AISC) Australian Skills Quality Authority (ASQA) Group Training Organisation (GTO) Labour Hire Authority Registered Training Organisation (RTO) Victorian Apprenticeship Field Services (VAFS) Victorian Registration and Qualifications Authority (VRQA) WorkSafe Victoria	English Language Intensive Courses for Overseas Students (ELICOS) Standards 2018 Labour Hire Licensing Act 2018 National Code of Practice for Providers of Education and Training to Overseas Students 2018 National Standards for Group Training Organisations Public Administration Act 2004 Standards for Registered Training Organisations 2015	Victorian Certificate of Education (VCE) Vocational Education and Training (VET)

7.3. Apprentice Employment Network

The Apprenticeship Employment Network is the peak body representing non-profit GTOs. Membership in the AEN is voluntary and open to all VRQA-recognised GTOs. The AEN provides support for member GTOs in relation to leadership and negotiation (https://aen.org.au/).

7.4. Apprenticeship and Traineeships Overview

Apprenticeships and traineeships are models for achieving a qualification that involve a combination of on-the-job training and formal education. The qualification that can be obtained through these models range from certificates to diplomas (VRQA, 2019a). On-the-job training is provided by an employer and the formal education is provided by a registered training organisation (RTO).

Broadly, apprenticeships are defined as preparation for skilled work and traineeships are defined as preparation for vocational work. An apprenticeship is a structured training arrangement taking over 3.5 to 4 years and a traineeship is usually completed between 9 to 48 months.

The structure of apprenticeships and traineeships are regulated by both state and federal legislation and involve multiple authorities at both levels.

Within Victoria, Apprenticeships Victoria (AV) is responsible broadly for apprenticeship policies and programs (https://www.apprenticeships.vic.gov.au/). AV oversees and coordinates the employment and training of apprentices and trainees across all industry sectors and areas of the state. This

includes school-based apprenticeships and traineeships, mainstream apprenticeships and traineeships, and Big Build Apprenticeships which offer the opportunity to get involved in infrastructure projects in Victoria.

AV employs 28 Apprenticeship Support Officers (ASOs) working out of 12 sites across Victoria. The role of an ASO is to provide free and confidential support and advice to registered apprentices via phone, email or text, workplace visit, or a longer period of contact if needed. ASOs provide apprentices and employers with help on workplace, training, or personal issues.

Both trainee and apprenticeship models are central to the range of roles within the construction industry, but there are more complexities for training in the construction sector which will be discussed in another section of the report. Areas within the construction industry that require workers to undertake a traineeship or apprenticeship are:

- Bricklaying & Stonemasonry
- Carpentry, Joinery & Cabinetmaking
- Concreting & Paving
- Cranes, Rigging & Demolition
- Electrical & Electronic Assembly & Servicing
- Electrical Trades
- Electronics Trades
- General Construction
- Glazing
- Higher Level Technician
- Laboratory Assistant–Building and Construction
- Painting, Plastering & Tiling
- Planning, Design, Surveying & Estimating
- Plan and Equipment Operations
- Plumbing and Roofing
- Roads, Bridges, Tunnels and Major Foundations

One aim of the trainee/apprenticeship learning pathway is to provide employers with a way to provide training that contributes to their business (VRQA, 2019b, para. 2). Another aim is to provide apprentices/trainees with a way to earn an income while training, and to gain practical skills on the job combined with formal education through the RTO (AV, n.d.b).

Pre-apprenticeships are also available for some areas. Pre-apprenticeships aim to provide entry level training and enables the student to determine if an apprenticeship is the right choice by providing a brief introduction to the role whilst providing the opportunity to learn the basic skills and knowledge needed for that role. The aim of the pre-apprenticeship is both to help people in their career choices and to enable the capacity to enter an apprenticeships/traineeship with some core skills and confidence already developed.

Pre-apprenticeship programs are delivered by RTOs and some GTOs. Some pre-apprenticeship providers also assist students in securing the required employment for entering an apprenticeship, and some employers favour candidates who have completed pre-apprenticeship training (AV, n.d.d).

7.5. Employer and Apprentice/Trainee Rights and Obligations

Employers and trainee/apprentices both have rights and obligations under the training model. Both parties enter into a training contract that details their rights and responsibilities in alignment with the VRQA guidelines. These contracts are provided by an Australian Apprenticeship Network provider and must be signed within 14 days of the placement.

The contract outlines the right for the apprentice/trainee to *"to learn all the skills related to your chosen trade or occupation through on-the-job training"* (VRQA 2019c, para. 1). The trainee or apprentice can expect to be trained by someone with appropriate qualifications and/or experience to provide that training and to learn to use the common tools and equipment for the trade or occupation. The apprentice/trainee is obligated to work in a professional manner, respect the employer's property and resources and conduct themselves respectfully to those they are working with, and to take the opportunity to learn and make every effort to meet their training competencies.

In addition to the contract, both trainee/apprentice and employer, along with the training organisation, should agree on a training plan. A training plan will be developed that outlines what training will be provided and at what point it will be provided, which can focus on only the on-the-job training, or cover both on and off the job training. Supervisors are expected to check the trainee's/apprentice's training against the training plan (VRQA, 2020e).

There is also a Code of Good Practice which the Australian Apprenticeship Support Network provides and makes available to employers and trainees/apprentices. The Code of Good Practice is a national code that provides an outline of the expectations and obligations of the parties entering into a training contract. The code outlines the employer's responsibility to meet legal obligations and to provide a safe work environment that is free from bullying, racial or sexual abuse in line with the requirements of the OHS Act. Employers are also expected to emphasise the importance of occupational health and safety to apprentices (this code uses the term 'apprentice' as an umbrella term for both trainees and apprentices). Employers also need to ensure that a record of training is kept and are expected to notify relevant authorities if the apprentice is at risk of non-completion. The employer is expected to nominate a designated supervisor and to provide information to the apprentice about their rights and entitlements and about the supports available to them. The employer should encourage apprentices to raise concerns and problems. The apprentice is expected to make all efforts to fulfil training responsibilities, respect employer confidentiality and to make a record of the training they have completed (AA, 2019).

7.6. Group Training Organisations

A Group Training Organisation (GTO) is a labour hire provider that employs apprentices and trainees. Labour hire organisations/businesses employ people who they then provide to their client organisations/companies on a fee or contract basis (Work Safe Victoria, n.d.). GTOs must be licensed under the Labour Hire Licensing Act 2018. The Labour Hire Authority implements this scheme and undertakes education, enforcement, and compliance activities. This scheme was created in response to the findings of the Victorian Inquiry into the Labour Hire Industry which uncovered abuse and exploitation of labour hire employees across Australia. The scheme seeks to protect labour hire employees from exploitation and to ensure fair competition between labour hire providers where no provider is able to gain advantage through exploitation of employees (Labour Hire Authority, 2019).

GTOs are responsible for all employer duties and aim to create employment opportunities for apprentices and trainees as well as improve the quality and range of training available. These duties include paying wages, awards and superannuation and managing sick and holiday pay. GTOs are responsible for ensuring that trainees and apprentices receive appropriate work and training.

GTOs have additional obligations, compared with non-GTO labour hire providers, related to providing training and support. GTOs are regulated under Part 5.5 of the Education and Training Reform Act 2006, and must adhere to the National Standards for Group Training Organisations. The VRQA and Apprentice Employment Network (AEN) coordinate to 'recognise' GTOs that comply with the national standards.

Once a GTO is registered, they are listed on both a National Register and when recognised by the VRQA and AEN, on the VRQA's Recognised Group Training Organisations list.

7.7. Employer/Employment Structure

Apprentices and trainees can be employed by a business, organisation or sole trader or may be employed by a Group Training Organisation. A business/sole trader will be assessed to determine their suitability to take on a trainee or apprentice. The VRQA must approve the employer before a training contract can be signed. The Education and Training Reform Act 2006 requires the VRQA to consider that the employer and the person the employer proposes to use to supervise the training is fit and proper, with appropriate knowledge and qualifications and that the premises that they propose to be trained in, the methods and equipment that the training will involve are appropriate (VRQA, 2018).

Appropriate supervision of apprentices is a workplace safety issue as well as a key factor in the training of apprentices and trainees. Apprentices require one on one supervision, referred to as direct supervision, at the beginning of the apprenticeship. Once apprentices are able to work independently, the model of supervision can change but supervisors are expected to meet the apprentice once a day and be available to address questions and provide guidance as needed (Apprenticeships Victoria, n.d.d). In addition to these minimum requirements, the supervision has to be appropriate for the task and be provided by an appropriately qualitied tradesperson. Electrical apprentice/trainee supervision has additional requirements due to the unique risk factors of the work. For example, if live parts are being worked on or work is being conducted near live parts, a registered electrical worker needs to be within sight of the apprentice and be able to communicate directly with the apprentice (ESV, n.d.).

If a prospective employer is unable to provide an appropriate range of training relevant to the qualification or may not be able to provide the number of hours needed for a trainee/apprentice to complete the training, the employer is advised to use a Group Training Organisation.

7.8. Registered Training Organisations

Registered Training Organisations (RTOs) provide the formal education required for apprenticeships and traineeships. There are three categories of RTO:

- education training centres
- community-based adult education centres that focus on helping mature-aged students find employment or re-skill
- industry and professional organisations that provide training (VRQA, 2021a).

RTOs include Technical and Further Education (TAFE) institutes, which are state-run, as well as private providers (ASQA, 2020a). There are 12 TAFEs in Victoria and many more private providers. TAFEs train a large share of trainees and apprentices due to the size of the organisations.

In the construction industry, some examples of professional organisations that are registered as RTOs to provide training are unions (such as the CFMMEU) and peak industry bodies (such as NECA).

RTOs are able to issue nationally recognised qualifications and statement of attainment under the Australian Qualifications Framework (VRQA, 2020). RTOs can be registered with either the Australian Skills Quality Authority or by a state regulator, which in Victoria is the VRQA. State or national registration is largely driven by whether the training organisation operates in one state or territory or across many, as well as whether the focus is on domestic or international students. The VRQA determines which qualifications, referred to by the VRQA as approved training schemes, will be offered as traineeships and apprenticeships (VRQA, 2021b) and the Australian Industry and Skills Committee (AISC) approves training packages to be implemented by RTOs (ASQA, 2021a; ASQA, 2020a).

RTOs are subject to the Education and Training Reform Act 2006 (the Act), which was introduced in part to bring all training and education providers under a single regulatory framework regardless of a providers ownership structure. TAFEs are additionally subject to the Public Administration Act 2004 (DET, 2021).

7.9. RTO Trainers

RTOs must ensure that their trainers hold a vocational competence at least equal to the competence that they are delivering. Trainers must also have current and relevant industry skills and knowledge in accordance with the competencies that they are delivering. Trainers and assessors must in addition hold at least one of the following qualifications: Certificate IV in Training and Assessment (or its successor) or a diploma or higher-level qualification in adult education (ASQA, n.d.a). Trainers and assessors can also be paired with industry experts and jointly deliver assessments to ensure that these requirements are addressed. RTOs must also provide relevant professional development for trainers and assessors. The standards do not specify the number or nature of professional development, but stipulates that it needs to be sufficient to ensure that trainers and assessors have knowledge and skills relevant to current practices in the relevant industry (ASQA, n.d.a). RTOs are responsible for checking and ensuring that the industry knowledge and skills of trainers and assessors is relevant and current. The RTO must retain evidence of trainers and assessors knowledge and skill level (ASQA, 2021b)

7.10. Compliance and Enforcement

The trainee/apprenticeship model involves multiple stakeholders and requires a degree of coordination to ensure that trainees and apprentices are gaining the relevant skills and knowledge to complete their training. There are mechanisms in place that aim to ensure that stakeholders meet their obligations under this model. The compliance mechanisms are summarised below.

7.10.1. Employers

The Victorian Apprenticeship Field Services (VAFS) is the regulatory field service provider for the VRQA. The VAFS role is to ensure that the requirements of the training contract are being met. VAFS field officers conduct check-ins with apprentices at the workplace or over the phone. VAFS field officers are authorised under the Education and Training Reform Act 2006 to enter workplaces, make enquiries and inspect and copy documents (VRQA, 2021c).

The VRQA can investigate disputes and complaints related to apprenticeships and traineeships. For example, if a trainee/apprentice feels that their employer is not adhering to the training contract they can notify the VRQA who will seek to resolve the issue (VRQA, 2020b).

The Fair Work Ombudsman is an avenue to find out more about employer/employee rights and responsibilities and to raise complaints relevant to pay, awards and other workplace issues (Fair Work Ombudsman, n.d.). WorkSafe can be contacted in relation to health and safety of apprentices and trainees.

7.10.2. Group Training Organisations

The recognition period of a GTO is five years and within this period the VRQA will conduct an audit to check that the GTO is complying with the National Standards. Audits can also be triggered by a complaint or report of high-risk practices. Towards the end of the recognition period, a financial capability assessment is undertaken and GTOs that pass this assessment are awarded another five-year recognition period (VRQA, 2021d).

7.10.3. Registered Training Organisations

RTOs are required to submit regular reports on their compliance with the Australian Quality Training Framework (AQTF). The AQTF standards aim to provide a consistent high standard across states and territories, and the VRQA guidelines aim to address gaps between national and Victorian regulations for the VET sector. The VRQA guidelines focus on appropriate training, appropriate qualifications of trainers, independently validated assessments, annual reporting and, where relevant, appropriate agreements to any third parties the RTO engages.

In addition, the ASQA conducts audits of RTOs and focuses on compliance with the Standards for Registered Training Organisations (RTOs) 2015, National Code of Practice for Providers of Education and Training to Overseas Students 2018, and the ELICOS Standards 2018 (ASQA, 2020a). The ASQA has undertaken changes to the way that audits are conducted and as of 2021, has taken a particular focus on ensuring that RTOs have systems in place to monitor their own compliance and have mechanisms in place to improve performance. The outcome of an audit is reported in the performance assessment report. As part of the changes to the auditing process, the ASQA has committed to including evidence and reasoning underpinning any findings of non-compliance. Findings of minor deficiencies, which are deficiencies that are not systemic, able to be easily addressed, and do not significantly impact students are documented separately (ASQA, 2021b).

If a student has a complaint against their RTO, the ASQA advises the student to follow their institute's complaints procedures. The ASQA will receive complaints and feedback, both positive and negative, from students but will not resolve specific complaints. Rather, they will use the feedback to generally help protect against poor quality education in the sector. All RTOs registered with the ASQA are required to have complaints procedures in place that effective and efficient (ASQA, n.d.b.).

7.10.4. Pathways and Process

The Australian Apprenticeship Support Network (AASN) is a national advisory service for both employers and potential apprentices/trainees (VRQA, 2020d). The network consists of multiple providers across Australia. Seven of the AASN providers are contracted by the Victorian Department of Education, Skill and Employment These providers provide regular contact, administration support, process payments and targeted supports for apprentices who need additional assistance in completing their training or to find alternative training pathways for those not suited to the apprenticeship model (AA, n.d.b). AASN providers are also expected to assist employers to assess their eligibility for incentives and information on Trade Support Loans to apprentices. AASN providers also provide the training contract as discussed above.

7.10.5. VCE VET Programs

VCE VET programs combine secondary school subjects with vocational education and training for which students can receive credit towards either VCE or VCAL (discussed below). VCE VET programs provide an opportunity to gain nationally recognised qualifications. Most VCE VET programs offer workplace-based learning, and some offer scored assessments (VCAA, 2022).

7.10.6. VCAL

VCAL is a senior secondary qualification that is focused on practical skills alongside literacy and numeracy skills. Unlike the VCE (Victorian Certificate of Education) which is focused on a university pathway after secondary school, VCAL is suitable for students interested in pursuing VET apprenticeship/traineeship pathways after secondary school or proceeding directly into employment. Students enrolled in VCAL must undertake units that contribute to a nationally recognised VET program with a minimum of 90 hours completed in relevant units (Victorian Curriculum and Assessment Authority, n.d.)

In April 2022, the Victorian Government announced that in 2023 a new integrated senior secondary certificate will commence and be fully integrated by 2025. The changes to the current system will bring together the VCE and VCAL. The first stage is the introduction of a new VCE vocational major that will commence in 2023. The new two-year vocational and applied learning program that will replace senior and intermediate VCAL and offer a program that enables successful transitions into apprenticeships, traineeships, further education and training, or directly into employment.

The merger of the two certificates removes the need for students to choose between VCE and VCAL before the commencement of year 11. The integration of the two certificates provides students with a vocational major or the opportunity to combine academic and vocational pathways to dispel the stigma that VCE is only for those with intellectual capabilities.

7.10.7. School-based Apprenticeships and Traineeships

School-based Apprenticeships and Traineeships (SBAT) (DET, 2019) is an option that allows students to combine secondary school with part-time work and training. The SBAT model was established in 1998 and is available to students who are 15 years of age or older and enrolled in either VCE or VCAL. Students enrolled into a SBAT enter into a Training Contract which is registered with the VRQA and must work a minimum of one day a week. A SBAT must lead to a nationally recognised qualification of either a certificate I, II, or IV level. There are two types of SBATs:

- Type A includes ‘off the job training’ which means that students will undertake paid employment and at least six hours of training and seven hours of paid employment;
- Type B is fully workplace-based with a minimum of 13 hours of paid employment. Students can receive a credit toward VCE or VCAL and do not usually undertake scored assessment.

8. Discussion and recommendations

8.1. Introduction

Our research was undertaken to:

1) Identify the barriers and facilitating factors of women entering construction-based apprenticeships and traineeships.

2) Explore the experiences of women undertaking apprenticeships and traineeships in construction.

3) Identify ways to effectively promote construction trades as a viable career pathway to school aged girls and women.

4) Explore how apprenticeship and traineeship programs in Victoria are structured and governed to identify how apprentices and trainees are formally supported.

We applied a systems approach to identify the interaction between structural and individual factors that create barriers for women entering apprenticeships and traineeships.

Our findings illustrate how the primary and secondary education system, the vocational educational and learning system, and the construction system interacts in a complex way to shape the career decisions of schoolgirls and women and their intention to enter a construction trade or traineeship.

Our findings revealed that the experience of our participants was varied and nuanced. Some participants had experienced few barriers during their pathway into an apprenticeship or traineeship and acknowledged the support they had received from their school, parents, friends, educators, employers, and work colleagues. Other participants had experienced barriers at multiple junctures of their career pathway into a trade or semi-skilled role in construction.

We acknowledge that there are many stakeholders across the system who have been and continue to be a positive support for women to enter and succeed in a trade or semi-skilled role in construction. Our research did identify however, that many barriers remain for women seeking to enter a construction-related trade or semi-skilled role.

In this section we focus on the major barriers for women's entry into trades and semi-skilled roles and make recommendations for overcoming these barriers. We start by considering the barriers in the context of the systems approach which has previously been used by Gyarmati et al. (2017) to explore the experience of tradeswomen. The four levels of the system are:

- Macro: structure, system, cultural norms, including societal and industry level gendered role expectations
- Organisational: organisational policies, practices, norms and standards
- Interpersonal: attitude of students, teachers, co-workers, family, peers that influence bullying, harassment, and support networks
- Individual: knowledge, beliefs, self-perception, and self-confidence

We then highlight the key barriers emerging from the research and align these with recommendations which seek to remove the barriers for women entering a trade or traineeship. While we identify each barrier separately, taken together, these barriers reflect a complex system consisting of multiple stakeholders from seemingly “disparate” settings. It’s crucial to acknowledge that the barriers are related in a particular and sometimes complex way, and that the modification of one barrier is expected to have a “domino” effect on other barriers. Hence it is important that a system-wide approach is taken to address the barriers to enable greater participation of women in trades and semi-skilled roles in the Victorian construction industry.

8.2. Barriers experienced by women across the career pathway

In this section we summarise the barriers experienced by women at different stages of their career pathway. We consider the experience of schoolgirls and women in semi-skilled, pre-apprentice, and apprentice stages, and categorise the barriers according to the macro, organisational, intrapersonal, and interpersonal as outlined in Tables 7 to 10.

Our findings identified that women often experience a lack of trade-related educational opportunities at school and in the workplace because of gendered barriers across all levels of the system. There were parallels between the experience of schoolgirls, apprentices, and trainees who had experienced many of the same barriers. Those who had initially aspired to enter construction as an apprentice or trainee had been discouraged and influenced while at school to follow a more gender-relevant occupation. One of the key reasons this occurred was a perception that women do not belong in construction, and that construction is not a safe place for women to work.

To end this recurring and negative cycle which hampers women’s participation in construction, a system-wide approach is needed in which schoolgirls, parents and family members, teachers, career educators, employers and male construction workers accept that women are able and capable. A system-wide belief that women are capable and able will enable education and work opportunities which are supportive, nurture learning opportunities, and are safe and inclusive.

8.2.1. Macro level

Barriers at the macro level include the structure, system, cultural norms, including societal and industry level gendered role expectations, outlined in Table 7.

Table 7. Barriers aligned with the macro level across the career pathway

Barrier	School Girls	Semi-skilled	Pre-Apprentice	Apprentice
Gendered work stereotypes within society enforce a belief that women don't belong in the construction industry, especially in trade-related occupations.	✓	✓	✓	✓
The perception of trade occupations and associated workplace culture as male-dominated, hostile, and aggressive.	✓	✓	✓	✓
The perception that the industry is dangerous, and women are not physically and mentally capable of completing the associated tasks.	✓	✓	✓	✓
The perception that trade-related work is unskilled, repetitious, menial, and requires limited intellectual abilities.	✓	✓	✓	✓
The perception that industry-based inflexible "work" expectations prohibit women from forging a meaningful career and that they can add value at all stages of their career trajectory.	✓	✓	✓	✓

8.2.2.Organisational level

Barriers at the organisational level include organisational policies, practices, norms and standards, as outlined in Table 8.

Table 8. Barriers aligned with the organisational level across the career pathway

Identified barrier	School Girls	Semi-skilled	Pre-Apprentice	Apprentice
Secondary school, RTOs, construction organisations				
Lack of awareness and exposure to trades as an occupation.	✓	✓	✓	
Lack of acceptance of women and girls in trades education.	✓	✓	✓	✓
Lack of educational opportunities and experiences based on gender.	✓	✓	✓	✓
Unsupportive class/learning environment due to attitude of trainers, teachers, fellow students/co-workers towards women in trades.	✓	✓	✓	✓
Lack of visibility of women in trades	✓	✓	✓	✓

Lack of role models and networks for women.	✓	✓	✓	✓
Lack of mentors in school/workplace	✓	✓	✓	✓
Lack of exposure to tools, knowledge, and skills associated with trades.	✓	✓	✓	
Lack of women in educator and trainer roles, and employers guiding skill development on-site.	✓	✓	✓	✓
Lack of training for employers and trainers focusing on teaching skills to better support apprentices/trainees.		✓	✓	✓
Lack of education/training pathways for women wanting to transition into formal trade training pathways.	✓	✓	✓	✓
Lack of financial incentives for employing adult apprentices.				✓
Identified barrier	**School Girls**	**Semi-skilled**	**Pre-Apprentice**	**Apprentice**
Construction organisations				
Discriminatory workplace experiences, recruitment, hiring, and advancement practices.	✓	✓	✓	✓
Lack of policy, practices, and capacity to address harassment and discrimination.		✓	✓	✓
Lack of policy, practices, and capacity to improve the learning experience.		✓	✓	✓
Inflexible workplace policies and practices.		✓	✓	✓
Gender-specific health and safety concerns.		✓	✓	✓
Lack of connection to RTOs and schools to encourage/attract/support women.	✓	✓	✓	✓

8.2.3. Interpersonal level

Barriers at the interpersonal level include the attitude of students, teachers, co-workers, family, peers that influence bullying, harassment and support networks, as outlined in Table 9.

Table 9. Barriers aligned with interpersonal level across the career pathway

Identified barrier	School girls	Semi-skilled	Pre-apprentice	Apprentice
Disrespectful learning and work environments.	✓	✓	✓	✓
Lack of role models, mentors, and informal networks.	✓	✓	✓	✓
Unsupportive attitudes and influence of parents, teachers, students, educators, employees, and employers.	✓	✓	✓	✓

8.2.4. Individual level

Barriers at the individual level comprise of knowledge, beliefs, self-perception, and self-confidence, as outlined in Table 10.

Table 10. Barriers aligned with the individual level across the career pathway

Identified barrier	School Girls	Semi-skilled	Pre-Apprentice	Apprentice
Lack of experience in relation to skills associated with trade/s.	✓	✓	✓	✓
Lack of understanding of training requirements, role of trades.	✓	✓	✓	✓
Financial barriers associated with training.		✓	✓	✓
Barriers with balancing learning, work, and family responsibilities.		✓	✓	✓

8.3. Remove the stigma of trades

Our findings identified that there is a stigma around trades as being an occupation requiring limited intellectual ability, and which is inferior to occupations aligned with a higher education qualification. This finding is consistent with previous research which highlights that the stigma around trades acts as a barrier to entry (Jenkins et al., 2018). Schoolgirls in our research were led to believe that undertaking vocational education and training was considered as inferior compared with a higher education pathway. The stigma around trades was held by parents and secondary schools, and schoolgirls were often persuaded to follow a higher education pathway even if they were interested in pursuing a trades-related pathway.

Recommendation:

- Remove the stigma of trades held by parents and schools by educating them on the structure of a trade and the opportunities it offers. It is envisaged that removing the stigma of trades will require a coordinated approach between Apprenticeships Victoria, Department of Education and Training, Career Education Association of Victoria, the construction industry and associated industry groups, RTOs, and secondary school career educators.

While the stigma of trades impacts on all students irrespective of gender, women experience additional gendered barriers that we examine in the following sections of the report.

8.4. Schoolgirls are capable and able

Our results showed that the gendered stereotype of women not belonging in a construction trade is reinforced at multiple points throughout primary and secondary school and this has an impact on boys and girls, albeit in different ways. Some of the schoolgirls had initially aspired to pursue a trade after secondary school yet had changed their mind due to external influences. Our finding is consistent with that of Struthers (2016) who identified that career aspirations and expectations are different. The former expresses an individual's ideal career goal while the latter the realistic or likely goal, and that socialisation of gender roles within social and environmental contexts influences occupational aspirations and expectations for adolescents (Anker, 1997; Struthers, 2016; Patton and Creed 2007).

The belief that women are not capable and able of entering a trade was voiced by parents, teachers, career educators, and schoolboys. The attitude and behaviour of schoolboys and male teachers in secondary school that women don't belong in construction particularly emerged as a significant barrier for schoolgirls who were considering a career in trades. Schoolgirls were belittled by schoolboys for undertaking construction-related subjects, and their ability to undertake technical tasks was questioned by both teachers and schoolboys.

It has long been recognised that self-efficacy towards STEM subjects and associated occupations grows when children develop a non-gender schema of behaviours. Girls learn they are valued in all careers and related subjects early in their life. One of the critical components of shifting the stereotype across the education system is demonstrating that schoolgirls are capable and able and that working in a trade is not only a "job for the boys". It is integral that challenging the gender norms around occupations should occur in early primary school years, given that children form ideas and thinking about careers at a young age. As suggested by Struthers (2016), *"career exploration may engage children more in their learning; and early intervention may help to overcome the impact of gender stereotypes on children's understanding of occupations"* (pp72-73). Early career education with a specific focus on challenging gendered work norms will address a key issue which emerged in our results. That is, the gendered segregation in subjects and occupational pathways in later years of secondary education.

An important issue raised by participants was the influence of culture and religion on career choices of boys and girls. Careers education within schools must be respective of religious and cultural attributes which can influence the career choices of students.

Recommendations:

- Primary and secondary school curriculum incorporates opportunities to develop skills and knowledge in trade-based skills for all students irrespective of gender to (i) develop the awareness of trades as a possible occupation for women; (ii) develop the confidence and self-efficacy of girls through knowledge and skill development and experience; and (iii) educate boys and girls that women are capable and able and that they belong in construction.

- As part of career education, tradeswomen visit primary and secondary schools to share their experience, lead activities, and act as role models for schoolgirls who may be considering a pathway into a trade. It is also envisaged that schoolboys, teachers and career educators will benefit from exposure to tradeswomen and learn that this is a potential career path for girls.

- Tradeswomen and tradesmen together visit schools to emphasise that a career in trades is gender inclusive, and that men and women in construction can work in a team collegially and respectfully.

- Increase visual representation of tradeswomen in construction through social media, construction-related websites, television coverage. Additionally, representation in the media, websites, and in the broader public domain which reflects that tradeswomen and tradesmen work collegially and respectfully together.

- Career educators actively promote trades as a potential career pathway for schoolgirls.

Many apprentices had entered an apprenticeship as a second career, as they had been unaware of a trades option while at school or had been actively discouraged from pursuing a trade while at school. Anker (1997) contends that there exists a bi-directional relationship between a woman's education and experience and her occupation, and our findings concur with this contention. The macro-level barriers associated with masculine socially constructed stereotypes in building and construction, coupled with organisational and interpersonal barriers, initially swayed the career aspirations of participants to seek alternative occupations. Interestingly, the research identified the strength of career aspirations coupled with dissatisfaction with their alternative career choices led women to pursue building and construction trades later in life. Furthermore, with increased individual capability such as insight and maturity, these women had returned to training in the occupation that had first garnered their attention.

It is acknowledged that some of the schools participating in the research had developed work experience and vocational subjects to expose students to technology and trade occupations, and these were offered to year ten students. These initiatives were designed to enable students to build confidence and skills associated with technologies and construction-related VET education. Opportunities of this kind address the organisational barrier identified by Gyarmati et al. (2017), where women enter trades with relatively less prior knowledge of and exposure to trade occupations compared with males. The positive reinforcement gained through successful skills development resulted in girls developing confidence in their abilities. School programs such as these address the barrier of lack of ability as a deterrent for following aspirational career pathways into the building and construction-related trades.

Within Victoria, the Victorian Curriculum and Assessment Authority has developed the Career Education Framework. The Framework aims to enrich teaching and learning programs to facilitate effective career education for students. It is not until year nine that the Framework sets objectives to enable students to recognise stereotypes, biases and discriminatory behaviours that may limit opportunities for people in the workplace. Additionally, it is not until year ten that students begin to understand the importance of allies in maintaining a positive self-concept and explore various

education and training requirements in future occupations or sectors. However, our results identified that by year nine many schoolgirls had already made important career-based decisions and therefore the timing of the Framework was less effective.

Recommendation:

- Given the experiences of schoolgirls, the timing of career advice in schools, including career opportunities in existing male-dominated occupations and challenging gendered occupational norms, should be introduced earlier in the middle years (years 7-9) of secondary education and expanded more overtly into the social world of both boys and girls.

8.5. Safe and inclusive workplace

Our findings showed that there is widely held perception that the construction workplace is an unsafe place for women. Central to this workplace hazard was the way that male workers psychologically and physically treated women in the workplace. According to our schoolgirls, the perception of an unsafe workplace for women was held by parents and family members who had actively discouraged their daughter/sister/niece from pursuing a trade-related pathway. Significantly, this perception was held by parents and family members who had experience of working in construction along with those who had no experience of working in construction. The very poor reputation of the construction industry acts as a barrier for schoolgirls to enter a trade.

Our findings are consistent with those of Carnemolla and Galea (2021) who contend that in order to attract young women to careers in construction, the industry needs to "significantly improve its image and work to engage directly with the young women it hopes to recruit" (p.835). Our results also suggest that the construction industry needs to "win over" parents, family and friends who influence the career decisions of schoolgirls.

Consistency of crew and workplace is essential for women as it takes time to build relationships and feel included. When individuals feel safe, they take risks in their learning which is central to an apprenticeship or traineeship. Yet, many of our apprentices and trainees had experienced hostility and aggression from male colleagues which had impacted on their learning and progress and contributed to their intention to exit the industry. The poor treatment of women undertaking apprenticeships and traineeships by their male colleagues is considered as a critical barrier for emerging trades and semi-skilled women to complete the learning objectives and qualify.

Recommendations:

- Implementation of regulations and policies and associated education and training across the construction ecosystem which supports the creation of a safe and respectful workplace for all workers, irrespective of gender.

- Drawing on the hierarchy of control model for controlling safety risks in the workplace (WorkSafe Victoria, 2020), develop and implement a hierarchy of control model for managing psychosocial risks in the workplace with a particular focus on gender. The model should be developed in conjunction with all industry stakeholders, including but not limited to employers, industry associations, unions, and health and safety representatives (HSRs), and must include men and women in construction roles.

- Provide training for HSRs and union delegates on the hierarchy of control model for managing psychosocial risks in the workplace.

- As required under the OHS Act, employers must provide and maintain a work environment that is safe and without risk to the health of their employees, so far as is reasonably practicable. This legal obligation includes protecting women from harassment and discrimination through work practices that focus on the perpetrator being held accountable for their behaviour, and that appropriate consequences are applied for unacceptable behaviour. This is particularly important as women remain in a gendered minority group on site and have limited positional power to control and influence their work environment.

Our participants had experienced a lack of educational opportunities in the workplace due to gender-based exclusion and isolation. The acceptance of women as capable and able along with a safe and inclusive workplace creates a work environment that women require to learn their craft. Acceptance and respect opens up learning opportunities and the confidence to ask questions and seek feedback.

8.6. Safe and inclusive classroom

Many of our apprentices had also experienced hostility and inappropriate behaviour from the classroom which mirrored the poor treatment women can experience in the workplace. The inappropriate behaviour in the classroom originated from both male apprentices and trainers. Again, this behaviour created an unsafe space for women in the classroom and created a barrier for learning and retention.

Recommendations:

- Trainers be educated in classroom management to support respectful and inclusive behaviour.

- Trainers model appropriate respectful and inclusive behaviour for their students.

- Recruit more women into trainer roles into VET.

- Add a module/competency unit on safe, respectful, and inclusive behaviour to construction-related VET training packages which all students complete.

The acceptance of women as capable and able along with a safe and inclusive classroom enables the learning environment women require to learn their craft.

A barrier that precludes some women from entering a trade is access to trades training. For some aspiring tradeswomen, their closest trade school was located far from where they lived, and this made attendance very difficult. For example, some of our apprentices lived in country Victoria and did not have access to an RTO. Another barrier experienced by women who cared for dependant aged chidden was the timing of classes. The scheduling of class often clashed with caring responsibilities and there was little flexibility offered by the RTO, making it difficult for these women to attend class.

Recommendation:

- Consider alternate methods for class attendance which is inclusive of women with child caring responsibilities and those who do not have an RTO close by.

8.7. Teaching skills to support learning in the classroom and workplace

Another barrier to learning in the classroom and workplace was the quality of instruction and guidance provided to apprentices and trainees. Our results suggest this may be due to the limited knowledge and application of adult education principles in instructional design (Holton et al., 2001). While this was not a gender-specific barrier, it was part of a suite of barriers which women can experience that challenge their capacity to gain adequate knowledge and skills to become fully qualified.

Recommendation:

- Support the development of adult education principles in instructional design for trainers and employers.

8.8. Employing women as apprentices and trainees

Undertaking an apprenticeship is only possible when an employer has been secured. Often the women that do secure employment have existing connections to construction, such as through family members.

Completion of a pre-apprenticeship was a commonly cited method for establishing connections with employers, gaining employment, and building confidence. Therefore, the completion of a pre-apprenticeship in a trade has become an important entry point for women seeking to enter the industry. GTOs also played a pivotal role in helping women to secure employment so that they were able to commence their apprenticeship.

As a woman, many participants identified that securing employment was one of the key barriers to undertaking a trade. Employers chose not to employ a women into an apprentice or trainee role for various reasons:

- Women are not physically capable.
- Women will not be able to survive in the male-dominated culture which does not accept women.
- Employers are not willing to change the workplace culture to accommodate women.
- Having women in the workplace will create a “distraction” for men.
- Women will leave to start a family.
- As many women commence their apprenticeship at 21 years or age or older, they are required to be paid a fourth-year apprentice rate which was considered “too expensive”.

Recommendations:

- Challenge employers’ perception that women are not capable and able through the creation of industry partnerships with secondary schools and RTOs.
- Implement recruitment, hiring, and advancement practices which do not disadvantage women.
- Earlier we made recommendations around the creation of a safe and inclusive workplace to encourage schoolgirls to enter a trade. It is expected that a shift to a respectful and inclusive

workplace culture also will encourage more employers to employ women, as there will be no longer an expectation that women will need to "survive" in a toxic industry culture or that employers will need to "accommodate" women.

- Workplace industrial instruments that enable work practices that are flexible and support the various life and family stages of women so that they can retain a trade-based career in construction.

- Implement financial incentives for employers to take on adult women as apprentices. This is particularly important as the majority of our participants commenced their apprenticeship as an adult.

Given the challenge of securing an employer, many of our apprentices and trainees intended to stay with their current employer over the coming decade. This could be problematic if the employer treated the apprentice or trainee poorly, however there was a sense from some women that they had little opportunity to leave and join another employer.

8.9. Supporting women across the apprenticeship

Many of our participants felt isolated in the classroom and workplace as often they were the sole woman. When they were experiencing gender-related challenges they often felt like they had no one who understood what they were going through who could provide support and advice. Being mentored by a tradeswoman was considered as important to assist the apprentice to navigate challenges experienced in the classroom and workplace. A mentor can also act as a role model for women and provide support which otherwise may not be available in the classroom or workplace.

Recommendations

- Develop a formal training program where tradeswomen who choose to become mentors are provided with training. For example, Tradeswomen Australia offer their mentors with training so that are well equipped to mentor (https://tradeswomenaus.com/tradeswomen/mentoring/).

- While women remain a minority in construction, allocate all women in apprentice roles with a mentor who is a tradeswoman.

- Connect apprentices and trainees with Communities of Practices (CoP) that specifically support women in construction. For example, a range of CoP for tradeswomen is outlined in Part 8 of the report: Women in Construction: Exploring the Barriers and Supportive Enablers of Wellbeing in the Workplace.

8.10. A clear pathway into trades

Schoolgirls who were pursuing a VCAL pathway identified the importance of career education in identifying their pursuit of VCAL, associated subjects, and required work placements. Of note, the schools of VCAL students had made a significant effort in creating a VCAL program that held a different yet equally valuable role to VCE and associated career pathways. Further, these schools had developed occupation-related experiences for students at the year ten level to ensure students had (i) an understanding of the VCAL program and (ii) opportunities to experience related occupations, including building and construction trades, before making their senior secondary certificate and subject

choice. These approaches provided students and their parents with greater exposure to different educational pathways and ensured students could decide on their education based on their learning needs. Consequently, schoolgirls at these schools were aware of the multiple pathways available to them to achieve their chosen careers.

However, many schoolgirls were not clear on the pathway into a trade and this created a barrier for entry into construction. Some of the schoolgirls in our study stated they were aware they "could" but didn't know "how" to follow their desire to work in the industry or gain experience with building and construction-related activities.

Many participants identified that their schools had emphasised and articulated the pathway into higher education, and this is consistent with Clarke (2012) who argues that secondary school students receive more advice on university pathways relative to advice on vocational pathways. Given this emphasis on university entry, it was unclear for students on what steps were needed to prepare for and access an apprentice or trainee program. This is particularly the case as many secondary schools do not offer an educational pathway into a trade, and career educators may not be aware of the pathway into a trade and therefore unable to advise students.

Schoolgirls suggested there was a need for communication targeted to a youth audience via social media platforms such as Instagram and YouTube to engage young people in non-traditional gendered occupations. Social media presents an opportunity to address individual, interpersonal, and structured cultural norms and challenge the assumption that building and construction trades were jobs for boys. Social media was also considered as an effective way to attract adult women into trades.

Some mature-age apprentices had gained knowledge about the pathway into a trade through a friend or family member already in construction. For those women who had an interest in entering a trade as a second career but with no connection to the construction industry, navigating the pathway into a trade was considered unclear and this acted as a barrier to entry.

Recommendations:

- Apprenticeships Victoria, Department of Education and Training, Career Education Association of Victoria, the construction industry and associated industry groups, and RTOs engage with career educators to provide information on pathways into trades.
- Promote websites to schoolgirls, teachers, career educators that raise awareness and provide information on trades in construction. Information should be easy to find and clearly outlines the steps required. For example, this Victorian Government website provide information on trades targeted specifically to women: https://womeninconstruction.com.au/
- Communication is developed by schoolgirls for schoolgirls on the possibility of a career in a trade or skilled role.

The concept of partnerships between schools, parents, carers and families, and the broader community, business and other education and training providers is identified by Klatt et al. (2018) to be an essential factor that influences student outcomes. There is a current gap in the education system concerning awareness of trade occupations and the opportunity for women in these roles.

Recommendation:

- Partnerships between schools and RTOs, construction organisations, and tradeswomen can facilitate a greater awareness among students, teachers and career educators which raises awareness and promotes the participation in trade-related education, further training and future employment.

8.11. Navigating the apprenticeship governance system

There exists a complex set of relationships and responsibilities shared across key governance groups including ASSN providers, GTOs, ASOs and VAFSs under the responsibility of the Federal and State government that govern the recruitment and support of apprentices in their learning journey. The role of these groups, as explained above, is vital to ensure the responsibilities and expectations of the employer, RTO and apprentice are communicated, understood, and met. However, given the complexity of the relationships, coupled with various learning environments and associated experiences, women reported feeling isolated, unsupported and confused about the system and the support available to them.

Recommendations:

- Auditing of the compliance of employers, apprentices and RTOs to ensure contractual requirements are met which enables a safe and supportive workplace that facilitates learning.
- Increased active outreach to apprentices which provides support that is valued and effective.

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