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RESEARCH REPORT: APPRENTICESHIP SOCIAL SUPPORTS

Apprentice Support Structures for Young People in West of Melbourne Project

Commissioned report

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Contents

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Introduction

The Apprentice Support Structures for Young People (ASSYP) research project was undertaken as a pilot project for the Victorian Government Department of Education and builds on the work of the *Strategies for Skills and Jobs in Melbourne's West* Project (SSJMW). The research project applied an evidence-based approach to jobs and skills in the west of Melbourne, the geographical location of Victoria University and the communities we serve. The research project was future-focused, identifying the jobs and skills that should be aspired to in Melbourne's West and how that may be realised (Wade et al., 2022). Overall, the project identified that skills required by employers in Melbourne's West 'do not closely align with the skills possessed by the local population' and 'better matching the skills of people to the work opportunities in the West will be key to greater future prosperity' (Wade et al., 2022, p. 3-6).

The ASSYP project focused on young apprentices in Melbourne's West, a primary source of skills that are not aligning with the needs of employers. Our project considered what support structures and associated soft skills are required to ensure apprentices stay engaged through to completion.

Our project focused on apprentices in the construction trades, and aimed to investigate the following question:

> What apprentice support structures and associated soft skills are vital for young people (aged 15— 25 years) to navigate the complex transition from school to apprenticeship in the infrastructure/construction trades and how can these be identified, measured and reported on?

Vocational education and training have been identified as 'the greatest challenge and the greatest opportunity in meeting labour market needs' (Macklin, 2020). Apprenticeships continue to play a vital role in skills development in Victoria and the capacity to meet the current, emerging and future needs of industry (McKell Institute, 2022).

The ASSYP project focused on apprentices in the construction trades as it has been determined that COVID-19 will have a negative impact on apprentice completion rates result over the next eight years (Hurley, 2020). Prior to COVID-19, completion rates were already trending downwards. As apprenticeships in trades are traditionally of four years duration, it is necessary to look at time frames that are long enough to enable completion (Naidu et al., 2020). As a result, we have compared data for those who commenced their apprenticeship

(or traineeship)[1] in 2017 with those who commenced in 2016 (NCVER, 2022). Completion rates in 2021 for those in trade occupations fell from 43.9 per cent for those who commenced in 2016 to 42 per cent for those who commenced in 2017.

To increase retention and completion rates, recent reports (Maklin, 2020; McKell Institute, 2022) argue that more support is required, to connect services, and take a best practice and active approach with students. However, there is less clarity around what that support looks like.

Strategies for Skills and Jobs in Melbourne's West: the role of apprentices

The SSJMW project identified key strategic directions, with focal enables to achieve 'industry-driven skills development and sustainable job growth in the future' (Wade et al., 2022, p. 4). Four focal Enablers were developed in consultation with stakeholders:

1. Creating a local skill ecosystem
2. Facilitating innovation, growth and change
3. Authentic industry engagement
4. Institutions as a space for industry and educational collaboration

The report identified that vocational and higher education pathways will be required to support these local Focal Enablers. It also acknowledged that the 'current skills shortage are complex and skill gaps can be tracked back to different sections of the training and recruitment pipeline' (Wade, et al., 2022, p. 7).

Post-secondary school engagement in education and training with young people will play a significant role in addressing the skills mismatch identified in Melbourne's West (Wade et al., 2022). Understanding the particular challenges to engagement and identifying opportunities to better support young people from enrolment through to completion of apprenticeships will play a vital role in any jobs and skills strategy.

The ASSYP project engaged with young apprentices, support agencies and organisations for apprentices, stakeholders in vocational education and learning, careers and industry partners. The aim of this supplementary report is to introduce an apprenticeship, youth-focused perspective of the support required for young apprentices to enter into vocational education and training and remain engaged to the completion of their skills development. Similar

[1] Completion and attrition rates report by the National Centre for Vocational Education Research (NCVER), include rates for trainees as well as apprentices. As a result we are unable to separate these rates in our reporting.

challenges and opportunities could be applied to apprenticeships in other vocational education and learning, as completion rates are consistently low across different areas of skill development (NCVER, 2022).

The ASSYP project has identified Macro, Meso and Micro levels of strategy that need to be addressed to disrupt the impact on skills development, through the entrenched and downward non-completion of apprenticeships in the construction trades. Some strategies are systemic and complex, requiring changes at a national and state level. They are offered here not as quick solutions but as ways to facilitate the innovation, growth and change that is a key focus of the SSJMW Report (Wade et al., 2022). Other strategies are arguably more achievable at the local level but consider needs in the context of 'an industry or region' (Wade et al., 2022, p. 14) rather than individual companies or organisations. The Meso level is a complex space that introduces the challenges, and opportunities, young people face in their transition to an apprenticeship, and retention, in the construction trades. Understanding the Meso level is vital for SSJMW stakeholders wanting to work together with young people to meet their skills needs.

The Micro level, in the context of apprentice experience and support, is finding a way to engage young people in bottom-up actions, to acknowledge and work with their skills, capabilities, desires and motivation. Moving these from adult-centric, traditional models of industries like the construction trades, is necessary to implement change and meet the needs of Melbourne's West into the future.

Literature Review

See standalone literature review in Appendix B.

Methodology

The Apprentice Support Structures for Young People (ASSYP) project built on the SSJMW project and benefited from the survey, interviews with industry stakeholders and focus groups with TAFE educators and students, conducted for these projects, with VUHREC, HRE21-072 approval. A standalone Literature Review, *Improving apprenticeship support structures for young people in construction trades, (see Appendix B)* was undertaken specifically for this project before seven interviews with stakeholders and two focus groups with eleven apprentices (all male) were undertaken.

The participants included:

Role	Sector	Interview or focus group	Number of participants
Manager	Jobs and skills industry	Interview	1
Senior Manager	Built environment education	Interview	1
Project Worker	Mental health – tradies	Interview	2
Executive	Careers sector	Interview	1
Manager	Apprenticeship support	Interview	2
Apprentice	Carpentry	Focus group	4
Apprentice	Engineering	Focus Group	3
Apprentice	Electrical	Focus Group	4

NVivo analysis of emerging themes was undertaken for interviews and focus groups separately. The synthesis of findings is presented in this report. We have chosen to include verbatim quotes to convey the authentic response from participants as the aim of this project was to identify what support structures are required, and how they can be captured, measured and reported. As a proof of concept project, capturing that information directly from participants enables us to undertake our analysis and identify relevant themes. An overview of the questions posed to interview participants and focus group participants is outlined in Appendix A.

Themes

Macro level challenges

At the Macro level, the top-down policies at the national, state or regional level, we continue to see education and training through the primary and secondary years that impact young people's decision-making and capability, transitions to apprenticeships in the construction trade and the capacity to stay engaged in apprenticeships through to completion. Our research shows that it is often too late to wait to address education and training decisions, and choices, at the vocational and higher education level.

Decision making

It was evident some young people are forced to make or accept decisions about career pathways in their early secondary school years, aged 14-15, with little understanding or information about specific industries, sectors, or roles. As a result, employers and vocational education and training providers are being asked to provide support to young people who had little knowledge of apprenticeships and the construction trades prior to enrolling.

> *We would always argue that one of the reasons we see non-completions is that young people are making decisions on selecting an apprenticeship [we don't believe]' with the full knowledge and understanding of what they're actually signing up for.*
> (Executive, Careers Industry, Australia)

> *I think that's one of the major problems, its information – real information, hands-on physical ability to see and touch and do. Given the cohort we're talking about, would help them to understand which trade it is that they're most likely to want to be a part of. The initial choice of their apprenticeship, I think that's one of the biggest issues.*
> (Manager, Apprentice Support, Victoria)

> *It seems like only the VCAL kids went and did a trade. That was never really given an option doing VCE, it was always all right, what Uni, what course did you want to do sort of thing. So, in a way that, yes, but after I finished school what pathway do I have to take to be able to get into the trade.*
> *(Young apprentice, focus group, TAFE, Victoria)*

Prescribed pathways

Young people and stakeholders, interviewed for this project, all reported a focus on University pathways through their secondary school years, or at the least early ones through Years 7 –

10. This was reported as the primary pathway until it was determined that a young person, 1) did not have what it takes to complete VCE subjects (as assessed by the school), 2) disengaged with education, and/or 3) decided to engage in vocational learning either in the secondary school or through a TAFE or private provider.

Throughout their secondary school years, until the age of 14-15 years, young people are funnelled into higher education or vocational learning pathways. This is not a new phenomenon, but much of how we understand young people's educational aspirations focuses on social capital within the family, parental background, schools, and peer networks. However, our research also highlighted the systemic challenges of Australia's 'weak linkages between the education system and labour market' (Chesters & Smith, 2015, p. 944) and the shift in the 1990s:

> With the move away from tech schools and a very heavily University focused education system, that's probably done a lot of damage as well (Manager, TAFE Gender and Equality project, Interview).

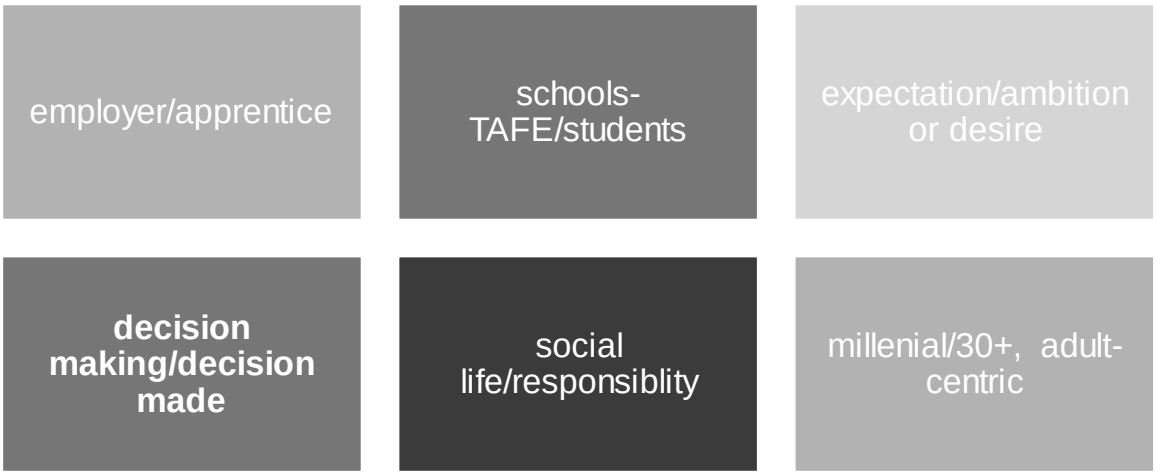
The consequences of schools' determining young people's employment trajectories are evident in the sustained levels of retention and completion in apprenticeships (Macklin, 2020; NCVER, 2022). Similarly, schools' making decisions on behalf of young people, based on their educational attainment at the age of 15-16, and not engaging them in this major life decision has negative consequences for young people.

> *So at Year 10 level, when they used to come and see me [careers advisor] what would happen is – and this still happens – what would happen is I would just get this spreadsheet from the Heads of learning areas and they had already gone through and determined – put next to each kid's name, what subjects they would be able to do in Year 11 and 12. … So I'd have to say to the kid you're not eligible to do physics and chemistry.*
>
> *[And they'd say:] 'But I want to do physics and chemistry'*
>
> *[And I would have to say:] 'No, you're not eligible because you haven't got good enough grades. So there was no option for that kid. He just couldn't.' No school would admit it but it goes on.*
> (Executive, Careers Industry, Australia)
>
> *I feel like a lot of the time anyway, with school anyway, it seems like only the VCAL kids went and did a trade. That was never really given an option doing VCE, it was always all right, what Uni, what course did you want to do, sort of thing.*
> (Young apprentice, focus group, Victoria).
>
> *We spoke to career pathway people at school and that, but that was all for University courses and what courses I could get with my school and whatnot. Never really came up with a trade, didn't want to go down the*

Uni pathway anymore. My school was heavily focused on trying to get people into University unless you were doing VCAL then they'd try and get you into work. But yeah, I changed my mind halfway through year 12. (Young apprentice, focus group, Victoria)

Meso level challenges

The Meso level is the primary focus of this research. What we found is a complex space with evidence of tension between young people and their transition to, and retention, in a trade. The intent here is not to set young people up or label them in binary scenarios, but what we heard is that for young people it can feel like:



Evidence of the career aspirations of millennials (those born between 1995 and 2012) is building and there is evidence that they enter the workforce with expectations of career development, learning, mentorship and career growth (Barhate & Durani, 2020).

COVID-19, the recession and economic recovery have had a significant impact on the youth market, and young people are particularly vulnerable to long-term scarring effects (e61, 2022). The flow-on effect to employers requires mitigation strategies to be incorporated into jobs and skills planning.

Transitions to work

At the same time, we know that transitions to work for young people occur at a life-stage transition, which for some can be positive and for others a period of vulnerability and risk (Corney & Du Plessis, 2011). These challenges have become more complex as a result of rapid societal, cultural, and technological advancement, alongside changing organisational culture and structures, work-life balance, and environmental change that impacts the intrinsic and extrinsic motivation of young people (Barhate & Durani, 2020). Those challenges were evident in our research.

The stigma and stereotypes of vocation trades

With the stigma of choosing a vocation trade over a University pathway so prevalent in the young apprentice's narrative, we asked them whether they experienced an ongoing stigma from society:

> *Yeah, people definitely think lower of or not smart enough to go do a Uni degree so you go do a trade. Some of the people it's like, smartest people I know are in the trades. So, people don't realise how much actually goes into this program. You look at especially we're doing roofing at the moment and all the trigonometry and that, you look back when you did that in year nine or whatever it was and not thinking much of it, now you look back oh, the teacher was right when they said this is part of everyday life.*
> (Young apprentice, focus group, Victoria)

They also spoke to cultural stereotypes that are not obvious now they have joined the trades workforce.

> *You've heard all the ones, all tradies go on the weekends drinking, getting on the drugs, everything like that. You hear it all. Sure, I've met more than a couple that are like that, but a lot of the time, some people you look at and you would never even expect them to do that. Some blokes on site don't even drink. I know a fair few blokes on my site that haven't drunk in 10 years.*
> (Young apprentice, focus group, Victoria)

Family expectations, understanding and support

As we know that social capital plays a significant role in young people's decision-making (Chesters & Smith, 2015), we asked the young apprentices about the expectations of their families:

> *No, that was living at home, if I still wanted to live at home, if I wasn't going to go to Uni it was go get a full-time job because not living and free balling living at home. So, I was going to go work anyway, I couldn't imagine*

sitting at home, I'd drive myself crazy.
(Young apprentice, focus group, Victoria)

I was going to drop out, Dad was going to make me drop out, he said, "If you're going to do a trade, you might as well start now." Then Mum wanted me to finish year 12, so I finished year 12 and then started as soon as I finished.
(Young apprentice, focus group, Victoria)

Yeah, Mum and Dad were pretty supportive of it. Dad managed to find me a job through – he was contracting to a bloke who was after first year, that's how I kind of got the job. But yeah, no, still live at home.
(Young apprentice, focus group, Victoria)

Relationships: family, intimate and peer

We also asked the young apprentices about how challenging it was to retain relationships as they transitioned into apprenticeships and the workforce. Some reflected on apprenticeship wages and how without the additional support of family or partners, they would not have been able to afford to complete the apprenticeship:

Even on a mature apprentice wage, the cost of accommodation, you're either going to be travelling long distances to get to work so it's going to cost you heaps of fuel now or you need to have a partner who's willing to chuck in some extra cash each week. So, incentives like that to ease the burden would definitely go a long way.
(Young apprentice, focus group, Victoria)

Others reported that their work schedules make it difficult to retain a partner and/or interact with peers:

I wake up at 5:30 and I get home about 6:30, sometimes even 7:00. But yeah, I eat dinner, then I go do my own thing for a little bit and go to bed. So, I rarely get to interact with my family or even friends.
(Young apprentice, focus group, Victoria)

There is benefits to having a partner. There is also cons as well. Accommodation - it does help out with accommodation but you're still going to be caught up with time and other commitments, especially when you're working hard days and you want to go out to date nights every week or something.
(Young apprentice, focus group, Victoria)

The admin of everyday life: finance, transport, accommodation

The everyday practicalities of transport, accommodation, and finance are not new (Corney & Du Plessis, 211). We argue though, that often the more complex challenges of COVID-19,

technology, and new and emerging jobs can overlook the basic needs of young people who are transitioning from a heavily structured school environment to the workforce.

Transport was a bit issue and several spoke about staying at school longer just to be eligible to get a licence, or in some instances, relying on parents to get them to the first mode of transport:

> Mum's not taking you to work. And unfortunately, buses and trains can only get you so far. So, it worked out easier for me, and I guess more realistic for me just to stay in school, because I couldn't drive. I'd turned 18 in January and I finished in October, so there was three months off – that was definitely a big reason what kept me in school, yeah, 100%, the travel aspect.
> (Young apprentice, focus group, Victoria)

> *I just had my mum, she dedicated three years to taking me everywhere or to a bus stop that another worker would pick me up on the way or just shit like that.*
> (Young apprentice, focus group, Victoria)

Others talked about the challenges of finding accommodation with some reflecting on couch surfing, staying with grandparents or at home longer than they planned:

> *That's what I was doing for the last three months, just trying to get accommodation.*
> (Young apprentice, focus group, Victoria).

Money was another concern, although those working on commercial sites were less concerned than their peers working on domestic sites:

> *It's like every week, budgeting is - constantly budgeting, "Oh fuck, that didn't work," budget again, "That didn't work," budget again.*
> (Young apprentice, focus group, Victoria)

Several talked about the need for support services that offered them financial guidance or assistance managing a week-to-week budget:

> *Financial support or even someone like a counsellor or advisory I think would be invaluable to apprentices because a lot of them I think - you don't get taught in school about how to handle your expenses, how to write up anything like that so if you have rent or you have groceries, a lot of people live for the weekend so they go out on the weekend.*
> (Young apprentice, focus group, Victoria)

> *I do think that some sort of maybe TAFE accommodation would've been helpful for students. I know that with Unis, if you're studying with a different Uni, there is accommodation available for fairly cheap so I think that could be something that could be looked into, maybe a facility or a building that could be facilitated for accommodation, cheap accommodation for students because we're all apprentices, we don't get*

much.
(Young apprentice, focus group, Victoria)

Life stage

Co-author, Tim Corney and his colleague Karin Du Plessis, wrote about *Apprentices: young people in transition* (2011) over 10 years ago after conducting research with apprentices in the building and construction industries. Our research in 2022, revealed many of the same challenges, as we consider the life stage of young apprentices, the expectations and pressure to successfully transition to work. What has changed are new employment landscapes for young people (Chesters & Cuervo, 2023) and the disproportionate impact of COVID-19 on the lives, education and mental health of young Australians (Li et al., 2022).

There's been situations where I've seen a first-year apprentice complaining about his weekend while holding an active and a neutral about to touch them together and he was going to trip the system out and I'll say he's going to do more.
(Young apprentice, focus group, Victoria)

because say, you're working with someone that's a bit frazzled from the weekend for example - electrical, it's not - it's dangerous, you know what I mean? One mistake could end your life or somebody else's so yeah, definitely.
(Young apprentice, focus group, Victoria)

Oh, come our Friday night," and you're like, "I can't, I've got to start work at six o'clock Saturday morning." The amount of parties I missed or went out and didn't want to drink because I knew I had to go up to work the next day. Missed out on a lot during that.
(Young apprentice, focus group, Victoria)

You've got to have the right mindset to do it. You can't just jump into it, not knowing what you want to do or where you want your life to go.
(Young apprentice, focus group, Victoria)

Mental health

Prior to the COVID-19 pandemic, mental ill-health represented 'the main threat to the health, survival and future potential of young people around the world. There are indications that this is a rising tide of vulnerability and need for care, a trend that has been augmented by the COVID-19 pandemic' (McGorry et al., 2022, p. 61). While we do not want to dismiss the incredible resistance of many young people through COVID-19, it is evident that there are significant gaps and inequalities around access to mental health care for young people, and a system that is unable to meet the needs of young Australians (Gao et al., 2022). This leaves young apprentices unable to find support when needed:

Not really, I don't find you can talk to them because you want to have the vision of you're a good apprentice, you do your job, you don't complain a lot, you don't get in trouble, keep your head down, do your work and if you talk to them, they're always going to worry about you like are you good for the job, are you going to hurt yourself on site, are you going to hurt others onsite? So, it's not easy to talk to people.
(Young apprentice, focus groups, Victoria)

Work can definitely put a lot more stress on you and I'll be the first one to admit my mental health is pretty average. But then with that stress of work definitely some days just already going through a lot of stuff and then work, add a lot more stress and that, as bad as it sounds you tend to take things out when you get home, even though you don't mean to, just turn around and snap.
(Young people, focus group, Victoria)

Young people who have been supported either in the workforce or through support to take the time to seek that assistance report better outcomes:

I actually find going to work kind of helps mental health because I've got a really good crew. So, everyone kind of cracks jokes, you have a laugh throughout the day. It's a bit rare but no one really gets angry on my site. The boss is pretty supportive, funny. Yeah, it's just a calm crew to work for. So, I find it good to work there.
(Young apprentice, focus group, Victoria)

I personally have been pretty lucky in the last 12 months. Gone through a lot of family stuff and lost a loved one, and even with work and that anyway, I've had to take time to speak to professionals and that anyway. My boss has pretty much said, "I don't care if it's [the] middle of the day go talk to someone, I'll still pay you, I don't care. Sort yourself out," sort of thing. So, I've been really lucky, especially in the last few months.
(Young apprentice, focus group, Victoria)

Micro level opportunities

Recommendations for a way forward

And have we actually asked young people what they want? So I don't know. I mean, I'm in my 50s now, I've got no idea what a 17-year-old wants who is looking to undertake an apprenticeship. Ask them. I've got some ideas, but they might say "Well I think it's really important that I am allowed to take my mobile phone to work" or things for them which may be important which, to me, I'd sort of go I wouldn't even rate that as something that is important. I think in a lot of cases we develop systems and processes for young people without actually asking young people is this what they want.
(Executive, Careers Industry, Interview)

Our findings in this section are underpinned by the premise that young people must be fundamental stakeholders in any job and skills plan. They are informed by the understanding

that a tension exists between the entrenched traditions of the construction trades, political constraints around TAFE and the delivery of qualifications and training, and the transition of, and engagement with, young people in the workforce. The significant gaps and challenges of accessing mental health care under a system that does not meet the needs of young Australians have also informed our recommendations. The following statements about young people and our economic recovery through COVID-19 times must be considered:

1. Young people who are not well-matched to their jobs
2. Young people who have not been working for a sustained period, including the long-term unemployed and those not in the labour force
3. Young people who have not been working and not studying, particularly men aged between 20 and 24 years
4. Young students who have been disproportionately affected by school closures and the shift to remote learning (e61 Institute, 2022)
5. Young people from migrant and refugee backgrounds and those who identify as LGBTIQ+, and other marginalised groups require targeted support

Overall Findings:

1. Support structures exist but they are under pressure and don't target all year levels in TAFE, this includes:
    a. A lack of dedicated support structures in private Registered Training Organisations and Group Training Companies;
    b. A lack of industry-based support structures for apprentices that can be accessed by employers of apprentices, particularly small businesses in non-commercial sectors;
    c. Lack of data on the reasons for non-completion of trade training, which would enable a greater understanding of specific support required for specific issues; and,
    d. Generic subsidy policies, state and federal, around training, tool allowances, subsidised car registration, accommodation or rent subsidies – targeted to particular regions, e.g. Melbourne's West.
2. Young people need more targeted and informed career choice options/opportunities in secondary school:
    a. Career information needs to be delivered in more 'hands-on ways';

   b. Career information should be delivered across the primary school years, in age-appropriate ways to expose children to future employment, career opportunities; and
   c. Schools are under pressure and should not be the only system/organisation tasked with providing employment and career opportunities to students.
3. Move away from schools' funnelling students (particularly those with behavioural and other perceived problems) to vocational learning, keeping options open.
   a. Recognising that the current system is under pressure due to time and resourcing pressures, but making career decisions on behalf of young people without including them in the process has life-long impacts on young people, employers and industry.
4. Recognising that the life stage of young apprentices presents many 'transitional' challenges.
5. Finding ways to support young people who leave school and trial several trades or employment pathways without support – doesn't make sense regarding: life stage, decision-making capacity.
6. Finding ways to provide education to employers on young people's career aspirations and personal life stage transition needs.
7. Finding ways to support employers to engage and support young people as they transition from work to an apprenticeship in the construction trades.

Strategies for skills and jobs in Melbourne's West: leading innovative systems-level change

Many opportunities exist to trial and lead innovative ways to engage with young people and shake up the entrenched traditions in schools, employers and industry that sit around traditional work experience, schools careers counsellors, TAFE systems, employers and industry that are not providing the right support structures for young people.

> *I think a positive engagement between employers and young people prior to transition out of school is crucial.*
> (Executive, Career Industry, interview)

Recommendations

- SSMJMW stakeholders must work together to create strong networks that understand the aspirations and needs of young people in Melbourne's West, and develop strategies and support structures that build a future workforce together.
- Advocate for apprenticeship support services to be expanded, meeting the needs of first years through to completion, and raise the profile so all know of services.
- Understand and mitigate against the challenges some cohorts of young people will experience from COVID-19, and create opportunities to engage with those who are not currently working or learning.
- Advocate for more mental health services, for young people in general, but also targeting young people through their transition stage from secondary school to the workforce.
- Further research on non-completions, i.e. why very significant numbers of young people don't complete their apprenticeships and particularly focused on what practical and policy supports young people may need to increase apprenticeship completion rates.

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Appendix A – Interview and focus group questions

Interview questions for industry stakeholders and support structures

What is your role and how did you come to work in this area?

Employers are telling us that young people's attitudes to work and workplace expectations are the greatest social challenges young apprentices face as they transition. What is your opinion on this?

Are there particular attributes that enable a young person to successfully complete an apprenticeship? What are they?

What type of social support, or what we are calling informal and relational, is required for young people to successfully transition from school to apprenticeships and remain to completion?

The Macklin Future Skills Report identified 'best practice' models of support are required for young people to successfully complete an apprenticeship. What does that model of support look like to you?

Where and how do we create that model of support for young people?

Improving apprentice support structures for young people – focus groups

What are the greatest challenges young people face in transitioning from school to apprenticeships? How are those Unique to the 2020s in comparison to previous decades?

Are there particular attributes that enable a young person to successfully complete an apprenticeship? What are they?

Current reports have identified 'best practice' models of support are required for young people to successfully complete an apprenticeship. What does that model of support look like to you?

What about social support structures, like family, peers, schools etc?

What about the cultural impacts of the apprentice's life stage? E.g. driver's licence, public transport at 5.30/6 am, social activities including drinking and illicit drugs, sporting endeavours (injuries etc).

What about the educational and training aspect? E.g. student support at TAFE, ongoing engagement in learning, TAFE training structures – e.g. weekly attendance or week-long blocks.

What about attitudes to work and the workplace?

Are there particular stages during an apprenticeship where young people drop out or look for other options?

Appendix B – Standalone Literature Review

Improving apprenticeship support structures for young people in construction industries

Literature Review

VICTORIA UNIVERSITY
MELBOURNE AUSTRALIA

Table of Contents

1 Introduction

This review focusses on our current understanding of apprentice support structures for young people in construction industries. In these trades, apprenticeships are firmly anchored as one of the key models for training to become a qualified tradesperson, and the history of apprenticeships as workplace training can be traced as far back as ancient Babylonian times (Corney & du Plessis, 2011c). Historically, apprenticeships involved a young apprentice being bonded to an employer via a legally binding indenture, which often involved living in the household of the master tradesperson (Corney & du Plessis, 2011c). However, over time and place, the characteristics of an apprenticeship have evolved significantly. Today, different apprenticeship training systems exist in different parts of the world – each with its own challenges and opportunities for apprentices, employers, training agencies, policymakers and the labour market (Ray, 2001).

Apprenticeships play a unique role in post-secondary non-compulsory education in that they provide apprentices with paid employment for some years, coupled with the opportunity to learn skills from qualified tradespersons (Ray, 2001). Training takes place both in the workplace as well as in Technical and Further Education (TAFE) colleges or Registered Training Organisations (RTOs). Traditionally, apprentices were young people and the apprenticeship marked the time of the transition from school to work life – a period in which young people are often very vulnerable as it coincides with major life changes such as moving away from home and family, potentially making significant financial decisions and changes in social relationships (Corney & du Plessis, 2011c). In this transition, the apprenticeship model is unique in that it can potentially foster very meaningful mentoring relationships and important psychosocial support that other post-secondary non-compulsory education models simply cannot provide (Buchanan, Raffaele, et al., 2016). However, it becomes clear in this review that this potential is not being realised effectively. Completion rates for apprenticeships in Australia are very low and skill shortages remain a major problem for many trade industries (including construction) (Snell & Hart, 2008). Simultaneously, young Australian males working in the construction industry are twice as likely to take their own lives than other young Australian males and are at high risk for poor mental health and alcohol and other drug related harm (Ross et al., 2021b). In 2021, there are also a range of new challenges related to the impacts of COVID-19 pandemic on young people (Australian Institute of Health and Wellness, 2021) coupled with a possible future drop (or short-term artificial inflation) in apprenticeship commencements due to the pandemic, which represents a significant problem for school leavers who may have reduced

options or significant delays when making the transition from school to the workforce (Hurley, 2020)[2].

This literature review of support structures for young people in construction industries begins with a closer look at the context of today's Australian apprenticeships as well as the current policy and legislative context (section 2). This is followed by a review of the literature on attrition in construction apprenticeships (section 3) and a review of decision making and the logical progression of choices (section 4). The review then looks in detail at the barriers to apprenticeship completion (section 5) and what has been written about supports that exist or could be implemented (section 6).

2 The context of Australian apprenticeships in traditional trade areas

The 'Australian Apprenticeships' training system

The Australian Apprenticeships training system in place today is the product of a long history of reforms and interventions, which the NCVER has meticulously recorded dating back to 1939 (NCVER, 2015). Of these, Snell and Hart (2008) have identify several key events that shaped the training system into what it is today. First was the trigger of rapidly declining apprenticeship numbers in the 1980s and 1990s, driven in part by privatisation and declining employer interest in training provision. As a response, shorter and more flexible traineeships were introduced to address youth unemployment and help provide early school leavers with basic entry level workforce skills. When traineeships were subsequently expanded to a wider range of occupations and the requirement for off-the-job training was relaxed, this part of the sector began experience significant growth. In 1996, the Howard Government then embarked on a major overhaul of the system, which brought apprenticeships and traineeships together into the same framework and involved further privatisation and deregulation. This evolved into what is now called the Australian Apprenticeship training system. Collectively, these changes have resulted in significant increases among those in-training, however, much of this growth continues to be associated with low-skill traineeships in occupations such hospitality (Snell & Hart, 2008, pp. 45-46).

Under the Australian Apprenticeship system, training in a skilled trade (which includes the building and construction trades) still involves a 'traditional apprenticeship', while training in a vocational area usually involves a traineeship (Victorian Registration & Qualifications Authority [VRQA], 2021). This purpose of this literature review is to investigate the 'traditional apprenticeships' in building and construction, which is why we must first take a closer look at what sets them apart within the system. Table 1 provides an overview of the definitions and key differences in relation to the qualifications and timeframes involved.

[2] Please refer to Appendix A for a summary of how the pandemic is already affecting young people across several life domains and Appendix B, which shows an estimated impact of the pandemic on apprenticeships and traineeships. The government's 'Boosting Apprenticeship Commencements Wage Subsidy is discussed in more detail in section 2 (p.13).

Table 1: Differences between apprenticeships and traineeships

Australian Apprenticeships in 2021 (NCVER Definitions)	
Apprenticeship Definition	**Traineeship Definition**
A structured training arrangement which combines on-the-job training and work experience while in paid employment, with formal off-the-job training with a registered training organisation (RTO). The apprentice enters into a contract of training or training agreement with an employer, which imposes mutual obligations on both parties. Traditionally, apprenticeships were in trade occupations (declared vocations) and were of four years' duration, but the duration of contracts has been formally reduced in some trades and the apprenticeship system broadened. (Naidu et al., 2020, p. 4)	A system of vocational training combining off-the-job training with an approved training provider with on-the-job training and practical work experience. Traineeships generally take one to two years and are now a part of the Australian Apprenticeships system. (Naidu et al., 2020, p. 50)
Definition of a Traditional Apprentice	**Definition of a Trainee**
An apprentice who is employed under a contract of training in a trades occupation, training towards a qualification at Australian Qualifications Framework (AQF) level III or higher, and the expected duration of that contract is more than two years for full-time workers (or more than eight years for part-time workers) (Naidu et al., 2020, p. 49).	A person receiving training in a vocational area or undertaking a traineeship. The successful completion of a traineeship leads to a minimum of a certificate II in the relevant vocational area. (Naidu et al., 2020).

Examples of Apprenticeship Occupations	Examples of Traineeship Occupations
Building and Construction Trades	Hospitality
Engineering	Retail
Electrotechnology	Clerical
Hairdressing	Administrative

Under the Australian Apprenticeship system, both the traditional apprenticeships and traineeships are covered by the national system of regulation for the Vocational Education and Training (VET) sector in the form of the National Vocational Education and Training Regulator Act. However, in regards to legal matters both are predominantly the domain of the States and Territories (Hargreaves et al., 2017), which also applies to the training agreements. There are notable differences between the training agreements for apprenticeships and those for traineeships, particularly in regard to cancellations or suspensions and how they are handled (Table 2). These arrangements relate to the training contract of the apprentice or trainee (which is different from their employment contract) and highlight the additional rights and responsibilities traditional apprentices enjoy when compared to the trainees.

Table 2: Training contract differences between apprenticeships and traineeships

Training Contract Differences – VQRA (2021)	
Apprenticeships	**Traineeships**
To cancel the training contract, the apprentice and employer must both agree.	The trainee or employer can cancel the training contract without the other's agreement.
If the apprentice or employer wishes to cancel the training contract, and the other does not, they can ask VRQA to make a binding decision to resolve the dispute.	VCQA cannot make a binding decision to resolve a dispute about the cancellation of a traineeship training contract.
If the employer cannot afford to keep an apprentice, they can ask VRQA to suspend or cancel the training contract.	If the employer cannot afford to keep a trainee, they can suspend or cancel the training contract.

If the employer's business is sold, the new owner must continue the apprenticeship.	If the employer's business is sold, the new owner does not need to continue the traineeship.

Later in this section the characteristics of Australian Apprenticeships, School-based Apprenticeships and Pre-Apprenticeships will be discussed in detail (i.e. what does an Australian apprenticeship look like in 2021?), however, before going into detail it is important to understand how data on apprenticeships is collected and how occupations are cetegorized in the system.

Data collections tracking apprenticeships

The National Centre for Vocational Education Research (NCVER) is the national professional body responsible for collecting, managing, analysing and communicating research and statistics on the Australian vocational education and training (VET) sector. It operates the VOCSTATS platform (NCVER, 2021d) which includes current and time series/historical data from four NCVER collections:

- The National Apprentice and Trainee Collection,
- Students and Courses (National VET Provider Collection),
- The National Student Outcomes Survey, and
- the National VET in Schools Collection.

Particularly relevant for this literature review is the National Apprentice and Trainee Collection, which tracks the training contracts of apprentices in line with the Australian and New Zealand Standard Classification of Occupations (ANZSCO). A wide range of socio-demographic variables are recorded and occupations are available up to four ANZSCO digits, with the construction trades situated under sub-major group 33 and electricians in sub-major group 34 (Table 4).

This data collection provides a comprehensive insight into commencements, completions and apprentices/trainees currently in training. However, any analysis of data from the apprentice and trainee database needs to be interpreted carefully, as the survey only tracks the training contracts – not individual completions! Apprentices often change employers during their apprenticeship, which means that individual completion rates are higher than the training contract completion rates. Data and literature on attrition is reviewed in detail in section 3.

The National Student Outcomes Survey follows VET students' reasons for training, their employment outcomes, satisfaction with training, and further study outcomes. The main reason for not continuing with the training is also collected for those who did not complete.

Finally, the VET in school collection allows an insight into the current and historic school-based apprenticeship activity within the building and construction trades.

Table 3: ANZSCO Definition of Construction Trade

CONSTRUCTION TRADES WORKERS – ANZSCO SUB-MAJOR GROUP 33

Construction trades workers construct and repair buildings and other structures, apply final finishes such as plaster, painting and flooring, make and install glass products, and provide plumbing, drainage and mechanical services.

Indicative Skill Level in Australia:

Most occupations in this sub-major group have a level of skill commensurate AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

ANZSCO Digits:

33 Construction Trades Workers

331 Bricklayers, and Carpenters and Joiners

3311 Bricklayers and Stonemasons

3312 Carpenters and Joiners

332 Floor Finishers and Painting Trades Workers

3321 Floor Finishers

3322 Painting Trades Workers

333 Glaziers, Plasterers and Tilers

3331 Glaziers

3332 Plasterers

3333 Roof Tilers

3334 Wall and Floor Tilers

334 Plumbers

3341 Plumbers

Source: https://www.abs.gov.au/ausstats/abs@.nsf/Product+Lookup/1220.0~2006~Chapter~SUB-MAJOR+GROUP+33+Construction+Trades+Workers

Table 4: ANZSCO Definition of Electrotechnology and Telecommunications Trades Workers

Electrotechnology and Telecommunications Trades Workers - ANZSCO SUB-MAJOR GROUP 34

Electrotechnology and Telecommunications Trades Workers assemble, install, test and repair electrical appliances, networks and circuits, electronic systems and equipment, lifts, refrigeration and airconditioning equipment, electrical distribution networks, and telecommunications equipment.

Indicative Skill Level in Australia:

Most occupations in this sub-major group have a level of skill commensurate AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

ANZSCO Digits:

34 Electrotechnology and Telecommunications Trades Workers

341 Electricians

342 Electronics and Telecommunications Trades Workers

Source: https://www.abs.gov.au/statistics/classifications/anzsco-australian-and-new-zealand-standard-classification-occupations/2021/browse-classification/3/34

Characteristics of an Australian apprenticeship in 2021

The NCVER broadly defines an Australian Apprenticeship as

> "a structured training arrangement which combines on-the-job training and work experience while in paid employment, with formal off-the-job training with a registered training organisation (RTO). The apprentice enters into a contract of training or training agreement with an employer, which imposes mutual obligations on both parties. Traditionally, apprenticeships were in trade occupations (declared vocations) and were of four years' duration, but the duration of contracts has been formally reduced in some trades and the apprenticeship system broadened" (Naidu et al., 2020, p. 4)

Australian Apprenticeships are available to anyone of working age with eligibility to work in Australia and no specific school levels, certificates or other qualifications needed to start one. They are offered at a variety of Vocational Education and Training qualification levels

and can be either full-time, part-time or school-based (Australian Apprenticeship Pathways, 2021b).

Most apprenticeships involve a VET qualification of certificate III or higher (Naidu et al., 2020). Those that involve a VET qualification at Diploma or Advanced Diploma level are called 'higher apprenticeships' but they are far less common and made up only 3% of total commencements in 2019 (Australian Apprenticeship Pathways, 2021d). Pre-apprenticeships are also available at certificate levels I/II as a pathway towards a full apprenticeship in certain occupations.

In the building and construction trades, the vast majority of apprenticeships commence as traditional apprenticeships (i.e. not school-based) and involve a VET qualification level of certificate III (Tables 5 and 6). Table 7 shows the breakdown by occupational groups for the 12 months ending March 2021. The highest number of 'traditional' apprenticeships and SBATs were recorded in groups 3312 and 3341 (carpenters and joiners; plumbers), however the highest percentage of SBATs for each individual group was recorded in group 3334 (wall and floor tilers) where 6% of all commencements were in the form of a SBAT (Table 7).

Table 5: Apprenticeship commencements in construction (ANZSCO 33) - by level of education and SBAT status (Source NCVER 2021 Data Builder)

		2017*	2018*	2019*	2020*	2021*
'Traditional' ***(Not school-based)***	Certificate IV	25	10	20	15	15
	Certificate III	20,920	22,095	20,365	17,370	23,765
	Certificate II	-	-	-	-	-
School-based**	Certificate IV	-	-	-	-	-
	Certificate III	775	830	830	960	1,225
	Certificate II	50	-	-	-	-

* 12 months ending 31 March

** Whether or not training contract commenced as an approved SBAT

Table 6: Apprenticeship commencements in construction (ANZSCO 34) - by level of education and SBAT status (Source NCVER 2021 Data Builder)

		2017*	2018*	2019*	2020*	2021*
'Traditional' ***(Not school-based)***	Certificate IV	50	50	55	35	75
	Certificate III	12130	12970	13880	12600	14570
	Certificate II	-	-	-	-	10
School-based**	Certificate IV	-	-	-	-	-
	Certificate III	265	280	290	390	450
	Certificate II	-	-	-	-	-

* 12 months ending 31 March

** Whether or not training contract commenced as an approved SBAT

Source: NCVER 2021, Apprentices and trainees 2021: March quarter DataBuilder, Contract status, Occupation 2-digit, Level of education by School-based status, 12 months ending 31 March. Numbers are rounded to the nearest 5. Filters applied: Occupation 2-digit: 33 - Construction Trades Workers and 34 – Electrotechnology and telecommunications trades workers

Table 7: Apprenticeship commencements in construction (4-digit) by level of education and SBAT status for the 12 months ending 31 March 2021

		12 months ending 31 March 2021	
Occupation 4-digit	**Level of Education**	'Traditional'	School-based
3300 - Construction Trades Workers nfd	Certificate III	70	-
3311 - Bricklayers and Stonemasons	Certificate III	1,020	25
3312 - Carpenters and Joiners	Certificate III	12,010	745
3321 - Floor Finishers	Certificate III	365	10
3322 - Painting Trades Workers	Certificate III	1,435	50

3331 - Glaziers	Certificate III	450	15
3332 - Plasterers	Certificate III	845	20
3333 - Roof Tilers	Certificate III	280	-
3334 - Wall and Floor Tilers	Certificate III	625	40
3341 - Plumbers	Certificate IV	15	-
	Certificate III	6,660	315
3411 – Electricians	Certificate IV	20	-
	Certificate III	10670	395

Source: NCVER 2021, Apprentices and trainees 2021: March quarter DataBuilder, Contract status, Occupation 4-digit, Level of education by School-based status, 12 months ending 31 March. Numbers are rounded to the nearest 5.

School-based apprenticeships

A school-based apprenticeship is an Australian Apprenticeship undertaken part-time while still at school, combining secondary school subjects, paid work and vocational training (on or off the job) at certificate or diploma level. (Australian Apprenticeships, 2021b). Also called Australian School-based Apprenticeships (ASbA), SBATs were rolled out in 1998 as part of the 'New Apprenticeship' package of reforms (Knight, 2012). The details of employment and training are guided by the laws of each Australian state or territory (Australian Apprenticeships, 2021b). This means that each state has different guidelines on the number of work hours and the amount of contribution of the training towards the secondary school certificate of education (Australian Apprenticeship Pathways, 2021c).

In Victoria, students have to be enrolled in the Victorian Certificate of Education (VCE) or Victorian Certificate of Applied Learning (VCAL) and for an apprenticeship to be registered as an SBAT it must:

- be under a Training Contract with an employer
- include paid work carried out under an appropriate industrial instrument that endorses part-time apprenticeships or traineeships
- include work relevant to the qualification being undertaken by the student
- lead to a nationally recognised qualification at Certificate II, III or IV level
- be integrated into the student's school-based learning program, study timetable and career plan, and
- include training that complies with an approved training scheme for the certificate being undertaken and at a level appropriate for the student.

(Victoria State Government, 2016, p. 7)

Pre-apprenticeships

Pre-apprenticeships are a common pathway towards a full apprenticeship in traditional trades such as carpentry, electrical, plumbing and automotive (Australian Apprenticeships Pathways, 2021). They are intended as entry-level training and offered by Registered Training Organisations and Group Training Organisations. While they are not compulsory, they are viewed very favourably by employers in the above mentioned trades[3] and may enable the term of the apprentice's training agreement to be reduced" (Naidu et al., 2020, p. 37).

Generally, a pre-apprenticeship involves a certificate I or II, however, there is no clearly defined course outline and courses vary between states and territories, and between industries. For example, some involve a work experience component while others may include a credit transfer to an apprenticeship level qualification.

The NCVER emphasize that the key difficulty of defining a pre-apprenticeship is that it presumes the motivation of the individual to progress to an apprenticeship while this motivation could well change during the course (Foley & Blomberg, 2011). Furthermore, training is not restricted to pre-apprenticeships and courses are available to all students, which means that courses could be selected for entirely different purposes than to provide a pathway to a full apprenticeship. In other words, the dilemma for a definition is that not all certificate I and II courses are pre-apprenticeships - and that even those courses clearly intended by the RTO as a pre-apprenticeship (i.e. the course is titled a pre-apprenticeship) are not necessarily selected by students for that purpose (Foley & Blomberg, 2011).

While this makes it more challenging to identify drop out points and required supports to retain (pre-) apprentices, there is evidence from the NCVER that when pre-apprenticeships are completed they increase the likelihood of the completion of a full apprenticeship in the construction trades later on (Karmel & Oliver, 2011).

Examples of apprenticeship pathways in selected construction occupations

The following Table 8 is derived from Australian Apprenticeship Pathways (2021a) and provides an overview of pathways in selected construction occupations highlighting the significant differences between the trades.

[3] This may include other occupations as well but there appears to be no comprehensive overview. Apprenticeship seekers are essentially advised that they need to research this for their chosen trade.

	II Certificate II	III Certificate III	IV Certificate IV	D Diploma	Ad Advanced Diploma
Bricklaying/ Blocklaying	Builder's Labourer Bricklayer's Assistant	Heritage Bricklayer Paver Bricklayer Refractory Bricklayer	Contract Administrator	Project Manager	Construction Manager
Building & Construction Surveying & Management			Builder Site Manager Contract Administrator Building Estimator	Commercial Builder Project Manager Fire Sprinkler Designer Fire Alarm Designer Fire Safety Auditor	Construction Manager Building Surveyor
Carpentry	Builder's Labourer Carpentry/Joinery Assistant	Carpenter Formwork Carpenter Commercial Carpenter	Builder Site Manager Contract Administrator Building Estimator	Commercial Builder Project Manager	Construction Manager
Concreting	Builder's Labourer	Concreter Concrete Tilt Panel Fabricator	Site Manager Contract Administrator	Project Manager	Construction Manager

Crane Operations		Crane Operator			
Demolition	Builder's Labourer	Demolition Labourer	Demolition Site Supervisor		
Dogging, Rigging & Scaffolding		Rigger Scaffolder	Site Manager		
Fire Protection		Fire Systems Technician		Fire Sprinkler Designer Fire Alarm Designer Fire Safety Auditor	
Formwork / Falsework	Builder's Labourer Carpentry/Joinery Assistant				
Joinery, Stairs & Shop Fitting		Shopfitter Stair Builder Joiner	Site Manager Contract Administrator	Project Manager	

Painting & Decorating		Painter and Decorator	Site Manager Contract Administrator	Project Manager	Construction Manager
Plastering	Solid Plastering Assistant	Solid Plasterer Wall and Ceiling Plasterer	Site Manager Contract Administrator	Project Manager	Construction Manager
Plumbing & Gas Fitting	Drainer	Plumber Mechanical Services Plumber Roofing & Mechanical Plumber Gas Fitter	Site Manager Hydraulic Designer Plumbing Contractor	Hydraulic Design Consultant	Construction Manager
Roofing		Roof Tiler Roof Plumber	Site Manager Contract Administrator	Project Manager	Construction Manager
Signage		Signwriter	Site Manager	Project Manager	
Steelfixing	Builder's Labourer	Steel Fixer	Site Manager	Project Manager	Construction Manager
Stonework		Heritage Stonemason	Site Manager	Project Manager	Construction Manager

		Stonemason Monumental Stonemason Benchtop Mason	Contract Administrator		
Swimming Pools and Spas			Site Manager Swimming Pool & Spa Builder	Project Manager	
Wall & Floor Tiling and Paving	Tiling/Waterproofing Assist	Wall and Floor Tiler Waterproofing Applicator	Site Manager Contract Administrator	Project Manager	Construction Manager

Recent developments which may reshape Australian Apprenticeships in the near future

The most recent initiatives by the Australian Government have continued to focus on alternative deliveries and increased uptake. This includes the following five 'alternative delivery' pilots funded by the Australian Government with $9.2 million, which (if successful) may result in higher apprenticeships in building and construction becoming more common than they currently are. The current and completed pilot programs involve:

- The Australian Industry Group - Industry 4.0 Higher Apprenticeships
- Master Builders Australia - Pre-apprenticeship training
- National Electrical and Communications Association – Electrical Innovative Delivery & Pathways Project (complete)
- North East Vocational College – Student Builder Pilot
- PricewaterhouseCoopers – Higher Apprenticeships and Traineeships Pilot (complete)

(Australian Apprenticeships, 2021a)

However, the most significant recent development has been the Australian Government's Boosting Apprenticeship Commencements wage subsidy, as part of the Government's Economic Response to COVID-19. The wage subsidy reimburses 50 per cent of the wages employers pay a new or recommencing apprentice or trainee for a 12-month period from the date of commencement, to a maximum of $7000 per quarter. It was made available to encourage employers of any size or industry to take on new apprentices and re-employ those that lost their apprenticeship due to the pandemic. AUD $2.8 billion dollars were made available in 2020, with a top-up of $2.7 billion to extend and expand the program into 2022.

The result of the Boosting Apprenticeship Commencements wage subsidy has been a massive jump in apprentice and trainee commencements. At the time of writing, the most recent data from NCVER (2021c) on apprentice and trainee training activity indicated that:

- Commencements for the December quarter 2020 had increased by 141.5% compared with the December quarter 2019.
- The total number of apprentices and trainees in-training as at 31 December 2020 saw an increase of 13.9% from 31 December 2019.
- Both trade and non-trade commencements increased from the December 2019 quarter by 123.5% and 155.3% respectively.
- The largest absolute increase among trade occupations was in Construction trade workers with numbers increasing by 4510.
- Among non-trade occupations, the largest increase was in Clerical and Administrative Workers with an increase of 8820.
- The industries with the largest absolute increases in commencements were Construction, Accommodation, and Manufacturing.
- Compared with the December quarter 2019, there were increases across all major occupational groups and industry sectors.
- However, completions were overall down by 15.7% from December 2019. The decrease in completions was greater for those in the non-trades (22.8%) than the trades (5.3%).

3 Attrition statistics

Construction apprenticeship commencements and completions

The general trend of commencements and completions of training contracts in the trade occupations is shown in Figure 1 (please note that this is showing 'all trades' which means that construction only represents a fraction of this data). There is a noticeable rise in completions in the year 2014, which followed a peak of commencements in 2012. These peaks can at least to some extent be attributed to the Accelerated Australian Apprenticeship Initiative:

> *The Accelerated Australian Apprenticeships Initiative was announced in 2011 by the Australian Government []. The overarching aim [] was to support a systemic shift to competency-based progression and completion in VET, with a focus on apprenticeships. Approximately $53 million in funding was made available from 2011 to 2016 to support these multi-jurisdictional and sector-wide partnerships. The program's end was announced in the 2014—15 Budget, with the remaining industry projects expected to be completed in 2016.*

(Atkinson & Stanwick, 2016, p. 28)

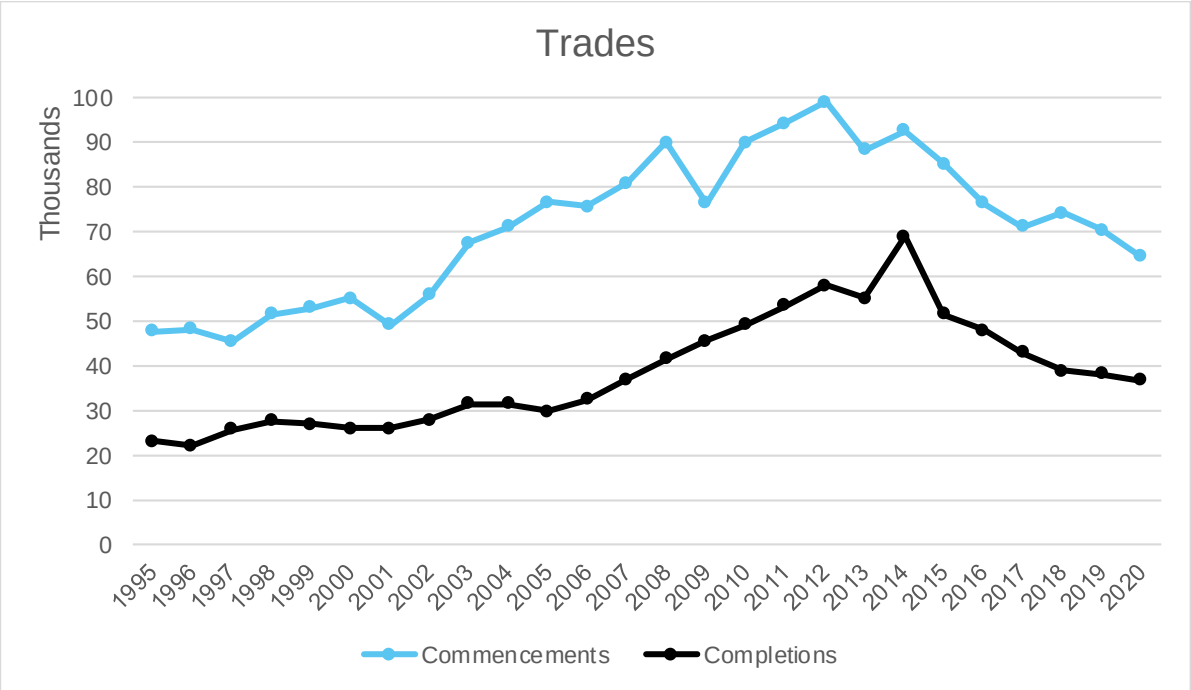


Figure 1: Commencements and completions in 12 months ending 30 June by occupation (trade), 1995-2020 ('000).

Source: https://www.ncver.edu.au/research-and-statistics/infographics/historical-time-series-of-apprenticeships-and-traineeships-in-australia-infographic-1963-to-2020

However, as these graphs encompass all trade occupations is it important to look more specifically at the construction trades to see whether this trend is reflected here as well. Figure 2 shows the commencements and completion rates for ANZSCO Code 33, indicating

fluctuating commencement numbers and low completion rates. The fluctuations appear to coincide at least partially with financial incentives such as the 'Tools for your Trade Initiative' (2005 - 2014) and the introduction of the 'Trade Support Loans Act' of 2014 (NCVER, 2015). However, the peaks in commencements do not appear to be followed by corresponding completions 4 years later, suggesting that these incentives have not necessarily made a significant improvement to attrition rates and skill retentions in the construction trades[4].

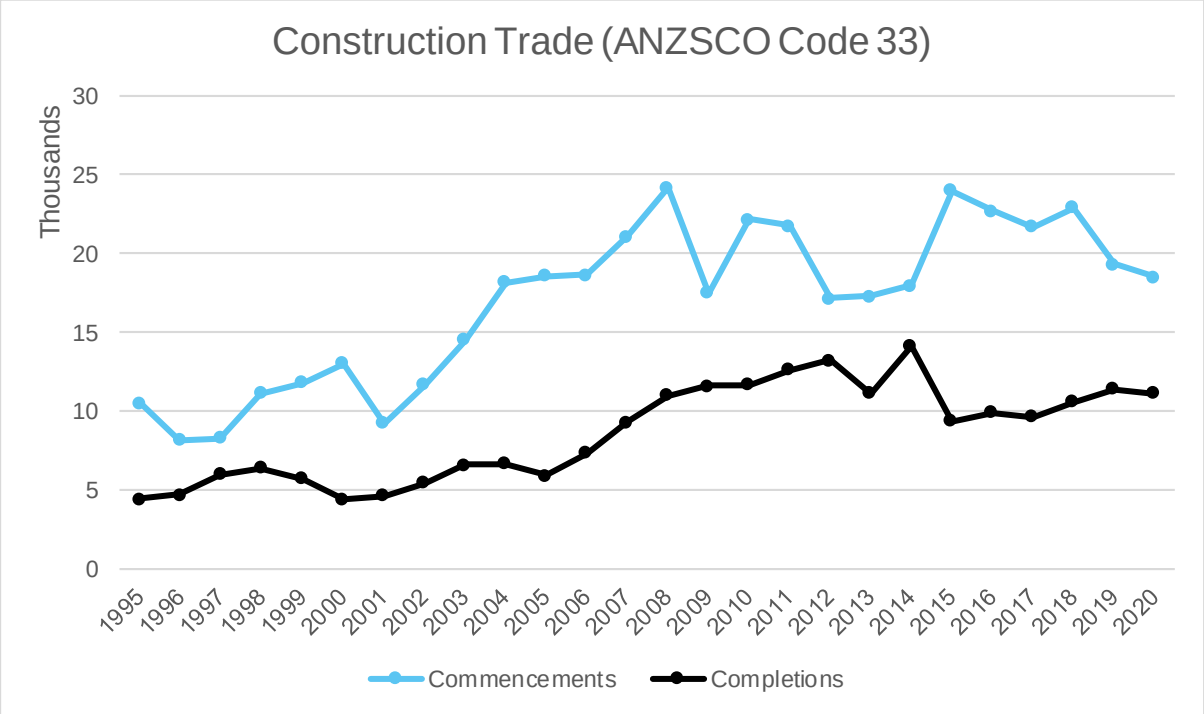


Figure 2: Commencements in 12 months ending 30 June by trade occupation, 1995–2020

Individual completion rates and attrition in construction apprenticeships

The NCVER derives individual completion rates by adjusting the contract completion rates with a recommencement factor (NCVER, 2021b). The most recent figures show the individual completion rates of those who commenced in 2015 and 2016. In the construction trades the individual completions rate for those commencing in 2015 was **57.4%** and **54.1%** for those who commenced in 2016 (NCVER, 2021b). Historical data from (Karmel, 2011) shows that for those who commenced in construction in 2005, the individual completion rate was **58%**.

From the reports it is not possible to say whether some of this decline may be explained by impacts of the Covid-19 pandemic but the figure from the 2015 commencements suggests that individual completion rates in construction have not dramatically improved, despite

[4] Although it should also be noted that individuals may take longer to complete if they take a break. This is one of the support options made available for struggling apprenticeships – see section 6)

numerous programs and incentives that were introduced with the aim to improve completion rates and address skill shortages in the sector. These have included financial incentives such as VET FEE-HELP loans to students (commenced 2009); mentoring initiatives such as the Australian Apprenticeships Mentoring Package (2011 - 2015); new quality frameworks for training (VET Quality Framework (VQF) introduced 2011); and the Australian Apprenticeships Support Network (AASN) (2014) (NCVER, 2015).

Individual and observed actual contract completion rates by occupation for apprentices and trainees commencing in 2015 and 2016 (NCVER, 2021b, p. 7)

Occupation (ANZSCO) group	2015			2016		
	Average annual adjustment factor	Contract completion rates %	Individual completion rates %	Average annual adjustment factor	Contract completion rates %	Individual completion rates %
Managers	**1.04**	**53.4**	**55.3**	**1.03**	**44.6**	**45.8**
11 Chief executives, general managers and legislators	1.01	38.1	38.6	1.01	36.9	37.4
12 Farmers and farm managers	1.08	55.0	59.4	1.09	54.6	59.7
13 Specialist managers	1.03	53.2	54.9	1.03	50.3	51.6
14 Hospitality, retail and service managers	1.04	63.2	65.6	1.02	44.1	45.1
Professionals	**1.08**	**56.6**	**61.3**	**1.07**	**55.7**	**59.7**
21 Arts and media professionals	1.07	0.0*	0.0*	1.04	0.0*	0.0*
22 Business, human resource and marketing professionals	1.02	46.2	47.3	1.03	50.6	52.0
23 Design, engineering, science and transport professionals	1.02	67.0	68.6	1.01	50.6	51.2
24 Education professionals	1.00	66.7*	66.7*	1.00	36.8*	36.8*
25 Health professionals	-	-	-	-	-	-
26 ICT professionals	1.33	58.2	77.6	1.34	74.1	99.6
27 Legal, social and welfare professionals	1.02	55.9*	57.3*	1.02	46.9	47.7
Technicians and trades workers	**1.29**	**44.8**	**57.6**	**1.30**	**42.5**	**55.1**
31 Engineering, ICT and science technicians	1.04	55.0	57.0	1.03	61.7	63.8
32 Automotive and engineering trades workers	1.21	52.1	63.0	1.21	51.3	62.0
33 Construction trades workers	1.39	41.4	57.4	1.41	38.4	54.1
34 Electrotechnology and telecommunications trades workers	1.30	50.4	65.6	1.31	45.5	59.7
35 Food trades workers	1.34	32.1	43.1	1.34	31.9	42.6
36 Skilled animal and horticultural workers	1.12	43.0	48.3	1.12	42.1	47.4
39 Other technicians and trades workers	1.26	43.9	55.5	1.28	40.2	51.6
391 Hairdressers	1.47	35.3	51.9	1.46	34.3	50.0
392 Printing trades workers	1.03	53.9	55.8	1.04	59.1	61.3
393 Textile, clothing and footwear trades workers	1.11	41.1	45.7	1.06	26.4	28.1
394 Wood trades workers	1.22	47.0	57.3	1.24	39.2	48.4
399 Miscellaneous technicians and trades workers	1.04	50.5	52.3	1.04	51.0	52.9
Community and personal service workers	**1.07**	**55.4**	**59.5**	**1.08**	**54.9**	**59.2**
41 Health and welfare support workers	1.05	61.5	64.3	1.05	67.4	70.8
42 Carers and aides	1.14	59.0	67.5	1.15	59.6	68.6
43 Hospitality workers	1.03	45.3	46.7	1.03	41.9	43.1
44 Protective service workers	1.01	55.2	55.9	1.01	67.0	67.8
45 Sports and personal service workers	1.03	64.1	65.8	1.03	62.9	64.5
Clerical and administrative workers	**1.02**	**54.0**	**55.2**	**1.02**	**52.5**	**53.6**
51 Office managers and program administrators	1.02	43.7	44.7	1.02	39.7	40.4
52 Personal assistants and secretaries	1.01	62.1	62.9	1.02	65.6	66.7
53 General clerical workers	1.02	63.5	64.9	1.02	63.6	64.9
54 Inquiry clerks and receptionists	1.02	45.1	46.0	1.02	38.9	39.5
55 Numerical clerks	1.02	52.8	53.7	1.02	55.2	56.3
56 Clerical and office support workers	-	-	-	-	-	-
59 Other clerical and administrative workers	1.04	49.9	52.1	1.05	44.6	46.6
Sales workers	**1.04**	**59.9**	**62.4**	**1.04**	**59.5**	**61.8**
61 Sales representatives and agents	1.06	49.0	51.9	1.05	48.2	50.8
62 Sales assistants and salespersons	1.04	60.8	63.2	1.04	60.2	62.5
63 Sales support workers	1.00	78.9*	78.9*	1.00	86.5*	86.5*
Machinery operators and drivers	**1.06**	**52.8**	**55.9**	**1.06**	**51.2**	**54.1**
71 Machine and stationary plant operators	1.04	56.2	58.3	1.04	61.2	63.4
72 Mobile plant operators	1.04	49.7	51.6	1.04	55.8	58.0
73 Road and rail drivers	1.08	55.2	59.4	1.08	45.6	49.2
74 Storepersons	1.08	51.1	55.2	1.08	43.8	47.3
Labourers	**1.04**	**50.7**	**52.8**	**1.04**	**50.0**	**51.9**
81 Cleaners and laundry workers	1.03	57.0	58.5	1.02	50.0	50.9
82 Construction and mining labourers	1.03	54.5	55.9	1.02	51.2	52.5
83 Factory process workers	1.04	49.2	51.4	1.04	47.7	49.8
84 Farm, forestry and garden workers	1.03	56.3	57.7	1.03	61.5	63.1
85 Food preparation assistants	1.14	39.5	45.2	1.13	49.0	55.5
89 Other labourers	1.03	54.0	55.6	1.03	46.0	47.3
Total non-trade occupations	**1.05**	**54.9**	**57.7**	**1.05**	**53.8**	**56.5**
Total trade occupations	**1.29**	**44.8**	**57.6**	**1.30**	**42.5**	**55.1**
All occupations^	**1.16**	**49.7**	**57.6**	**1.16**	**48.3**	**56.1**

The low contract completion rates in the construction trades highlight the level of employer 'churn' in these trades - and as contract completion in construction has gone down even further when compared to the figures of the 2005 commencements (Karmel, 2011) this suggests that the employer churn has actually increased in this period:

'Recommencement' adjustment factor, contract and individual completion rates, trade occupations, commenced in 2005 (Karmel, 2011, p. 10):

	Average annual adjustment factor	Contract completion rate (%)	Individual completion rate (%)
31 Engineering, ICT and science technicians	1.04	60.8	63.2
32 Automotive and engineering trades workers	1.18	51.3	60.6
33 Construction trades workers	1.29	45.3	58.3
34 Electrotechnology and telecommunications trades workers	1.20	53.6	64.2
35 Food trades workers	1.42	27.7	39.2
36 Skilled animal and horticultural workers	1.09	48.3	52.6
39 Other technicians and trades workers	1.27	41.3	52.3
391 Hairdressers	1.45	36.5	52.8
392 Printing trades workers	1.08	54.1	58.3
393 Textile, clothing and footwear trades workers	1.07	46.5	49.7
394 Wood trades workers	1.20	45.3	54.4
399 Miscellaneous technicians and trades workers	1.05	52.2	55.0
3 Technicians and trades workers	**1.24**	**45.6**	**56.6**

Attrition – younger versus older apprentices

As outlined in the previous section, the last few decades have brought significant reform of the apprenticeship system with the aim to broaden and enhance the system for both apprentices and employers. These have led to a rise of alternative models of apprenticeship delivery and a shift in the age of apprentices (Hargreaves et al., 2017). For example, in 1996, only 8% of all apprentices in the trades were classified as adult apprentices (Hargreaves et al., 2017) while in the December Quarter of 2020, this figure had risen to 36% (NCVER, 2021a). The proportion of adult apprentices completing a trade apprenticeship in two years or fewer has also increased from around 28% in 1996 to over 50% in 2016 (Hargreaves et al., 2017). The trend over the last decade has been that apprenticeships in the trades are getting shorter, while apprentices are getting progressively older, although the most recent data suggests that adult apprentice numbers are declining again, likely in response to changes in incentive arrangements for this cohort (Stanwick et al., 2021).

The NCVER defines 'younger apprentices' as those aged 15–24 years and 'adult apprentices' as those aged 25 years and over (Hargreaves & Blomberg, 2015; Hargreaves et al., 2017). However, for any comparison of the completion rates between the two cohorts, it is important to remember that the apprentices and trainee database tracks the training contracts, not individuals. This means that a person can commence as a young apprentice and later complete as an adult apprentice (Table 9). Neither Hargreaves and Blomberg (2015) nor Hargreaves et al. (2017) mention that adjustments for this were made in their analyses. It is therefore not entirely accurate for (Hargreaves et al., 2017) to conclude that

we are seeing increasing adult apprentice completion rates and decreasing young apprentice completion rates. Without adjustments to the data or extended definitions, we can only conclude from the data that, prior to 2016, over the age of 25 years completion rates were increasing; and that under the age of 25 years completion rates were steadily decreasing.

Table 9: VOCSTATS definition of age (apprentices and trainees database)

Term	Definition	Classification categories	Classification sub-categories	Source
Age	The age of the apprentice/trainee at key points in the training contract, such as commencement and completion. It is reported in age ranges.	19 years and under 20 to 24 years 25 to 44 years 45 years and over Not known	Individual years of age available under each age grouping.	Calculated based on the AVETMISS fields Date of Birth from the Client file and Date of transaction from the Training contract transaction file.

(NCVER, 2021e, p. 12)

It is also important to note that Fair Work Australia (Modern Awards) has a different definition where "an adult apprentice or trainee is someone who starts their apprenticeship or traineeship when they are 21 years old or older" (Fair Work Ombudsman, 2021). The age of 21 years is also reflected in the *Mature Age Entry Scheme* which is defined in the NCVER Glossary as

> "A scheme which enables admission of adults (generally over the age of 21 years) to further education after a period away from school. These schemes are usually made available to students who have not satisfactorily completed Year 12"
>
> (Naidu et al., 2020, p. 29)

However, the NCVER definition of 25 years for adult apprentices aligns internationally with the United Nation's (UN) definition of 'youth':

> *"The United Nations, for statistical purposes, defines 'youth', as those persons between the ages of 15 and 24 years, without prejudice to other definitions by Member States. This definition was made during preparations for the International Youth Year (1985), and endorsed by the General Assembly (see A/36/215 and resolution 36/28, 1981). All United Nations statistics on youth are based on this definition, as illustrated by the annual yearbooks of statistics published by the United Nations system on demography, education, employment and health"*
>
> (United Nations [UN], 2021)

Within the definition of 'youth', the UN then distinguishes between teenagers (13-19) and young adults (20-24) due to the differing sociological, psychological and health problems the two cohorts face (United Nations [UN], 2021).

Coming back to Hargreaves et al. (2017) and their study on the changing nature of apprenticeships between 1996 and 2016, one of their key findings was that while adult trade apprentice completion rates were steadily increasing over time, younger trade apprentice completion rates were on a slow but steady decline (Hargreaves et al., 2017). This would suggest that changes to make the apprenticeship system more flexible may be benefitting older apprentices more than younger ones. However, the literature suggests that there may be other, unrelated factors contributing to these different trajectories as well. Data from Construction Skills Queensland [CSQ] (2017) for example shows that while older apprentices had better completion rates, the only did so for 10 of the 16 years investigated – and these 10 years corresponded directly with the period of Queensland's mining boom. During this time there was an employer-driven increase of older civil construction apprentices and in the two years afterwards, it was younger apprentices who had the better completion rates.

The VOCSTATS 'apprentices and trainees data collection' shows commencements, completions and withdrawals – but not the completion rates. These are published in separate NCVER publications but there does not appear to be a way to create a time series for individual occupations. Unless the complex analytical method to estimate completion rates (Harvey, 2010) is replicated, we are limited to the data on commencement and completion numbers (as opposed to the rates). Looking at the most recent of these for ANZSCO codes 331, 332, 333, 334 and 341 for the last five years, completion numbers of younger apprentices increased notably in many occupations before plummeting in 2021. The graphs for each of the five occupational codes are shown in Appendix C.

4 Decision making and mapping logical progressions of choices

The evidence from the literature shows that decision making and the logical progression of choices begins from a very young age. For example, as early as primary school, many children have an impression that university is a more desirable pathway and better suited to those who do well in school (Gore et al., 2017). This is shaped by prevailing misperceptions amongst parents/carers and teachers that VET is a place of practical learning designed to cater to less academically oriented students and give those students a chance of success (Gore et al., 2017). Gender stereotypes also permeate student ideas from an early age with 'traditional' male and female occupations dominating the list for both boys and girls (Hargreaves & Osborne, 2017).

Influence of family, peers and schools

In primary school, students' occupational interests are shaped by various influences, including sports stars, famous people and even movie characters, but the most important career advice comes from family and peers (Gore et al., 2017). Parents are considered the most trusted source with 76% of young people choosing their parents for career advice with the justification that parents have their best interest at heart (Behavioural Insights Team, 2020). Even in later years of study, the informal channels of simply talking to family and friends remain the most commonly reported source of career advice (Dockery et al., 2021). This is also where peers begin to play an increasingly important role in a student's career aspirations as peer heavily influence what is perceived as social norms (Behavioural Insights Team, 2020). Often, however, family and peers have outdated information reinforcing misperceptions around VET (Hargreaves & Osborne, 2017). For instance, four in five Australian parents (79%) would prefer their children go to university rather than VET (Wyman et al, 2017) and this seems to reflect data from the UK where 92% of parents approve of apprenticeships but only 32% would like their children pursuing this pathway – with parents that had completed an apprenticeship being more likely to prefer that pathway for their child (Demos, 2015; Behavioural Insights Team, 2020).

Further entrenching default and perceived stigma of VET is that parents of lower SES background often have limited capacity to provide career guidance (e.g. due to their own limited education and work experience, or lack of time and resources) (Dockery et al., 2021),

increasing the importance of the career advice provided at school. Many schools however present university as the default option (Behavioural Insights Team, 2020) and there is evidence to suggest that teachers are more likely to suggest apprenticeships to young people that are not performing well (Nelms et al., 2017). One contributing factor may be that teachers often do not have personal experience with VET as most teacher education takes place at university (Behavioural Insights Team, 2020). Career advisors often have a better understanding of the VET sector, however, career advice activities are focused on the later years of secondary school when many students have already formed a strong (and sometimes negative) view of VET (Gore et al., 2017).

Evident from the literature is that SES is correlated with the level of career advice that is received. A study on careers advice provided to Australian secondary students shows a clear socio-economic divide where students from high SES backgrounds are more likely to access multiple forms of careers information (including university entrance) while students form lower SES backgrounds are more likely to be informed about non-professional vocations (Dockery et al., 2021). This divide in access appears to become more entrenched over time with many of the SES gradients in the study becoming more pronounced (Dockery et al., 2021). The study notes however that it is unclear how much this is driven by access to, or demand for, information by students of different SES backgrounds.

Aspirations of school students

The common misperceptions amongst parents/carers and teachers, where VET is seen as a place of practical learning designed to cater to less academically oriented students (Gore et al., 2017), are reflected in the aspirations of young people, where VET and VET-related occupations appeal to certain kinds of students (Table 10). These students are demographically opposite to those more likely to choose a university option (Gore et al., 2017).

Table 10: Likely characteristics of students who choose VET and VET-related occupations (Gore et al., 2017)

Choosing VET as highest level of education	Choosing VET-related occupations
○ **From lower SES backgrounds** ○ **Attending schools in metropolitan locations** ○ **Male** ○ **In the early years of secondary school** ○ **With lower cultural capital**	○ Lower cultural capital ○ English-speaking background ○ Lower SES ○ male ○ In Years 3—4 ○ From schools in the lowest ICSEA quartiles

○ **From English-speaking backgrounds** ○ **From schools in the lower ICSEA[5] quartiles** ○ **Perceiving themselves as average or below for academic performance relative to their peers.**	○ In lower NAPLAN quartiles ○ Perceiving themselves as average or below for academic performance relative to their peers ○ Not participating in out-of-school academic tutoring.

Gore et al. (2017) note that in this study, each significant variable in the regression is important for understanding student educational aspirations. For example, even if all other variables are held constant, SES still has an effect on the outcome. This means that even when students are matched on age, gender, school ICSEA, and NAPLAN, SES has some weight in determining which of them would be more likely to aspire to VET than university.

Psychology of making decisions about post-school pathways - biases and 'heuristics' in apprenticeship choice

In a study on how young people develop perceptions of and make decisions about apprenticeships, the Behavioural Insights Team (2020) concludes that, psychologically, the most important factor on post secondary decisions is which option is perceived as the norm or default. The study outlines the behavioural biases and heuristics influencing young people's decisions about post-school pathways (Table 11) and argue that reliance on heuristics may be heightened for individuals of low socioeconomic status.

> *"These young people have increased pressures on their time and fewer resources leading to lower engagement in the decision making process (Greenbank and Hepworth, 2008; Dickinson, 2019) and hence rely more on opportunistic sources of information (Usher, 1998). The economic and emotional strain of financial hardship can also impair decision making, as people with scarcer access to resources tend to invest time and energy into managing daily expenditures with less resources to focus on long term planning (Adamkovič and Martončik, 2017)."(Behavioural Insights Team, 2020, pp. 16-17)*

It is emphasized that behavioural biases and heuristics often manifest as barriers to young people making well considered decisions about post-school pathways.

Table 11: Behavioural biases and heuristics which influence how young people make decisions about post-school pathways (Behavioural Insights Team, 2020, pp. 17-18)

[5] ICSEA = Index of Community Socio-Educational Advantage. See <http://www.myschool.edu.au> for details.

Bias or heuristic	How this influences career decisions
Present bias	People overvalue immediate costs or rewards at the expense of their long-term intentions (Green, Fry and Myerson, 1994). Young people's decisions and actions are particularly influenced by emotional and in-the-moment pressures rather than consideration of future outcomes (Green, Fry and Myerson, 1994). This may make it harder for them to appreciate the temporally distant employment benefits that apprenticeships offer.
Confirmation bias	People seek out or evaluate information in a way that fits with their existing thinking and preconceptions (Nickerson, 1998). If young people form negative attitudes towards apprenticeships, they will be less likely to seek or absorb information about apprenticeships in a neutral way.
Status quo bias	People are more likely to choose an option presented as the default or status quo (Jachimowicz, Duncan and Weber, 2016). University pathways are now perceived to be the default post secondary school option for young people, meaning that fewer young people will engage with vocational avenues.
Friction costs	Friction costs refer to small, seemingly minor details that make a task more effortful, and they have a disproportionately large effect on whether people complete a task (Bettinger et al., 2012). As many young people have to proactively seek out information about apprenticeships, these friction costs might deter them from engaging with these avenues.
Familiarity principle	People tend to develop a preference for things simply because they are familiar (Zajonc, 2001). Compared to other pathways, young people experience a lack of exposure to apprenticeships and vocational careers though personal and public channels.
Social norms	The perception of what constitutes normal or desirable behaviour amongst one's social group has strong influences on behaviour (Cialdini, 2007; Deutsch and Gerard, 1955). As only a minority of people complete apprenticeships, completing or considering one may violate a 'norm' set by young people's social networks.

Choice overload	Having too many choices can make decisions more difficult, meaning that people make suboptimal decisions or postpone deciding entirely. As young people have to choose from hundreds of potential post-school pathways, they may be more prone to heuristics and are unlikely to consider all options.
Satisficing	Satisficing is a heuristic that involves choosing an option that meets a set of minimum standards, rather than continuing to search for an optimal choice (Bazermann and Moore, 2009). In career decision making, this may mean selecting a pathway that satisfies a small number of criteria (e.g. years of study, salary) without searching for the best possible option.

Choosing VET – from aspirations to reality

A final important factor shaping default pathways is the limitations of actual choice for some students. Hargreaves and Osborne (2017) conclude that:

- The factors mattering most to students are: training location; those offering advice and information (trusted influencers); timetables; fees and affordability; and the perceived quality of the training provider.
- Ultimately, however, there is often 'no or very limited' choice, given that influential factors such as location, timetables, course content and fees are 'fixed'.
- Segments of the VET student population lack both access to choice and control over their choice of course and RTO.
- In rural or regional areas, choice of provider and course are limited
- Prospective students feel they lack reliable, trustworthy and independent information on VET providers.
- There is uncertainty over the financial support available to those considering a VET pathway.

Current issues with School-based Apprenticeships and Traineeships (SBATs)

Klatt et al. (2017) conducted a study of NCVER data to identify who is undertaking SBATs, where they live, which industry areas they are studying and the qualifications they are undertaking.

While there was a fairly even distribution of enrolments in SBATs between the quintiles of the socio-economic index for areas (SEIFA), and the vast majority of SBAT learners were enrolled at Certificate III level, the study voices a significant concern about enrolments in Certificate II. The argument is that this qualification has a poor perception amongst employers and it is predominantly undertaken by students from the two lowest quintiles. This qualification was also the most common among Indigenous Australians. It is argued that the

majority of already disadvantaged young people who undertake Certificate II are streamlined into a pathway that may not lead to improved socio-economic outcomes.

The study concludes that SBATs 'lock-in' already disadvantaged young people to precarious pathways and reinforces the nature of an already gender-segregated Australian labour market and suggests that:

> "These programmes, in the current form, should therefore not be presented as a 'ticket to work' but rather as an opportunity to explore core characteristics of occupations, so young people, especially those from disadvantaged backgrounds with little access to such opportunities, can make informed decisions after leaving school. These occupational 'explorations' should be backed by a strong career planning component, as well as strong numeracy and literacy education" (Klatt et al., 2017, p. 489)

5 Barriers to completion

There is a growing body of literature that has investigated the barriers to completion for apprentices in Australia. This chapter first looks at the reasons for non-completion as reported by apprentices in the NCVER 'Apprentice and trainee experience and destinations survey', followed by a closer look at how these reasons differ by stage in the apprenticeship, followed by a review of the literature on barriers to completions identifying the key themes.

Reasons for non-completion (NCVER data)

The results of the latest apprentice and trainee experience and destinations survey (NCVER, 2019) show that the main reasons that apprentices and trainees in trade occupations did not complete their training were because:

- they didn't get on with their boss or other people at work (11.9%)
- they lost their job or were made redundant (11.7%).

The main reasons apprentices and trainees in non-trade occupations did not complete their training were because:

- they changed career (19.9%)
- were offered a better job (11.2%).

Table 12: Main reason for not completing an apprenticeship or traineeship, 2019 (%) (NCVER, 2019, p. 15)

	Non-completers		
	Trade	Non-trade	Total
Employment-related	**73.8**	**72.4**	**73.1**
Got offered a better job	6.1	11.2	8.8
The pay was too low	6.7	5.5	6.1
Poor working conditions	7.7	6.5	7.1
I was not happy with the job prospects in the industry	3.2	1.6	2.4
I didn't like the type of work	8.1	4.6	6.2
I didn't get on with my boss or other people at work	11.9	6.6	9.1
I lost my job/ was made redundant	11.7	7.2	9.3
I transferred to another apprenticeship/traineeship	2.3	1.3	1.8
Left job/changed career	8.2	19.9	14.4
Apprenticeship or traineeship cancelled/discontinued	6.6	7.1	6.9
Not able to use the skills I was learning at work	0.6	0.3	0.5
Business closed / company went into liquidation	0.7	0.5	0.6
Training related	**10.8**	**10.3**	**10.5**
I wasn't happy with the on-the-job training	3.8	1.9	2.8
I wasn't happy with the off-the-job training	1.2	1.4	1.3
I found the study too difficult	1.0	1.4	1.2
Studying elsewhere (university/school)	1.2	1.6	1.4
Lack of interest/support	3.6	4.0	3.8
Personal reasons	**13.5**	**14.8**	**14.2**
Problems with travelling/transport	1.1	0.9	1.0
Illness/health reasons	5.5	5.7	5.6
Family reasons	3.8	3.6	3.7
Lack of time	0.4	2.6	1.6
Moved	2.7	2.1	2.4
Other reasons	**1.8**	**2.6**	**2.2**

Reasons for non-completion by stage in the apprenticeship

The Apprentice and Trainee Destinations Survey (NCVER, 2019) unfortunately does not list the reasons for non-completion by stage in the apprenticeship. However, a study by Karmel and Mlotkowski (2010) has estimated this based on probabilities. As the raw data did not show any meaningful trends (Table 13), the study used a regression analysis and probability analysis to look for changes in the importance of each of the factors over the duration of an apprenticeship.

For the trade occupations the study concluded that: 'doing something different/better' and 'other reasons' remained consistent in their importance as a factor over time; 'poor working conditions/did not like the boss' and 'lost job/ made redundant' decreased steadily in their importance over time; 'did not like work or industry/transferred' initially increased but began to fall after the first year; while 'wasn't happy with training or study' and 'personal reasons' started low and increased with duration (see Appendix E for probability graphs).

Table 13: Main reasons for not-completion by duration, trades. Source: Karmel and Mlotkowski (2010, p.10)

	Up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and up to 2 years	Over 2 years	Total
	%	%	%	%	%	%
Doing something different/better	23.9	14.3	29.1	21.1	27.1	**23.4**
Poor working conditions/didn't like boss	24.8	22.0	12.8	23.4	7.1	**19.1**
Didn't like work or industry/transferred	11.4	22.4	17.5	22.9	0.9	**16.7**
Wasn't happy with training or study	4.9	8.3	8.4	10.3	7.4	**7.9**
Personal reasons	9.6	10.3	4.6	5.3	34.2	**9.4**
Lost job/made redundant	12.6	6.8	10.4	7.1	9.8	**9.5**
Other	12.9	15.8	17.1	9.9	13.5	**13.9**
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

These findings suggest that supports for apprentices in the construction trades need to be tailored to the stage in the apprenticeship journey. Early on, when the attrition rates are highest, employment conditions play a particularly important role - while training quality and personal reasons become increasingly important towards the end.

SBATs on the other hand appear to have quite a different profile and support needs:

> Attrition is lower among school-based than all young apprentices and trainees, both within the first six months and year, and at both certificate I/II and certificate III and above levels. However, completion rates at the certificate III and above level are also lower for school-based than all young apprentices and trainees []. So, whereas fewer school-based apprentices and trainees cancel or withdraw from training within the first year, fewer also go on to complete their training. This may be because school-based apprentices and trainees often finish school part way through their training (this is particularly true of certificates III and above), and the loss of school pastoral care may account for the lower completion rates.
>
> (Karmel & Mlotkowski, 2008, p. 12)

Factors influencing attrition and retention

Powers (2020) studied motivational differences of trade apprentices in their first and second year of study in two licenced trades (plumbing and electrical) and two unlicenced trades (carpentry and bricklaying) and found that motivational values were far more important predictors in apprenticeship retention compared to demographic characteristics. Based on this, the study suggests that more interesting workplace learning environments would increase retention while trade school interventions should distinguish between licenced and unlicenced trades and tailor their approach accordingly:

Understanding STVs [subjective task values] within different learning contexts provides insight into potential levers for improving retention and engagement through study and workplace motivation. Motivational values were much more important predictors of apprenticeship retention than demographic characteristics prevalent in apprenticeship retention research. Even though licenced apprentices entered with higher levels of SES and prior education compared with unlicensed apprentices, such differences did not predict persistence in study and work after accounting for motivation.

This study indicated the key to employers raising apprentices' intentions to persist in study and work is via raising apprentices' interest, and reducing their workplace anxiety, over encouraging the usefulness or importance of their workplace learning. Practical approaches could include structured and active workplace teaching with a variety of activities suited to lifting apprentices' workplace interest, through novelty (Bergin 1999) and support which trigger and promote interest (Hidi and Ann Renninger 2006). Reducing emotional cost may require greater clarity on evolving roles, to mitigate mismatched expectations (Snell and Hart 2008) and interpersonal differences on-the-job (Bednarz 2014) which have been associated with lower retention. Given the strong relationship between workplace motivations and apprentices' intentions to persist in study and work, there is an argument for employer regulation and training that target employers' on-the-job activities to motivate apprentices in specific ways. Employing policies that regulate who can employ an apprentice may improve retention rates by ensuring employers have the appropriate skills to support apprentice learning in ways that hold their interest and reduce anxiety. Given research that shows (a) employers are frequently uncertain how to implement workplace training (Smith 2000) and, (b) the negative relationship between unstructured approaches to workplace learning and retention rates (Bednarz 2014), the findings in this study encourage turning policy attention towards the workplace learning environment.

Employers who create an uninteresting and anxiety-provoking learning environment pose a significant risk to apprenticeship persistence and commitment to the occupation. Trade school STVs may be an easier pathway to intervene with larger groups of apprentices but must account for differences between licenced and unlicensed trades. Emphasising the importance of the qualification along with the status and esteem bestowed (Harris et al. 2001b) seems an important driver of planned retention for licenced trade apprentices. However, where the qualification is optional (unlicensed trades), presenting trade training in a manner that stimulates apprentices' interest would seem more critical to raising intentions to remain in the apprenticeship. For unlicensed apprentices, interest in trade school may be supported by greater variety in learning competencies, site visits, and guest speakers since novelty and modelling tend to promote situational interest (Hidi and Ann Renninger 2006). Even though trade school may be perceived as useful, important, and in a

format that reduces anxiety, this may matter little for apprentices who find their optional training uninteresting. P. 93

Looking specifically at 'drop out' reasons, Powers and Watt (2021) found that:

> Although apprenticeships ease the school-to-work transition for youth, many apprentices seriously consider dropping out. While associated with noncompletions, dropout considerations are important to study in their own right, because they reflect a negative quality of apprenticeship experience and can impact apprentices' quality of learning and engagement. Few studies have addressed apprentices' dropout considerations using comprehensive theoretical frameworks. To address this gap, this study examined how apprentices' interest and anxiety growth trajectories predicted dropout considerations and associated with perceived resources and demands, grounded in expectancy-value theory (EVT) and the job demands-resources (JD-R) model. Australian apprentices (N = 2387) were surveyed at 6-month intervals utilising an accelerated longitudinal design, on their workplace interest and anxiety, job-related resources (role model, timing of choice, employer teaching, expertise, job security, and training wages) and demands (lack of information, career indecision, and excessive work). Latent growth models (LGM) within a structural equation modelling framework showed apprentices began with high interest which declined over time, and low anxiety which increased in the latter half of their first year until the end of their second year. Apprentices' dropout considerations were predicted by initial interest and anxiety levels (at the beginning of their apprenticeship), and by interest losses during their apprenticeship (but, not by increases in anxiety). Almost half the variance in interest and anxiety trajectories was explained by apprentices' perceived resources and demands: resources had a greater effect on promoting interest than reducing anxiety, whereas demands were more important in exacerbating anxiety.

Other studies, however, have findings that appear to be somewhat contradictory to this. Ball and John (2005) for example found that, statistically, the likelihood of completion is influenced by gender, age, Indigenous status, presence of a disability, highest school level completed, and residential location. Mangan and Trendle (2008) also conclude that those most likely to successfully complete their apprenticeship training are males who have completed high school prior to training, work with a single employer, and undertake training within the Government system. Finally a recent study by the NCVER (O'Dwyer & Korbel, 2019) also suggests that employer size and apprentice demographics are the critical predictors:

> Group training can be particularly helpful to small and medium-sized businesses, which often find making a commitment to an apprenticeship difficult, in that they lack the resources to manage an apprentice or trainee, or are unable to provide the comprehensive on-the-job training required for an apprenticeship or traineeship. This study compares the contract completion rates of apprentices and trainees attached to GTOs with those attached to direct employers. Overall, completion rates with GTOs are similar to those of direct employers; however, further examination reveals that completion rates are dependent on a range of attributes relating to the employer and the apprentice or trainee, and these need to be considered to make meaningful comparisons. In particular, employer size and apprentice demographics are the key characteristics of the likelihood of apprentices completing.
>
> After accounting for the different demographic profiles of GTO apprentices and trainees and employer size, the study shows that GTO completion rates for all apprentices and trainees are substantially higher than for small and medium direct employers. For trade apprentices and trainees, GTO completions are higher than for small and medium employers. For nontrade apprentices and trainees, GTO completion rates are higher than the rates for both small and medium, and large direct employers. P. 3

In one of its most recent publications, the NCVER (Stanwick et al., 2021) summarizes the factors impacting completions as follows:

> Apprenticeship completions are impacted by several factors, which can vary across industries, but it is clear most non-completers leave in the first year of their contract (Bednarz 2014). Indeed, the most recently published data on attrition show that about a third of apprentices and trainees overall leave in the first year of their contract (NCVER 2021f). Influencing factors include changing demographics, government expenditure and incentives, perceptions of apprenticeships, and engagement by the community (McDowall et al. 2011). Working conditions also have a significant impact; these include low pay, hours of work, being treated as 'cheap labour' (Rexe 2012) and 'dirty work' (Misko, Nguyen & Saunders 2007). Shifts in the economy can impact on identifying employment opportunities for completing on-the-job training or it can increase redundancy rates (Misko, Gu & Circelli 2020). Figure 10 shows the top five reasons for non-completion from the 2019 Apprentice and Trainee Experience and Destinations (ATED) survey.
>
> While not explicit in the chart below, bullying is one of the reasons why apprentices and trainees may not complete their training. Information is contained in the ATED surveys on bullying observed in the workplace, both from the perspective of completers and also non-completers. Overall, about a quarter of apprentices observed bullying; however, a

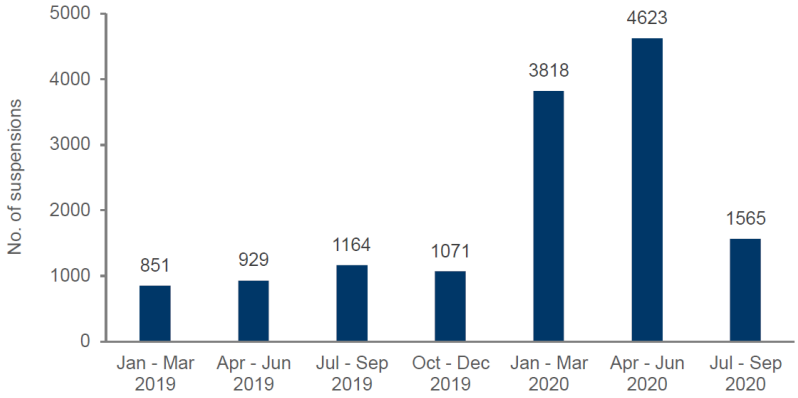
higher proportion of non-completers than completers observed it (35% vs 21%). It was particularly high for female non-completers, at about 45%. It was also very high for non-completers in the food trades, at 55%.

Also not shown in figure 10 is the proportion of non-completers who go on to further study. While not completing for various reasons, 29.0% then went on to further study, with 10.0% going on to another apprenticeship or traineeship (14.5% of trade non-completers and 6.0% of the non-trade non-completers). For the largest category in figure 10 — those who didn't complete because they left job or changed career — 26.4% went on to some form of further study, with 7.2% enrolling in another apprenticeship or traineeship.

Top 5 reasons for not completing an apprenticeship or traineeship, 2019 (%):

Note: 95% margin of error bars are shown on chart.
Source: NCVER (2019a).

In addition to the factors discussed above, system shocks such as a pandemic (resulting in lockdowns and restrictions on movements), affect the ability of apprentices to complete the on-the-job component and therefore complete in a timely manner. Figure 11 shows the likely impact the COVID-19 pandemic had on apprenticeship suspensions, with a marked increase shown in the first two quarters of 2020. What longer-term effects this may have on completion rates is currently not known.



Source: NCVER Apprentice and trainee collection, September 2020.

> Demographics also play a role, with evidence showing those aged 20—24 years, apprentices with a disability, those who identify as Indigenous Australians, and those training in metropolitan areas less likely to complete (Ball & John 2005). Age presents an interesting story. The Richard Review in the UK identified that those undertaking apprenticeships were increasingly older, with growth in apprenticeships 'fastest amongst those aged 25 and over' (Richard 2012, p.27). In Australia, Hargreaves, Stanwick and Skujins (2017) noted that, while completion rates for younger apprentices are on the decline, increasing numbers of adult apprentices are entering the system and their completion rates have been steadily increasing. Adult apprentices (aged 25—64 years) are also more likely to be 'undertaking training at a higher level … and more likely to complete in two years or fewer' (Hargreaves, Stanwick & Skujins 2017, p.16). In Australia, reasons cited for adult non-completion relate to family or personal situations, not dissimilar to other countries. In Canada, older apprentices are actually less likely to complete, in part for family and financial responsibilities, but, because they already have significant work experience, this cohort can find work even when they don't complete an apprenticeship (Smith & Brennan Kemmis, 2013).
>
> (Stanwick et al., 2021, pp. 11-12)

In a study from regional Victoria, Snell and Hart (2008) conclude that:

> Skills shortages have reinvigorated ongoing debate and concern about high attrition rates among Australian apprentices and trainees. Low apprentice and trainee wages have often been cited to explain this ongoing problem. This paper discusses the factors contributing to non-completion among apprentices and trainees in regional Victoria, and how the experiences of those apprentices and trainees who did not complete their training compare to those currently in-training. It asserts that unpleasant working conditions, poor quality training, a lack of support and low wages are contributing to both non-completion and a high degree of dissatisfaction among apprentices and

> trainees. Consequently, it argues an increase in the apprentice and trainee wage can only go part-way to improving training outcomes and experiences and attracting young people into the system.

Bilginsoy (2003, p. 54) provides insights from the US with the following findings:

> Apprenticeship programs in the United States, which provide workers with the broad-based skills required for practicing a trade via on-the-job training, are sponsored either unilaterally by employers or jointly by employers and trade unions. A comparison of the attrition and retention rates in these programs shows that program completion is more likely for apprentices in joint programs than for similar apprentices in unilateral programs. Rates of completion are lower for women than for men, and lower for ethnic and racial minorities than for whites. Apprenticeship duration rises with the unemployment rate.

Do pre-apprenticeships increase the likelihood of completion?

The NCVER emphasize that pre-apprenticeships provide an important pathway for disadvantaged students such as Indigenous students, early school leavers and those without non-school qualifications (Foley & Blomberg, 2011) and that:

- Pre-apprenticeships increase the likelihood of completion for apprentices in the construction, food and electro-technology trades and those with a Year 10 or Year 12 level of education.
- Pre-apprenticeships reduce the likelihood of completing an apprenticeship for hairdressers and apprentices in the automotive and engineering trades and for those people who already have a certificate III or higher qualification. This suggests that the design of pre-apprenticeships is important.
- Pre-apprenticeships lead to only a modest increase in satisfaction with job-related aspects of apprenticeships (but not off-the-job training aspects)
- In general, apprentices who have undertaken a pre-apprenticeship are less likely to discontinue their training because they did not like the type of work or training, but this does not translate into a higher likelihood of completion.

(Karmel & Oliver, 2011, p. 3)

6 Supports that exist – or could be implemented

Despite a reasonably mature literature on barriers to apprenticeship completions, the literature on support structures that exist or could be implemented still has significant gaps, particularly in regard to relational and informal social supports. A recent report by NCVER (Stanwick et al., 2021) summarizes the evidence-base as follows:

> "There are several key elements directly linked to successful completions. These include having access to an on-the-job training experience, enjoying the job,

experiencing a range of work tasks, feeling happy with the quality of training, having time to practise new skills, and experiencing a positive work environment. Social inclusion and integration into the workplace are also vital, particularly getting along with colleagues, and even more importantly, getting along with the 'boss' in an effective and positive relationship (Western Australian State Training Board 2017; Jobs Queensland 2016; Bednarz 2014). []

For apprentices and trainees with disabilities 'social exclusion, particularly harassment and bullying, were significant barriers' (Cocks & Thoresen 2013, p.26). This highlights further the critical role these social aspects play. Successful apprenticeship outcomes also rely on support structures, with the supervising tradesperson needing to develop a strong relationship with the apprentice, and evidence shows that guidance and mentoring, especially in the early stages of the apprenticeship, can reduce attrition (Loveder 2017; European Commission Directorate-General for Employment, Social Affairs and Inclusion 2013; Cocks & Thoresen 2013). However, this can be challenging for supervisors, who, despite being knowledgeable in their trade, often don't have teaching or training experience and may not have the communication skills necessary to effectively give instructions (Bednarz 2014).

Group training organisations can help by filling the mentoring gap that employers cannot provide (Ai Group 2016; Fattore, Raffaele & Moensted 2012), enabling apprentices to speak openly, be listened to, and receive independent advice (Fattore, Raffaele & Moensted 2012). They provide the additional support (including, for example, pastoral care) necessary for apprentices and trainees to complete (O'Dwyer & Korbel 2019). Indeed, supervisor support is ahigh priority, as noted by attendees at 'The future of Australian apprenticeships' stakeholder forum, hosted by the National Centre for Vocational Education Research (NCVER) in 2016, at which the value of a program mentoring and training workplace supervisors to develop skills in working with apprentices and training providers was identified (Couldrey & Loveder 2017).

Where formal support networks are inadequate, informal networks and social relationships are pivotal (Cocks & Thoresen 2013). Other apprentices and co-workers can assist the apprentice to self-manage employment challenges and work tasks, while family can provide financial support to augment the low wages some apprentices receive.

The latter is very important, as expenses related to undertaking an apprenticeship can be prohibitive, such as the costs of tools and equipment, and travel to both on- and off-the-job training. Travel can be particularly unaffordable for apprentices living in rural locations. For all apprentices, however, having reliable transport makes completion easier. Collectively, these expenses can make accessing training opportunities difficult. Nevertheless, some supports are available for apprentices, for example, trade support loans (for income support) and a living away from home allowance (LAFHA).

> Interestingly, some research (Deloitte Access Economics 2012) showed that LAFHA did have an effect on completion rates, while the employer incentives did not.
>
> Research suggests that support mechanisms, whether for mentoring, ensuring quality training, or providing financial incentives, should be built into the apprenticeship system, becoming a shared investment between industry and government (McDowall et al. 2011; SA Training and Skills Commission 2019)." pp.13-14

Relational supports

Deficit-based versus strength-based mentoring

Formal mentoring programs are deeply embedded into Australian Apprenticeships and include initiatives such as the "Industry Specialist Mentoring for Australian Apprentices (ISMAA)" program which aims to: increase apprentice retention rates, particularly in the first two years of training; improve completion rates; and support the supply of skilled workers in industries undergoing structural change. ISMAA provides support for those apprentices who have barriers to finishing their training in the form of an individual mentoring plan and frequent contact from a skilled industry mentor (**https://www.australianapprenticeships.gov.au/node/2721**).

This type of formal approach to mentoring has been shown to rank high with apprentices in regards to career development and role modelling support, however Corney and du Plessis (2011b) conceptualize the model as both hierarchical and deficit-based, in that it assumes the mentor to have qualities (e.g. experience, skills, social network) that the mentee lacks. While there is undoubtably value in the approach from a career progression perspective, its value as a program to increase retention is likely to decrease over the duration of an apprenticeship. Referring back to the earlier sections of this review, we know that 60% of Australian apprentices who leave do so within the first year. Employment conditions play a particularly important role in their reasons to leave, while personal and 'other' reasons become the main reasons by those who leave in their final years. As recognized by ISMAA, formal mentoring may therefore help apprentices continue their training early on, but it may not provide the support needed by those struggling later in their apprenticeship.

This brings the importance of psychosocial support into focus as it may help retain those who are close to completion. These apprentices have already gained significant knowledge, skills and experience – and from an industry skills-shortage perspective are arguably the most important to retain. These apprentices list personal and 'other' factors as their reason to withdraw – and whatever these personal reasons are, they are likely to be significant for an individual to leave their training so close to completion. Individual reasons are naturally

very complex and difficult to capture on a quantitative scale but what we do know from the literature is that young male apprentices in Australia are more likely to come from a demographic associated with a reduced tendency to seek help for mental health concerns and that they are also more likely to suffer from conditions or behaviours that would benefit from such help (Corney & du Plessis, 2011b). This is supported by studies showing overall poor levels of mental health in the construction industry for both men and women (e.g. Bowen et al., 2018) with women faring worse than men (Holdsworth et al., 2020) but also being more likely to seek help (du Plessis et al., 2011).

Corney and du Plessis (2011b) argue that for young male apprentices 'strength-based' interpersonal mentoring is particularly valuable as it has been associated with an increased likelihood of completing education and/or training; with higher self-esteem; and with a decreased likelihood of engaging in risk-taking behaviour. Strength-based mentoring is the support provided by 'significant others' such as family, romantic partners, friends or others in the community in the form of relationships that are built on trust, friendship and respect (du Plessis & Corney, 2011). Alarmingly, 10 percent of participants in du Plessis and Corney (2011) study reported that they did not have this type of support available to them, highlighting the very real risk of social isolation and the need to provide enablers for social support.

Corney and du Plessis (2011b) findings show that apprentices rank the psychosocial support provided by this type of informal mentoring significantly higher than in formal mentoring and that "significant others often act as a natural sounding board for apprentices' concerns and could be instrumental in encouraging help-seeking when additional support is required" (p.27). In other words, it is the informal support that increases the resilience of young people and their ability to keep walking when the going gets tough.

The study concludes that

> *"Facilitating and strengthening young workers' ties to existing support networks will benefit not only young people, in terms of improved physical and psychological health, but also industry in the form of higher apprenticeship completion rates and improved retention rates for skilled workers"*
>
> *"It is recommended that programs be introduced to assist young people to identify their significant others, and to extend and strengthen existing relationships, particularly those with significant others in their place of work or training."*
>
> (Corney & du Plessis, 2011b, pp. 27-28)

Recent literature on informal strength-based mentoring

The importance of significant others as discussed by (Corney & du Plessis, 2011b; du Plessis & Corney, 2011) is noted briefly in many recent studies on apprenticeships, however, apart from acknowledgement on the importance of relational support, the topic appears to have attracted surprisingly scarce research attention since – at least in connection with apprenticeships. The exceptions include a guide by the Australian Government (Apprenticeship Support Australia, 2021) which gives parents advice how they can help their children succeed in an apprenticeship, and other recent studies which have investigated the role of family in 'employability' (McDonald et al., 2020) and how, without family financial support, it is practically impossible for apprentices to pay for course fees, adequate housing and the vehicle often required to get to worksites (Myconos et al., 2018). However, the focus of these is particularly on the barriers this creates and why (see Table 14). There appear to be no other recent studies that specifically investigate how informal socio-emotional support for construction apprentices by 'significant others' may fostered.

However, Corney and du Plessis (2011b) argument of the importance of strength-based approaches is supported by a recent study from the UK which found that the outcomes of those apprenticeships that were based on a strength-based curriculum and assessment were notably more successful (with 10% higher grades) than those following the traditional route (Saville et al., 2019).

Mental health and wellbeing supports

Life skills courses and resilience training

Mates in Construction (MIC) is a program aimed at raising awareness and providing networks on site that provide help and link workers who are at risk of suicide through to professional help (https://www.birst.com.au/matesinconstruction.htm). In addition to its regular programs, in Queensland and South Australia it also runs a life skills program specifically for apprentices. "Life Skills" is an accredited training program delivered over the life of an apprenticeship/traineeship. The aim is to introduce young workers to a range of issues they will face in the industry and quip them with the life skills to deal with them. These include:

- Communication
- Financial management
- Belief systems
- Depression and mental health
- Drugs and alcohol
- Understanding and managing emotions

- Conflict
- Stress
- Suicide awareness

The MIC report that one in four apprentices who complete Life Skills take the initiative to ask for help.

In Victoria a course titled “Life Care” (Broadbent et al., 2013; Du Plessis et al., 2012) focuses on a range of topics relevant to young workers’ health and well-being, including relationships, finances, substance use, bullying and depression. Life Care sessions focus on building resilience through education about the issues and importance of accessing support services, and providing support to apprentices in need (Du Plessis et al., 2012). After the course apprentices who had participated in the programme retained a number of key messages in the long term, which included improved mental health literacy (e.g. knowledge of risk factors); increased willingness to access support from people; and increased knowledge of the importance of social connection (Du Plessis et al., 2012).

Boyle (2021, pp. 11-12) mentions the Victorian Automobile Chamber of Commerce’s life-skills course for apprentices:

> Consultation with apprenticeship providers has suggested that resilience or life-skills training could be another beneficial approach to promote the wellbeing of young apprentices. One such course is the Victorian Automobile Chamber of Commerce’s life-skills course for apprentices. This course is provided during induction and includes training on mental health, alcohol and drugs, financial skills and communication skills with regular follow up training Life-skills and resilience programs potentially have a protective effect against the negative aspects of apprenticeships. Resilience interventions based on a combination of cognitive-behavioural therapy and mindfulness techniques appear to have a positive impact on individual resilience.(35) There is emerging evidence demonstrating the effectiveness of online ehealth interventions, which target resilience in the workplace.(35) However, further trials into these training courses is recommended to ensure these courses meet the needs of young people.

Other programs include:

- Hope Assistance Local Tradies (HALT) in Victoria, a national grass-roots suicide prevention charity that has delivered close to 1000 ‘Save Your Bacon’ Brekkies and other events, reaching more than 100,000 tradies across Victoria, New South Wales, Queensland, South Australia and Western Australia. (**https://halt.org.au/what-is-halt/**).
- OzHelp, which aims to build awareness of risk and protective factors for mental health and suicide, adopt self-management strategies and seek help if required. (**https://ozhelp.org.au/**)

Employee assistance programs (EAPs)

Boyle (2021, p. 11) summarize the evidence-base of EAPs as follows:

> An Employee Assistance Program (EAP) is a work-based intervention program designed to enhance the emotional, mental and general psychological wellbeing of all employees and includes services for immediate family members (Brooks and Ling, 2020). They differ from mentoring and peer approaches by providing an independent, outside voice to support employees in the event of mental ill-health (Brooks and Ling, 2020). EAP programs are resource intensive and are therefore most often provided by larger employers and group organisations which have access to EAP. A systematic review in 2018 found that utilising EAPs enhanced employee outcomes in certain measures, specifically improved levels of presenteeism and functioning (Joseph et al, 2018). Yet, there is little information on how EAPs impact other measures, including wellbeing and productivity. There is also limited evidence on the effectiveness of EAP for apprentices. Further research is needed to evaluate how EAP programs can be optimised for young people in apprenticeships, as there is also little evidence examining uptake rates of EAP by apprentices.

Digital supports

Boyle (2021, p. 11) provide an overview of the evidence-based options as follows:

> Digital supports are an accessible means of delivering wellbeing support options for apprentices. The use of mental health programs delivered online (eHealth) and via mobile technology (mHealth), can overcome barriers to young people receiving mental health information and support (Deady et al, 2020). While there are a range of digital mental health supports, there are few tailored to apprentices. One example is the mental health app, HeadGear, a tailored eHealth program for apprentices. An initial study of the app found that there was a positive qualitative response from the apprentices surveyed but limited quantitative evidence on the effectiveness of the program (Deady et al, 2020).
>
> An example of a digital support for young people is the Moderated Online Social Therapy (MOST) platform, which offers continuous, integrated face-to-face and digital care to young people accessing certain mental health services. Evaluations of the MOST platform have found that it has been successfully adapted for young people with a range of mental health concerns (Alvarez-Jimenez et al, 2019, Alvarez-Jimenez et al, 2020; Rice et al, 2020; Gleeson et al , 2017)
>
> Another digital platform for mental health support is eheadspace, which provides online and telephone support and counselling to young people. Early analysis of eheadspace has found that it is effective in reaching a unique client group who may not otherwise seek help and is associated with strong user satisfaction (Rickwood et al 2016;

Rickwood et al 2019). For each of the other digital supports outlined above, there is an opportunity to examine how impactful digital supports can be for young people completing apprenticeships. Such a study would lead towards new opportunities to use these supports to aid apprentices.

Deady et al. (2020) specifically studied the utility of a mental health app in apprentice workers:

> **Background:** Young people are at heightened risk for mental health problems. Apprenticeships are common pathways into the workforce at a critical developmental period. However, in some cases the working conditions for apprentices present significant challenges to mental wellness. As apprentices are unlikely to utilize traditional services, eHealth and mHealth interventions are a useful means of delivering interventions to this group. The aim of the current paper is to: (1) qualitatively explore the utility of an existing mental health app within an apprentice population; and (2) evaluate the usability, acceptability, feasibility and preliminary efficacy of a modified version of the app (HeadGear Apprentice), designed to reduce depressive symptoms in an apprentice working population.
>
> **Methods:** Study One: Twenty-six apprentices (aged 18–30) took part in one of eight (90-min) focus groups. Participants explored the HeadGear app, took part in group discussions, and completed uMARS questionnaires. Modifications were made to the app based on feedback. Study Two: In the follow-up pilot testing, 47 apprentices downloaded and used the modified app over 30 days. Assessment occurred online at baseline, 5-weeks, and 3-months post-baseline. Feasibility was evaluated using consent rates, adherence and attrition. Acceptability was assessed using questionnaires and a post-study interview. Depression, anxiety, well-being, and work performance scores were used to assess preliminary efficacy.
>
> **Results:** Overall, the app was well-received in both studies, with high self-reported scores for acceptability and utility. However, engagement—both in terms of self-report and adherence—was an issue in both studies. In Study Two, users completed approximately one-third of the app's therapeutic content, with increased usage associated with improved outcomes. This had implications for the preliminary effectiveness of the app [depression as measured by the PHQ-9 Cohen's d = 0.27 (95%CI:-0.16–0.69)]. At follow-up users reported improvements in all outcomes, but overall only change in well-being reached statistical significance [Cohen's d = −0.29 (95%CI:-0.72–0.14)].
>
> **Conclusion:** Overall, findings from the two studies suggest that an eHealth tool, HeadGear Apprentice, was an acceptable and well-received intervention when adapted to young apprentices. However, questions remain regarding how to improve

engagement and adherence to the program. These questions appear critical to effectiveness. The two studies also have implications for awareness raising in this population. Whilst preliminary results were encouraging, these improvements, along with a full-scale efficacy trial, are needed to better understand the utility of smartphone applications for mental health in this population.

Trial registration: ACTRN12618001475235 **https://www.anzctr.org.au/Trial/Registration/TrialReview.aspx?id=375875&isReview=true**.

Responding to workplace bullying

Doran et al. (2020) reviewed the evidence related to the impacts of, and interventions for, workplace bullying in the construction industry and conclude that

> Workplace bullying has been identified as a hazard and requires organisational and community leadership to reduce incidence and impact. Overall, the findings describe limited evidence for persuasion-based interventions (i.e., workshops, awareness campaigns). Additionally, some evidence suggests there are potential harms to individuals for mitigation or counselling incorporating the bully and victim. Based on the literature, there are three types of interventions: primary interventions targeting the factors that buffer an individual from the negative effects of bullying (either as the victim or a bystander) including resilience, perceived control over the situation, coping strategies, and social support (from sources outside of the workplace); secondary interventions targeting workplace factors including autonomy-building workplace culture, supportive management styles, and social support (within the workplace); and tertiary interventions focus on managing outcomes of bullying (once it has occurred) and should be tailored for each individual's needs and the nuances of the situation. The more control the victim/bystander feels that they have in the tertiary intervention, the better the overall outcomes. (Doran et al., 2020, pp. 39-40)

Social supports in the workplace

(Please note that this is a summary of Buchanen et al 2016 and some of wording used here is very close to the original text with the intention to keep the context. For publications this needs to be paraphrased.)

Buchanan, Raffaele, et al. (2016) have investigated the social support structures for young Australian carpentry apprentices. The results are published in the referenced report, as well as in a supporting document containing the detailed results of each case studies (Buchanan & Raffaele, 2016) and in a webinar (Buchanan, Hargreaves, et al., 2016). Initially, the study was intended as quantitative research in the form of a survey to try and find the relationship

between the social structures provided in the workplace and measured mental health. However, due to difficulties in obtaining a sample size large enough to make robust comparative findings, and the underpinning literature not being mature enough to draw conclusions, the research design was changed to a qualitative case study approach to answer the following questions:

- What is the nature of workplaces that provide good social support structures of support?
- How do these workplaces function?
- What are the outcomes in terms of completion?

As such, the Buchanan, Raffaele, et al. (2016) study does not provide direct answers for *how* informal mentoring practices shape the health and wellbeing of young apprentices. It investigates what it is about the organisations that enables them to provide good social support for apprentices.

The report takes a strength-based approach: instead of focusing on what is needed by those already considered 'at risk', it analyses the work-based supports that help nurture the wellbeing of young apprentices and help prevent crises from occurring in the first place. In their summary of the reviewed literature, Buchanan, Raffaele, et al. (2016) conclude:

> *The transition from adolescence to early adulthood can be a particularly turbulent time for many young people, with their move from schooling into the next phase of their life. This time of change coincides with substantially higher risks for the onset and delayed treatment of the majority of the high-prevalence mental disorders, compared with later in life. While the literature recognises the importance of early interventions in improving outcomes, much of the evidence is centred around a deficits-based model of individualised specialist responses. There is far less attention given to strengths-based perspectives on how to better nurture and support the wellbeing of young people while ensuring the early identification of those needing particular support. (Buchanan, Raffaele, et al., 2016, p. 28)*

From their literature review (Buchanan, Raffaele, et al., 2016) emphasize two key points: social structures that are associated with work can have a very important influence on the most basic indicators of mental health and wellbeing; and that the social work environment has a significant impact not just on skill formation but also on social development in general.

The research methodology involved eight case studies of organisations with very high completion rates[6] of carpentry apprentices to better understand how pastoral care, mentoring and other forms of social support are functioning in contemporary Australian apprenticeships. The first four case studies looked at large 'best practice' organisations and the second four looked at small organisations as a comparison.

> *The first part, involving larger sites and organisations, was conducted to answer the seemingly straightforward question: what forms do mentoring and structures of support take in 'best of class' settings? The second set of sites was studied to see just how different they are, if at all, in smaller organisations. The analysis revealed the answers were far from straightforward. Certainly amongst the 'best practice' sites an impressive array of mentoring and pastoral care arrangements were in place. But in many ways these were the least*

[6] Defined in the report as employers with apprentice completion rates of 90% or more

important aspects of social support provided to apprentices. Closer analysis of these experiences revealed it was the broader array of structures around the apprenticeship model of learning and work that delivered considerable substantive social support. And what was particularly revealing was that this was not confined to apprentices in the traditionally skilled trade of carpentry. Indeed, arrangements of very comprehensive and wide-ranging support were extended to occupational categories and groups of workers not traditionally associated with trades training — managerial employees and populations of workers at risk of social exclusion in general and labour market exclusion in particular. (Buchanan & Raffaele, 2016, p. 5)

The key finding from these case studies was that while formal mentoring played a critical role in successful apprenticeships, informal mentoring practices also significantly shaped the overall health and wellbeing of young apprentices. Beyond this high-level description, however, it becomes very difficult to compare the case studies. Each case has its own unique apprenticeship model of learning and work, and its own work culture. Listing successful mentoring and pastoral care arrangements appears to be almost meaningless when the individual context is taken away. Each company is unique and has found its own way to build an 'expansive' apprenticeship model and a work culture that values and nurtures the wellbeing of its apprentices. Even when grouped into categories such as large employer, large GTO, small employer and small GTO it is clear from the case studies that the supports were only possible because of the wider organisational context they were taking place in (Appendices F and G show the key supports tables of the study).

Buchanan, Raffaele, et al. (2016) conclude from their cross-case analysis that:

Finding 1: Formal mentoring and pastoral care arrangements were very common, although these were not necessarily the most important form of support for the apprentices

- All GTOs and the two larger firms employed very senior personnel responsible for the pastoral care or wellbeing of their apprentices
- Some included life skills training (e.g. healthy living, cooking, communications, punctuality, personal appearance, importance of savings)
- Formal mentoring arrangements were based primarily on apprenticeship coordinators and group training field officers
- All four GTOs had a strong ethos of pastoral care, with the field officers playing a critical role in:
    - organising inductions
    - mediating conflict
    - organising referrals to other sources of support
    - providing mentoring, advice and support as needed
    - providing support with 'life administration' such as paperwork and finances, transport, housing rebates and so on.

Finding 2: Systemic informal support embedded in apprenticeship cultures of development was more significant and the 'everyday life structures' are the most important for social development

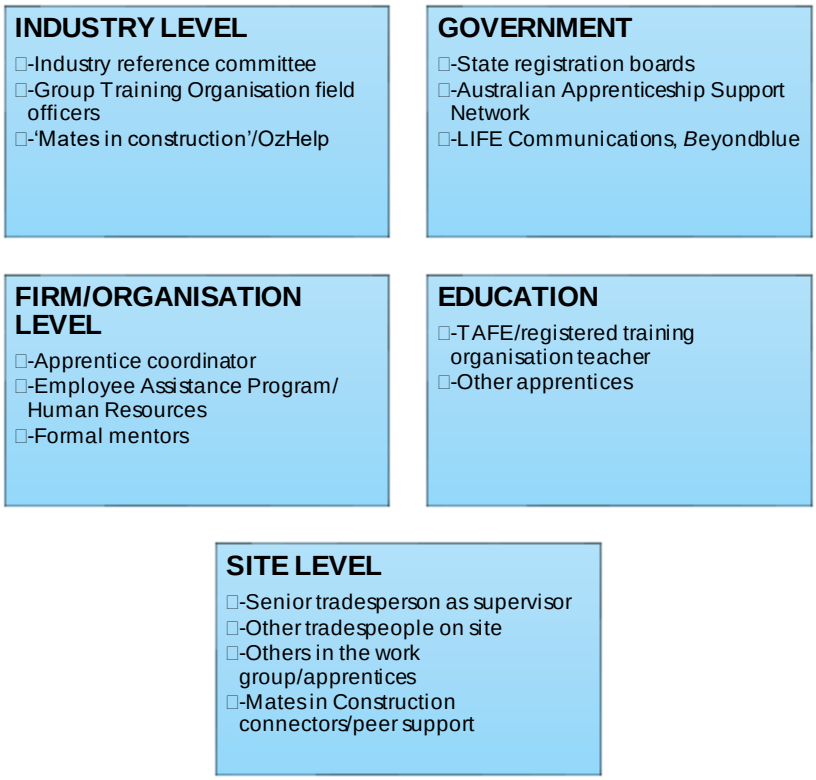
- Mentoring arrangements are not the whole, or even the most important form of, social support provided to apprentices. Highly customised support (both professional and personal) was provided to all apprentices through informal arrangements associated with vocational development on the job.

- The smaller businesses were not restricted by organisation protocols and were able to customise their apprenticeship offering. These companies do not have the formal support offered by the larger firms, but instead are able to support through a far more personal relationship between the apprentices and the supervising tradesperson. Several of these apprentices regarded the owner-supervisor as a personal role model not just for skills but working life in general.
- While not quite as personal, in the larger organisations this type of de facto support came from a range of sources, including the apprentices' immediate supervisor, other supervisors at the worksites, sub-contractors and other more experienced apprentices.
- Evidence of a supportive culture was extensive amongst the apprentices in that study and all those involved in developing them. Figure 3 shows the wide range of sources of potential social supports for apprentices.

Finding 3: Support arrangements were integral to business models.

- The arrangements that enabled the exceptional social support provided to apprentices did not occur by accident – they were integral features of distinct business models. All organisations studies were at the 'expansive' end of workplace environments. Expansive workplaces can be large or small and shear the following characteristics:
    - valuing the time required for both on- and off-the-job training
    - ensuring supervisors and peers recognise that skills development takes time and requires active nurturing on the job
    - placing high value on sharing skills and teamwork
    - respecting and placing importance on time for innovation
    - encouraging apprentices to tap into wider support networks
    - ensuring access to both formal and informal mentoring.
- Amongst the larger 'best practice' firms, integration with business models involved extending the apprenticeship model of support to managerial occupations
- Amongst the larger best practice group training organisations, integration with business models also involved extending the apprenticeship model of support to occupations and individuals not normally involved in trade training.

Figure 3: Work-based social support – example sources of social support for apprentices (NCVER 2016, p.2)



Finding 4: Quasi-apprenticeship support arrangements below trades level required additional stakeholders and resources.

- The ability to be more 'socially inclusive' and comprehensive in the support provided required additional stakeholders to be involved in sharing the risks and costs associated with supporting individuals at risk of labour market failure or exclusion.

Finding 5: External mentoring cannot be a substitute for poor apprenticeships.

- External mentoring programs can complement effective support arrangements; they cannot make up for deficiencies in vocational development arrangements.

The Buchanan, Raffaele, et al. (2016) study looked specifically at strength-based supports in the workplace that can nurture wellbeing of apprentices and prevent crises from happening in the first place. However, the study acknowledges that even when quality arrangements such as the ones in the case studies are provided, even they may not be enough to engage with apprentices in need of major personal support. In these cases, the report suggests that mentors independent of group training organisation field officers and host firm apprentice coordinators can become very important. The example was given of a GTO that invested money into a program for apprentices employed outside their network of host employers. The program involved a three-stage engagement program that started with inductions, a second stage to help with practicalities such as trade loans and car registrations, and a final survey about living arrangements and any potential issues such as trouble with the law. The intention was to identify apprentices who are likely to need greater support, which can then

be offered as opposed to having to wait for the apprentices to request their support or be involved in an incident that triggers their intervention.

The GTO reported that these mentoring arrangements had some advantages compared to field officers, as field officers are also involved in disciplinary matters regarding the apprentices. This monitoring role of the field officer may deter apprentices from sharing sensitive information. The report suggests that apprentices are generally more willing to talk about financial issues and family matters with external mentors, while mentors also tend to also have a greater capacity to complex personal issues as this is essentially their main responsibility that they can focus on.

> *The success of the OzHelp program in Tasmania is consistent with this analysis. This program was introduced in Tasmania as a specialised mental health and suicide support service for young people in construction in 2008, when there were 10 suicides annually. By comparison, in 2014, after a steady annual drop in suicides, there was one (OzHelp 2014). It is important to note, however, that both MGT Mentoring and OzHelp operate in conjunction with, not as substitutes for, quality apprenticeship systems of vocational development. The potential benefits of these schemes should not be regarded as in any way able to replace the deep support provided by quality apprenticeship arrangements — on and off the job. (Buchanan, Raffaele, et al., 2016, p. 53)*

The study concludes with a summary of what social support for young construction apprentices looked like in 2016.

> *While there are formal mentor-like arrangements in place, these are only a small part of the story. Of greater significance to apprentices as they master their trade on the job is the informal or de facto support provided day in and day out by more experienced adults and peers. In the organisations studied — amongst the best firms in the industry in contemporary Australia — these arrangements appeared to work very well. But there were exceptions. Some people do slip through even these 'best practice' structures of support. Therefore, the need remains for a specialised, well-designed complementary support service, one that is explicitly focused on the apprentice as a whole person. Such independent mentors could carefully identify individuals at potential risk and provide an additional 'safe place' to discuss sensitive matters beyond the work setting if it is needed. (Buchanan, Raffaele, et al., 2016, p. 54)*

While the report paints a clear picture of what quality social support for apprentice wellbeing looks like in the investigated case studies, the challenge is how this can be applied to other organisations. Informal mentoring is difficult to formally establish - and instead Buchanan, Raffaele, et al. (2016) focus on how employers can think more broadly to create an enabling environment for these types of social supports. NCVER (2016) have translated these findings into a good practice guide for employers, noting that of course individuals are unique and that situations and context vary. In other words, a 'one-size-fits-all' approach is the exact opposite of what works best. The guide suggests that a wide range of industry players can act as social supports for an apprentice (Table 15) and particularly in four key areas of workplace practice:

- through leadership by example;
- through a positive culture of workforce development;
- by tapping into wider social support networks; and
- by tapping into personal development opportunities.

Leadership by example and a positive culture of workforce development are particularly relevant at the firm/organisational and site level. The NCVER (2016) suggests employers focus on the following enablers in their own leadership approach:

- Personal attention — being mindful of the different levels of capacity, interest and understanding amongst apprentices. This tailored professional and personal support through the informal arrangements associated with excellent vocational development on the job can be powerful.
- Shared pride in the trade and a 'culture of caring' — demonstrating a willingness to work through issues and encourage an environment where apprentices are able to ask questions. Do not assume these aspects of your business are transparent.
- A comprehensive approach to skills development and human capability — a well-designed apprenticeship model of learning can simultaneously develop quality vocational skills and personal support for apprentices; it provides the context for apprentices feeling comfortable to discuss personal problems.
- A key support for apprentices is to be accepted as a valued member of the workplace.
- Everyday work structures — they can make a difference and provide a setting for discussing sensitive issues. The day-to-day support provided by peers, co-workers, other experienced apprentices, and supervisors all operate on their own or in conjunction with formal mentoring arrangements.
- Help with career development — don't leave this to chance or for the apprentice to do it in isolation.
- Quality on-the-job training — not all senior tradespeople are the best trainers; model a culture of sharing skills and provide training alternatives. Recognise and support the individual learning styles of each apprentice.
- Obtaining additional support — some employers value and may benefit from having their own mentor, or participating in training to enhance their communication skills and working with young apprentices.

(NCVER, 2016, p. 2)

In addition to leadership it is also suggested to review the business model itself, with the argument that even the best formal and informal mentoring and social support will fail if the workplace culture is disruptive (NCVER, 2016). According to Buchanan, Raffaele, et al. (2016), this equates to the ecology of the *expansive* apprenticeship model of vocational development. Expansive workplace learning situations are those in which: time for on - and off-the-job training is valued; the transition to full and rounded participation in the trade is seen as a gradual process; and time for innovation is regarded as important. The opposite to the expansive model is the restrictive (and least conducive) workplace learning environment where: virtually all training takes place on the job and there is little time for reflection; there is a preoccupation with making the transition to full competence arbitrarily quickly; and time for innovation is not respected (Table 15: Work-based social support - Positive culture of workforce development (NCVER 2016, p.3)).

The 'secret' to a high completion rate, according to Buchanan, Hargreaves, et al. (2016), is therefore not just paying apprentices well and ensuring that they have interesting work, but

also to look at apprentices as total individuals, their mental health and wellbeing, the structures to support them, and valuing apprenticeships as a social institution, not just an economic one. This requires an ecology where informal social support can flourish, but how can something that is informal be formally supported? Buchanan, Hargreaves, et al. (2016) suggest that the answer to this lies in how we mobilise resources and stakeholders to support workplaces that are expansive in nature; whilst being harsh on those workplaces with a narrow focus – those that are simply concerned with getting things done at minimal cost or to boost shareholder value. Of course, construction business are not welfare organisations but Buchanan, Hargreaves, et al. (2016) argue that all business are able to adopt a more holistic approach, with the key argument being that we know from the literature that wellbeing is good for the economy and that psychologically healthy employees essentially work better, turn up more often and turn up on time. According to Buchanan, Hargreaves, et al. (2016), improving support structures for young Australian construction apprentices therefore not only involves support aimed at apprentices but, importantly, also their employers.

Table 15: Work-based social support - Positive culture of workforce development (NCVER 2016, p.3)

Nature of workplace		**Workplace type (vocational development approach)**	
		Expansive (enhance social support)	*Restrictive (limits social support)*
External reference point	Engagement with a community of practice	• contributes to such a community • actively participates in established or emerging skills tradition	• limits engagement • no recognition or respect for tradition
Skills: nature and acquisition	Type of skill	• broad skills • respects value of transferable qualifications • values underpinning know ledge often learnt off the job	• narrow skills • no respect for qualifications • focuses all training on the job
	Nature of skills acquisition	• gradual/phased learning • supports career/skill development • over time • respects apprentices as learners • nurtures expanding skill set • has a clear skill regime • regular chance to learn new skills	• rushed/fast learning • focuses on getting the job done • sees apprentices as workers • confines skill definition • patchy/ad hoc skills regime • hinders learning new skills
Business setting: management, philosophy and enterprise structure	Alignments within the firm	• respects need for individual and company to benefit from workforce development • skills widely distributed • values team work	• workers' needs subordinate to the firm's • polarises skills • rigid role definitions

	Role of management	• facilitates individual and w orkforce development • multi-dimensional view of the • enterprise • respects and values innovation.	• controls individuals and w orkforce • uni-dimensional/top dow n view of • the enterprise • disregards innovation.

(NCVER, 2016, p. 3)

Engagement in education between training organisations and direct employers

O'Dwyer and Korbel (2019) compared GTOs and direct employers based on a qualitative study involving telephone interviews with 15 GTOs and nine direct employers in rural and metropolitan areas (NSW, VIC, QLD, SA and WA). The findings are summarized in Table 16:

Table 16: Engagement in education between training organisations and direct employers (direct quotes from text)

GTOs	Direct Employers
Factors in Completions* • **prevocational training and VET in Schools** • **recruitment practices adopted by GTOs** • **age and maturity of the apprentice**	**Factors in Completions**** • good mentors, who nurture the apprentices and trainees, given that nurturing is necessary due to the level of maturity and life experience of young people • good relationships with TAFE, including informing the employer about apprentices' and trainees' progress • the extent of apprentices' and trainees' ability to think independently and on the spot • apprentices and trainees equipped with a long-term outlook.
Reasons for non-completion* • **transient workers who are able to leave and find work elsewhere when unemployment rates are low** • **unrealistic or naive expectations or lack of prior knowledge of what is actually involved.** • **they didn't enjoy the work.** • **some had mental health issues, while others displayed a lack of resilience and had issues with communication and generational differences.** • **some of the older-aged non-completers withdrew at commencement, citing their need for a higher income.** • **GTOs were competing with universities for students.** • **Poaching (late transfers to direct employers)**	*Not stated in the report*
Likelihood of completing* **The GTOs interviewed showed no consistent pattern in completion rates over the last five to 10 years. Improvements in completions were viewed as due to** • **weekly site visits with individual apprentices and trainees;** • **apprentices and trainees having undertaken pre-training, such as participation in VET in Schools and prevocational courses;**	**Likelihood of completing**** The opinions from direct employers were based more on their perceptions of the characteristics of their individual apprentices or trainees rather than on past experiences of completion rates. Most direct employer respondents expected their current apprentices and trainees to complete.

• **improved working conditions and support for apprentices and trainees, including the consistency and stability provided by long-term staff;** • **GTOs no longer being involved in industries with low retention rates (such as hairdressing and hospitality); and** • **booming economic activity.** **Declines were attributed to** • **losing more people in the first six months of the apprenticeship or traineeship than previously experienced,** • **increasing incidence of mental health issues among apprentices/trainees** • **lack of economic recovery,** • **a crowded marketplace with increased competition for apprentices and trainees from other employers,** • **more apprentices and trainees from disadvantaged backgrounds, and** • **for those in rural areas, the impact of drought.**	
Literacy and Numeracy*	**Literacy and Numeracy****
• **GTOs responded that poor literacy and numeracy have always been prevalent in particular fields, however, they did not necessarily see a relationship between poor literacy and numeracy and completion levels, because problems were identified at the application or recruitment stage, meaning that support and counselling were offered at that point.** • **Several GTOs emphasised that support training is made relevant to the workplace, which is a key difference in the way literacy and numeracy are taught in schools.**	• Numeracy rather than literacy was the main focus for most direct employer respondents. Two reported that they look at school results to gauge literacy and numeracy. • Problems lie not only with apprentices and trainees but also with qualified tradespeople.
Motivation*	**Motivation****
GTOs and direct employers agreed that motivation was very important for apprentices and trainees and had observed differing levels of motivation among their apprentices and trainees, depending on type of work and contract duration. Both also noted that external factors,	GTOs and direct employers agreed that motivation was very important for apprentices and trainees and had observed differing levels of motivation among their apprentices and trainees, depending on type of work and contract duration. Both also noted that external factors, such as prevailing

such as prevailing economic conditions, rather than intrinsic motivation, can also motivate apprentices and trainees to keep going, especially if few other employment options are available. This is particularly pertinent to the period since 2002, which encompassed the GFC, the end of the mining boom and the collapse of the Australian car manufacturing industry. • **Very few GTO apprentices and trainees were not motivated.** • **Differences in the presence or degree of motivation mean that training must be customised to the individual and that GTO field officers need to meet with some more often than others.** • **Several respondents pointed out that motivation is difficult to measure and can waver during the four years. Keeping this demographic group engaged and motivated for this length of time can be a challenge.** • **The main means of maintaining motivation was mentoring, including face-to-face site visits with a 'personal touch', with the aim of building a trusted relationship between the field officer and the apprentice.**	economic conditions, rather than intrinsic motivation, can also motivate apprentices and trainees to keep going, especially if few other employment options are available. This is particularly pertinent to the period since 2002, which encompassed the GFC, the end of the mining boom and the collapse of the Australian car manufacturing industry. • role of social networks as a source of motivation
Advantages of GTOs*	**Advantages of Direct Employers****
• **security of employment (and correct rates of payment),** • **support from field officers or mentors,** • **flexibility in contract arrangements such as suspensions and the ability to move apprentices and trainees to different host employers, and** • **the ability to gain a range of skills and experiences.** • **Stakeholder relationships with schools and school leavers, career changers, employment service providers, unemployed persons and registered training organisations (RTOs). Relationships with host employers are particularly important for GTOs in rural areas, where there are fewer options.** • **Rotation has both advantages and disadvantages for apprentices. Some apprentices dislike rotation because of the disruption to established workplace routines and also because**	• Direct employers may be able to offer incentives such as higher wages

they are forced to work with new people. Several GTOs reported that minimising rotation has helped with completion rates by preventing apprentices from becoming disengaged. One respondent commented that rotation — along with greater support and mentoring — in instances of poor performance or workplace conflict prevents around 60% of these apprentices from leaving, so its effect on completion rates can work both ways. • **The practice of rotations for apprentices differs between GTOs. Many GTOs did not rotate at all; some rotated every six months and some four or five times per year. Whether rotations are used and the frequency and benefits of rotation depend on the particular industry and the needs of individual apprentices. GTOs with apprentices in hospitality, construction, carpentry and electrical tend to use frequent rotation.**	
Disadvantages of GTOs*	**Disadvantages of Direct Employers****
• **the advantages were seen as outweighing the disadvantages by far** • **disconnection or disengagement from host employer if treated like a contractor rather than an employee** • **a sense that they are not fully employed by the host company they are working for, even when treated as an employee day to day; some GTO apprentices/trainees fear that they may not receive the same benefits as other employed workers such as long service and sick leave accrual** • **confusion over who their legal employer is** • **generally not being paid above the minimum award wage (although GTOs can also pay above-award wages), while above-award rates are more frequently paid by host employers** • **GTOs being unable to offer the same incentives as direct employers (for example, bonuses, free lunches)** • **being under constant observation or monitoring from GTO administrators, which may be distracting or stressful for some GTO apprentices and trainees**	• direct employers generally do not have the time to provide one-on-one attention, even when they only have one or two apprentices or trainees.

• **the obligation to comply with safety regulations when hosts do not (for example, the requirement for long sleeves in hot weather)** • **some older workers in host employers, who are not up to date with new work methods (although this concern is not specific to group training, and GTO field officers can help bridge any gaps)** • **poor continuity if rotations are frequent.**	
Supports offered by GTOs*	**Supports offered by Direct Employers****
• **the option to suspend training rather than cancel the apprenticeship or traineeship if an individual needs several months to recover from a mental health incident** • **life skills programs, addressing finance/budgeting, communication, drugs and alcohol, conflict resolution, dealing with difficult people, mental health and use of IT (familiarity with mobile phones does not necessarily translate to proficiency with other forms of IT)** • **updates in life skills training throughout the apprenticeship or traineeship** • **clear, plain language policies on employee conduct** • **access to employee assistance programs.** • **Support for literacy and numeracy deficits is provided in the form of special classes or tutorials, usually provided by the GTO but also by some host employers. Several respondents pointed out that individuals with low literacy and numeracy fare better with face-to-face teaching, and that online training only requires existing literacy.** • **Communication and pastoral care were very important in supporting GTO apprentices' and trainees' employment and training experiences and thus for maximising completion rates. Many noted the importance of timely intervention at earlier stages, which had not occurred in past.** • **Many GTOs have adapted their communication processes to make use of social media and online technology, given their use by younger generations, such as using Twitter, Instagram**	• The report does not mention anything that was offered but notes that this question was worded differently for direct employers. The responses implied that although direct employers would like to make changes, they were constrained by regulations, red tape and costs. The small number of apprentices and trainees with most direct employers made it difficult for them to discern any long-term or wide-ranging patterns.

and Facebook. Conversely, some GTOs found that personal interaction rather than other forms of communication is preferable, 'because people are social beings'. • **Some GTOs invested in training for mentors, such as training on non-emotional bias and body language. GTOs have found that investment in staffing in areas such as cultural awareness and psychological first aid leads to increased completion rates.**	
Monitoring Schedule and OHS*	*Not stated in the report*
• **GTOs reported that the frequency and timing of schedules for monitoring apprentices and trainees is a key strategy in assisting to maximise retention. The first six and 12 months are important for identifying problems early on and for building rapport. Increased engagement was also said to be necessary at the five to 11-month mark, a time when some apprentices and trainees become overconfident. Performance appraisal documents are continuously updated rather than fixed or intermittent. Some GTOs track reasons for cancellations and use exit surveys as a way to improve their support processes.** • **Some GTOs expressed the view that, in the past, mental health and drugs and alcohol issues often led to cancellations. These GTOs said they are now more likely to suspend training contracts so that individuals can recover and recommence.** • **A few respondents mentioned that their improved OHS processes have helped to increase completion rates. The increased attention to health and safety, which includes good incident-reporting processes, regular toolbox meetings and updated checklists, has resulted in better employee confidence and fewer injuries. Most respondents did not refer to changes in OHS as a factor in completions, possibly because existing measures have been in place for some time.**	

*as reported by the GTOs that participated in the study

** as reported by the direct employers who participated in the study

Support for apprentices to know and exercise their rights at work

Together with a full time apprenticeship officer employed by the CFMEU Construction Union (**https://vic.cfmeu.org/apprenticeship-training**) the Young Workers Centre in Victoria (**https://www.youngworkers.org.au/**) consists of lawyers, organisers, educators and researchers seek to empower young people working in Victoria with the knowledge of their rights at work and the skills to exercise their rights.

Incentives and government support

A recent report by the NCVER (Stanwick et al., 2021, pp. 15-16) summarizes the research and literature on incentives and government support as follows:

> A broad range of incentives and other supports have been introduced to help increase participation and completion of apprenticeships. These include financial incentives, professional development programs for supervisors, trial mentorships, and advisory programs for apprentices (Owen 2016). Incentives have always aimed to boost commencement, retention and completions in areas of skills shortage across Australia.
>
> Various incentives and supports are available through the Australian Government and also state and territory governments. At the Australian Government level, these include the Australian Apprenticeships Incentives Program; trade support loans for trade apprentices; living away from home allowance; commencement and completion grants for apprentices and employers in certain occupations experiencing skills shortages; and support through the Australian apprenticeship support networks. States and territories also provide some employer incentives (including state tax rebates and exemptions) as well as higher rates of subsidy for some courses undertaken as an apprenticeship, and travel and accommodation related-supports (Burke forthcoming).
>
> The Australian Apprenticeships Incentives Program has been vital for encouraging apprenticeship opportunities and participation (Laundy et al. 2016). However, Bednarz (2014) noted that the attraction to incentives is nuanced, with some employers finding them more valuable than do others. Interestingly, incentives were seen to be more important to employers with low retention rates of apprentices and trainees than those with high retention rates.
>
> Furthermore, the econometric review on apprenticeship incentives by Deloitte Access Economics (2012) indicated that, while incentives have been effective in terms of increasing commencements, they were also associated, with some exceptions, with an increased likelihood of cancellation and a decreased likelihood of completion. A reform to the incentives program was subsequently undertaken to simplify and better target the payments. As was seen earlier, this had a large effect on non-trade apprenticeships and traineeships.

It is important to provide some context to these changes to incentives. Existing worker apprenticeships and traineeships were introduced in 1998 when the Commonwealth Government abolished the requirement for trainees to have been with the same employer for no more than three months to qualify for employer incentives (Noonan & Pilcher, 2017). This resulted in an explosion in number of these existing worker traineeships (Burke, forthcoming). As

Noonan and Pilcher (2017) pointed out, these people were already employed when they were 'signed up'. It was clear that there were issues from early on.

Firstly, reviews by Kaye Schofield found quality issues with existing worker traineeships in reports done around the turn of the century. For example, Schofield (1999), in a review of the quality of traineeships in Queensland, found inadequacies in quality assurance and abuse of the training system that did not result in any benefits to many trainees. An example of this was that it appears that the incentives were being used by some employers to fund in-house training programs.

Secondly, NCVER (2010) and Knight (2012) point out that incentives offset only a very small proportion of the costs for trade apprenticeships (which are largely not existing workers), but that for some traineeships, for example in retail and hospitality, they contribute an implicit wage subsidy of up to 20%. This tends to indicate that this type of incentive support functions as a labour market program. Indeed, Schofield (1999, p. 50) noted that the traineeships were 'in many cases a de facto source of wage subsidies to firms'.

As mentioned, there was significant reform to the incentives program following recommendations by McDowell et al (2011) with figures 1 and 2 clearly indicating that non-trades apprenticeship commencements declined considerably after the withdrawal of incentives in July 2012. Just before the decline, though, there was a significant increase in commencements upon the announcement of the intention to withdraw government incentives for existing worker traineeships (with employers taking advantage of the incentives while they could). Pfeifer (2016) noted in a study on firms' motivations for training apprentices that, in Australia, particularly in the non-trades, a production model of training (substitution of regular workers) is used, as opposed to an investment model, such as is the case in Germany. This means that employers, particularly in non-trade areas, are less likely to take on apprentices and trainees if the financial incentives are not there.

Apprenticeships are the main part of VET in Australia where the number of people in training are determined by employers. Incentives are only part of the reason why employers take on apprentices, particularly in the trades, since incentive payments rarely offset the cost of supervision. The main reasons employers hire apprentices include: requiring skilled staff, upskilling existing staff, filling specific roles, and training

new staff to their own specific requirements. Support from employers for apprentices and trainees is vital (Productivity Commission 2020; Bednarz 2014).

From the perspective of the apprentice, broad-based employer incentives do not guarantee quality on-the-job training or extra services by employers, and for governments there is no guarantee that provision of incentives will result in consistent employer investment in training (McDowell et al. 2011). The effectiveness of incentives has been found to relate to: the specific occupations, skills levels or demographics of the incentive (the target group); the structure of the incentive, conditions and qualifications; the economic space in which the incentive exists; and the dollar value (Jobs Queensland 2016).

There is no 'one size fits all' approach to apprenticeship support, particularly in regard to areas of skills shortages. Government policy changes and settings across all jurisdictions that prioritise and apply incentives and subsidies consistently are credited with contributing only partially to relative stability in the demand for trade apprenticeships over the past 15 years. Changes observed in this demand can be linked to the prevailing economic conditions, the challenge of providing opportunities when work is less available, and where economic growth occurs in areas not traditionally linked to apprenticeships. This includes adult apprentices, whose numbers have been declining after steady growth over a decade ago, likely in response to changes in incentive arrangements for this cohort (Ai Group 2016; Misko 2020; Misko & Wibrow 2020; Hargreaves, Stanwick & Skujins 2017).

It has been suggested that targeting employers with strong histories of accepting apprentices, as well as expanding eligibility for Commonwealth incentives under the Additional Incentive Skills Shortage (AISS) payment, would improve the usefulness of these incentives (Misko 2020; Misko & Wibrow 2020). In addition, a better understanding of which funding vehicles support specific skill development and better integration of existing programs across government would increase access to government incentives and support (Laundy et al. 2016).

Reforms that would enable better support

Myconos et al. (2018) argue that significant reforms across VET are needed to improve the welfare and wellbeing support of apprentices:

> Our focus on young early school leavers has necessitated omitting much about the experiences of the broader equity group population. Nevertheless, general observations emerge. It is clear that much of what transpires within the VET sector is determined by what occurs beyond it and, indeed, what has happened before the learner has even encountered a training provider, large or small, public or private. While this should surprise no-one, there is a noticeable absence in VET policymaking circles of

conversations about the need to promote collaboration on the boundaries of the VET sector. The metaphor of the safety net is useful here, with the threads of that net ideally woven through and beyond the sector. From the vantage point of the vulnerable learner – young or old – we see the need for reform of the kind outlined below.

Understanding of and support for the (prospective) learners

The notions of student welfare and well-being support have been neglected across parts of the VET sector – and particularly within the community of private for profit providers. This notion, familiar to educators elsewhere, must now be embraced by the whole VET sector. Coordinated vocational education and service delivery models should be created that meet the students' learning and broader needs. This could be achieved by linking those learners experiencing severe hardship with health services, community supports and employers. For this to succeed, advisory and enrolment regimes must be overhauled so that they are concerned as much with needs assessments as with boosting student numbers.

While the notion of needs-based funding has gained purchase in mainstream primary and secondary school education, it remains foreign to the VET sector. Such funding could help providers better to meet the needs of disadvantaged learners (Davies et al, 2011).

It takes a community …

There is an urgent need for more meaningful and sustainable collaboration between training providers of all hue and other agencies and services that advise and facilitate disadvantaged learners to move towards the VET sector. Clearly the TAFEs are well placed to foster such collaboration and to establish hubs of interaction and exchange between, say, secondary schools, jobactive providers and sundry support services to assist the marginalised better to navigate towards and through the sector. Fundamentally there is a need to ensure important stakeholders' interests are brought into closer alignment and then to create more malleable and nimble services.

If we are concerned with achieving success for disadvantaged learners in VET we need to think beyond the narrow confines of the sector. Facilitating this shift first requires the embrace of a more comprehensive notion of equity and access as central to the sector's core business. (p. 9)

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Appendices

A) Australia's youth: COVID-19 and the impact on young people

Australian Institute of Health and Wellbeing (2021*) Australia's youth: COVID-19 and the impact on young people.* Available from **https://www.aihw.gov.au/reports/children-youth/covid-19-and-young-people** (last accessed 03/01/2022)

Key Findings (directly quoted)

The COVID-19 pandemic has affected young people across several life domains, many of which are interrelated.

- During 2020, rates of confirmed cases of COVID-19 among those aged 20–24 and those aged 25–29 (168 and 183 per 100,000 people, respectively) were higher than all other age groups, except 85 years and over (279 per 100,000). Between January and 16 June 2021, there were 187 cases among young people aged 15 to 24, making up 9.7% of the total 1,929 cases during this period. In 2021, across all 5-year age groups in the population, rates of confirmed cases have been highest among those aged 30–34, followed by those aged 35–39, and those aged 25–29.
- Of the 910 COVID-19-related deaths in Australia since the pandemic began 1 was in the 20–29 age group.
- In July–August 2020, among young people aged 13–17, 42% said the pandemic and response had negatively affected their social connectedness, a drop from 70% in April 2020. The proportion for young people in Melbourne was higher, at 55%, but still lower than April levels. The easing of restrictions across much of the country at the end of June 2020 brought more structure and connectedness to young people's lives.
- Compared with February 2017, psychological distress worsened in April 2020 for those aged 18 to 24. In April 2021, psychological distress of young Australians was significantly below what it was in April 2020 but was still higher than in February 2017.
- The proportion of young people not in education or employment rose from 8.7% in May 2019 to 12% in May 2020 and has since decreased to 11% in February 2021, a similar rate to February 2020 (10%).
- Between March 2020 and May 2020, the proportion of all young people aged 15–24 who were employed (the employment ratio) dropped by 10 percentage points (60% to 50%, a decrease of 329,000 young people). From May 2020, the employment ratio of young people aged 15–24 generally increased. As at April 2021, the employment ratio of young people was 61% compared with 60% in March 2020.
- The monthly unemployment rate for young people aged 15–24 rose from 12% in March 2020 to a peak of 16.4% in July 2020. The unemployment rate was 11% in April 2021.
- Of all employees who received the JobKeeper Payment in April 2020, 12% were aged 24 or under. Young people were under-represented in JobKeeper coverage, which may reflect their considerably higher receipt of income support payments than other age groups.

- In May 2020, just over 1 in 4 (28%) young people aged 18–24 reported not being able to pay their rent and/or mortgage on time in the previous 3 months. This compares with 15% of Australians aged 18 and over.

While some effects of COVID-19 on young people are emerging, it is important to note that the full impact is complex and not yet fully understood. The effect of COVID-19 can also be dynamic—outcomes change quickly (for instance, mental wellbeing and social connectedness) when conditions change (such as introducing or easing restrictions). Many of the effects of COVID-19 will be interrelated and could take some time to become apparent.

Many life trajectories are set in place during adolescence and young adulthood. Hence, there is a need for ongoing comprehensive monitoring of the impact of COVID-19 on young people's wellbeing. Areas of particular interest for monitoring include:

- wellbeing, including mental wellbeing
- access to educational choices after secondary school, education attainment, achievement and outcomes
- longer term outcomes for young people; for example, the potential consequences of unemployment on their long-term employment prospects and finances, their access to secure housing, and their mental health
- the longer term impact of COVID-19 on child protection services
- experience of domestic violence
- variation in outcomes for different population groups.

B) Impact of coronavirus on apprentices and trainees

Hurley, P. (2020). *The impact of coronavirus on apprentices and trainees.* Mitchell Institute for Education and Health Policy, Victoria University. Available from: www.mitchellinstitute.org.au

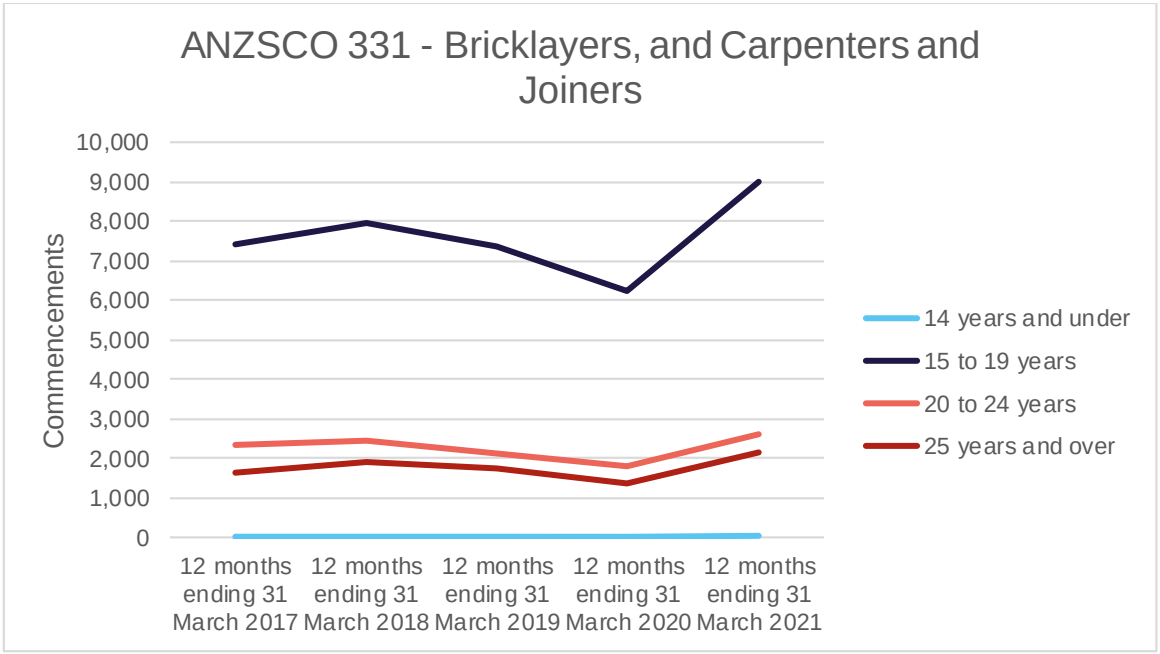
Key Findings (directly quoted)

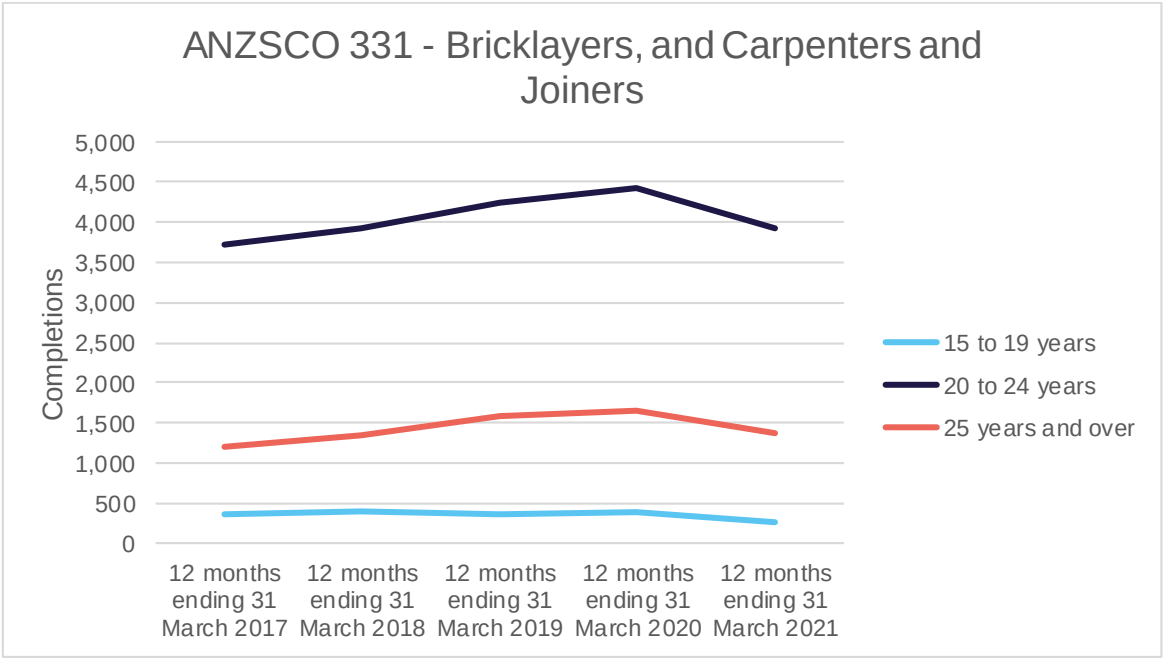
- The Mitchell Institute estimates new apprenticeships/traineeships will decline by 30% within two years. This equates to approximately 130,000 fewer new apprentices and trainees from the start of the pandemic to June 2023.
- Currently enrolled apprentices/trainees are forecast to decline by approximately 20%, falling to their lowest level in 2023 where it is forecasted there will 50,000 fewer apprentices/trainees 'in training'.
- Previous recessions show an amplified relationship between the unemployment rate and apprenticeship/traineeship figures. In the last two recessions, a 5 percentage point increase in the unemployment rate resulted in a 30% decrease in apprenticeship commencements.
- We estimate that the reduction in the number of available apprenticeships and traineeships will lead to 50% more school leavers classified as 'not in employment, education or training' (NEET). The NEET category is an indicator of disengagement and is associated with poor long-term outcomes.
- Current policies designed to support apprentices and trainees, such as the JobKeeper program, may mask the scale and severity of the decline.
- Downturns in the number of apprenticeships can have long lasting effects and raise the prospect of skills shortages occurring which hamper a coronavirus economic recovery.
- There are policy responses that will help reduce the impact of the coronavirus on apprentices and trainees. These are:
    - increasing employer incentives and wage subsidies to make it easier for employers to keep current apprentices and trainees or bring on new ones;
    - integrating new apprentices and trainees into public spending projects to grow the number of opportunities available; and
    - establishing innovative labour market programs that provide apprentices and
    - trainees with work in their occupation while the economy recovers.

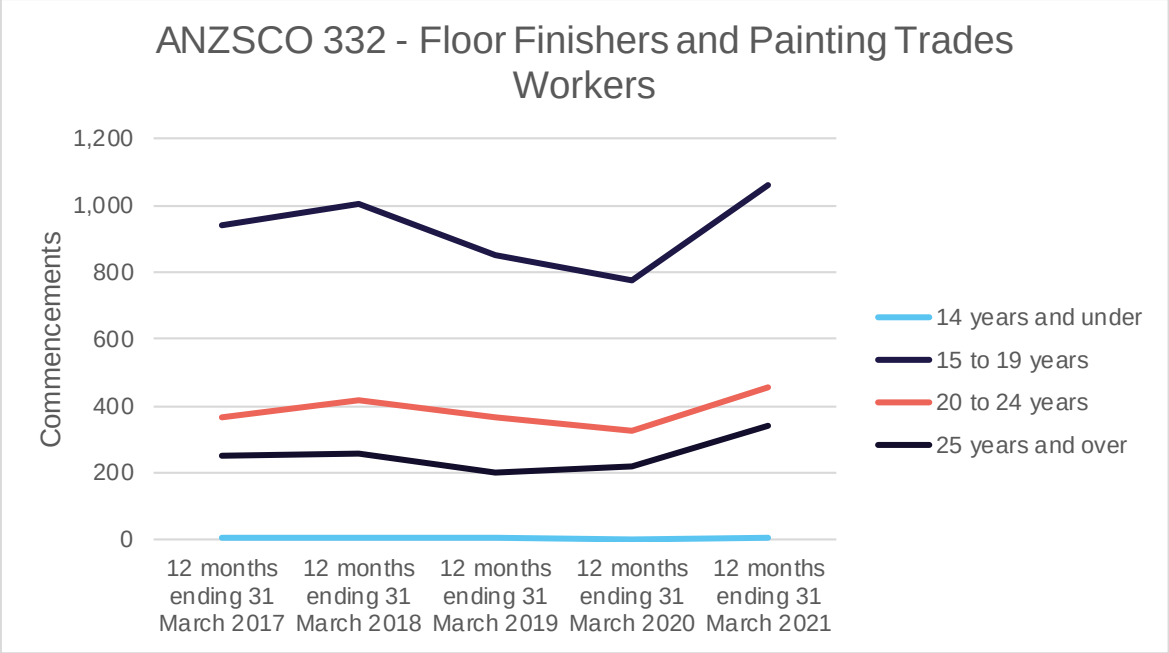
C) Commencements and completions by age and ANZSCO code

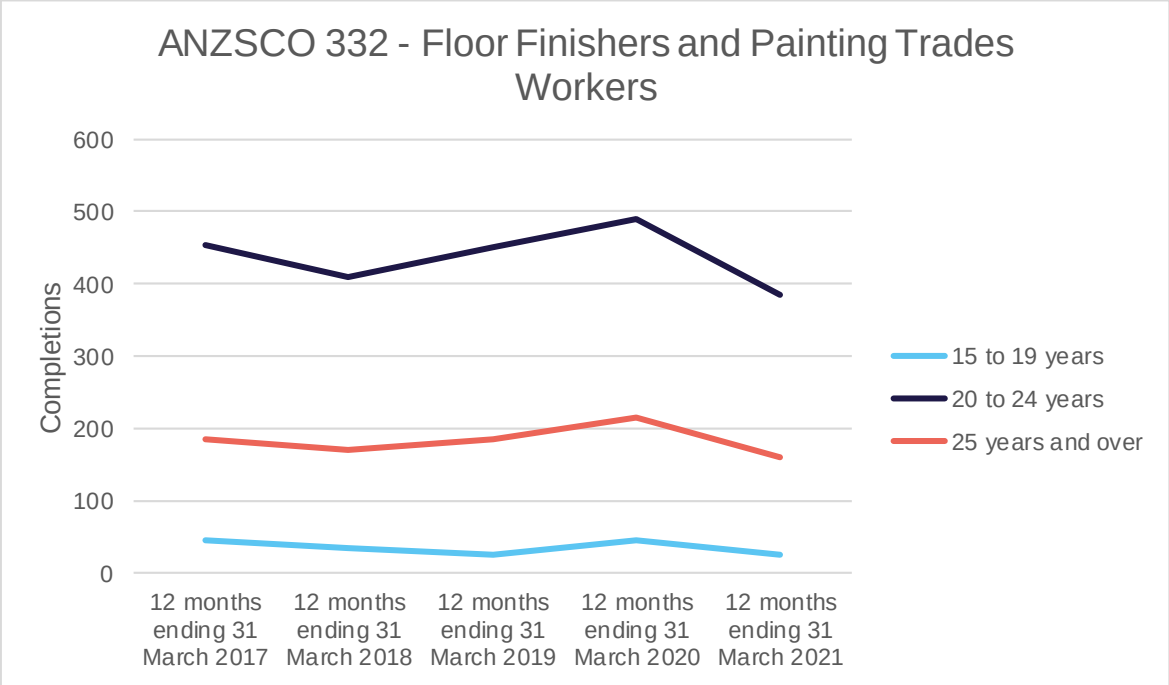
Please note that this data is based on the training contacts, not individuals. For example, an apprentice that was in the 15-19 years age group at commencement may be in the 20 - 24 year age group at completion.

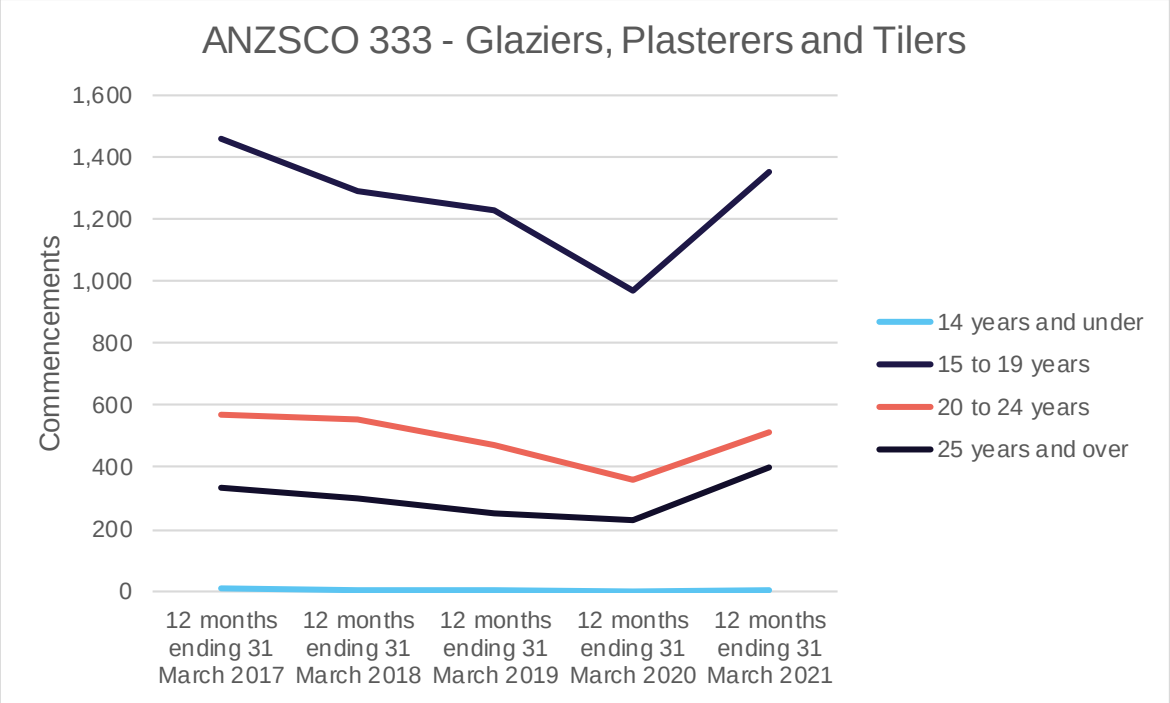
Source: NCVER 2021 Data Builder, Apprentices and trainees 2021: March quarter, Contract status, Age group, Occupation 3-digit by 12 months ending 31 March.
Numbers are rounded to the nearest 5.

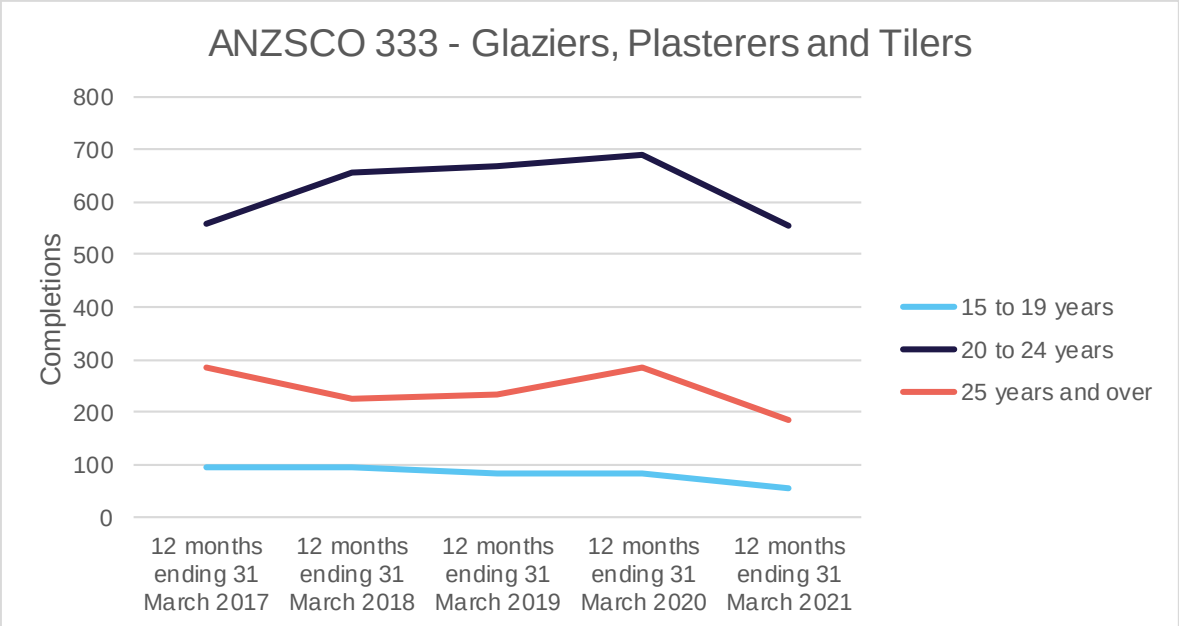


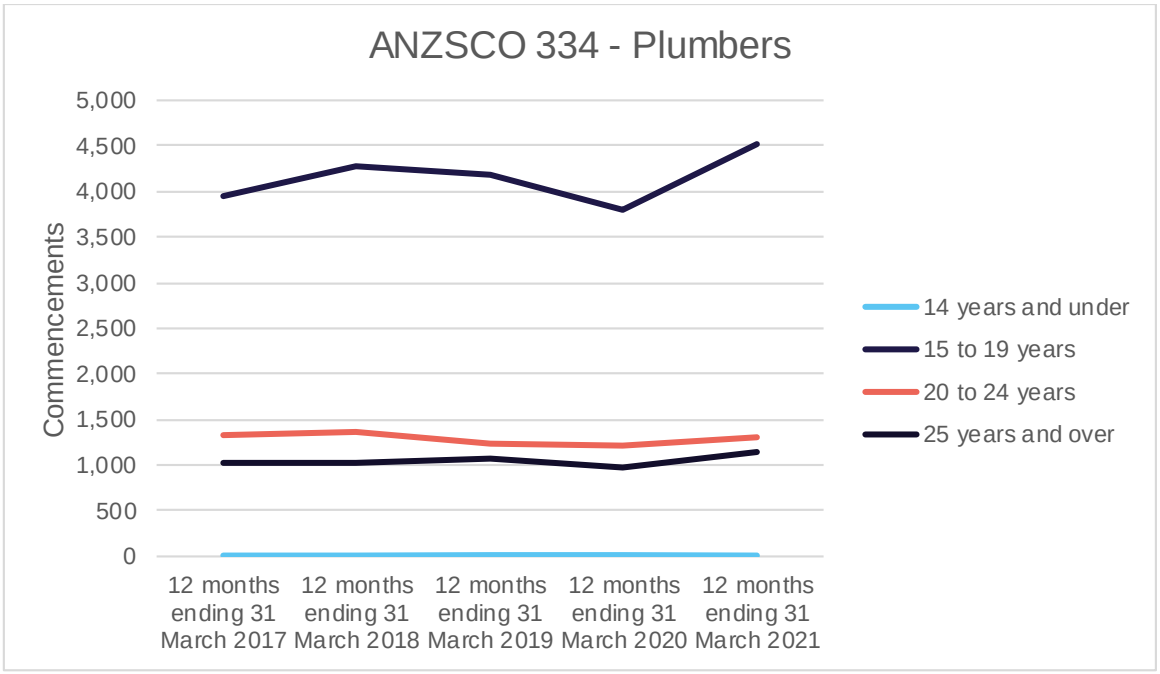


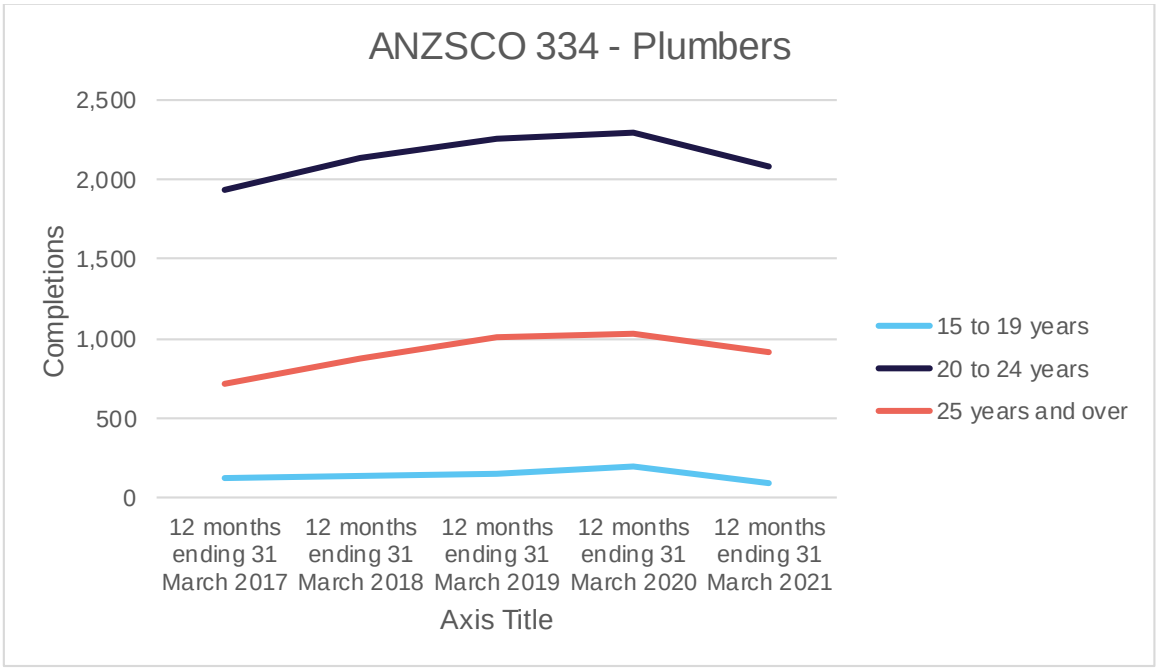

ANZSCO 332 - Floor Finishers and Painting Trades Workers
Commencements
1,200
1,000
800
600
400
200
0
12 months ending 31 March 2017
12 months ending 31 March 2018
12 months ending 31 March 2019
12 months ending 31 March 2020
12 months ending 31 March 2021
14 years and under
15 to 19 years
20 to 24 years
25 years and over

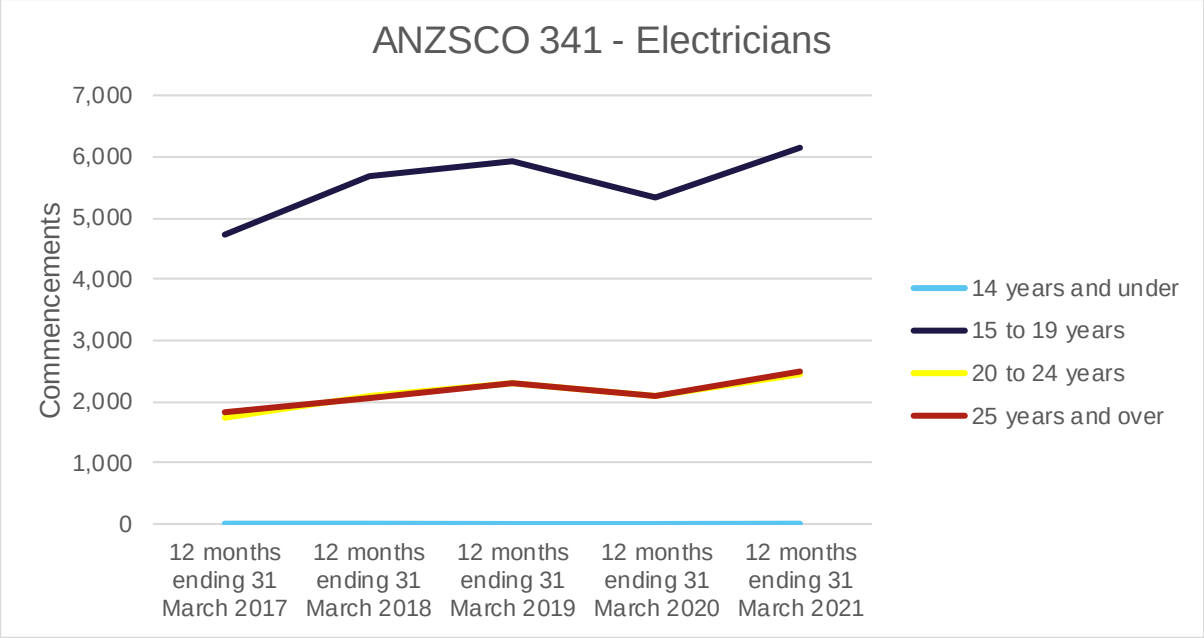

ANZSCO 332 - Floor Finishers and Painting Trades Workers
Completions
600
500
400
300
200
100
0
12 months ending 31 March 2017
12 months ending 31 March 2018
12 months ending 31 March 2019
12 months ending 31 March 2020
12 months ending 31 March 2021
15 to 19 years
20 to 24 years
25 years and over

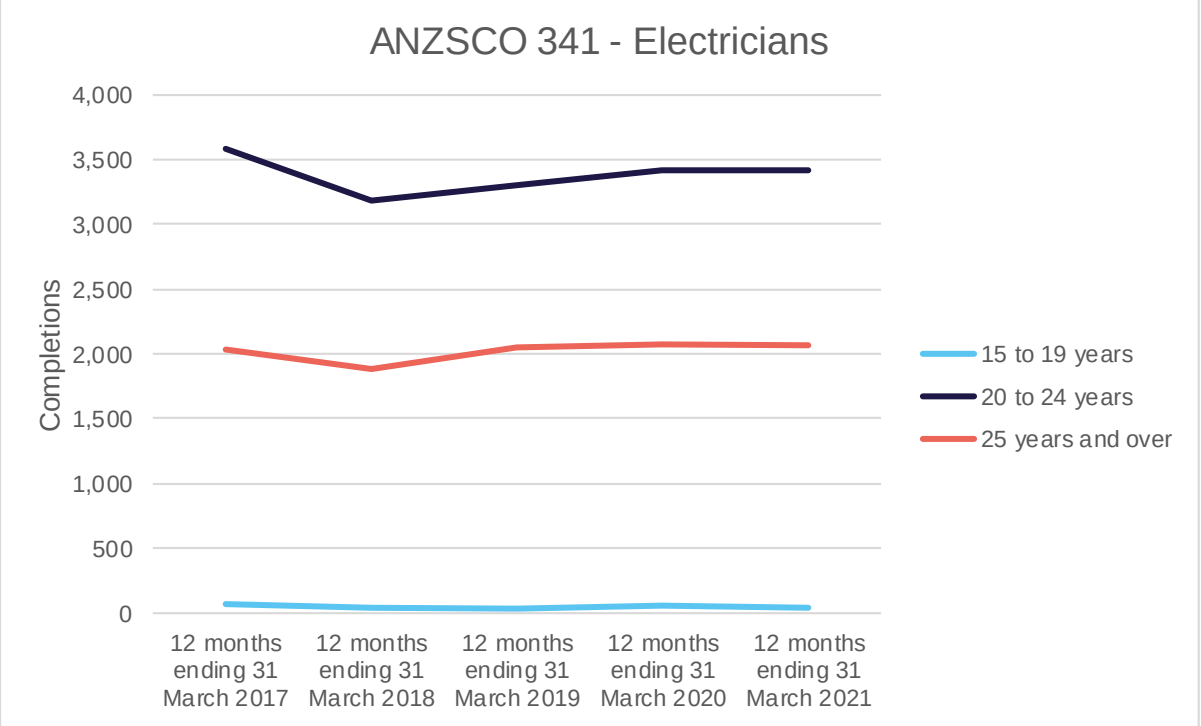

ANZSCO 333 - Glaziers, Plasterers and Tilers
Commencements
1,600
1,400
1,200
1,000
800
600
400
200
0
12 months ending 31 March 2017
12 months ending 31 March 2018
12 months ending 31 March 2019
12 months ending 31 March 2020
12 months ending 31 March 2021
14 years and under
15 to 19 years
20 to 24 years
25 years and over


ANZSCO 333 - Glaziers, Plasterers and Tilers
Completions
800
700
600
500
400
300
200
100
0
12 months ending 31 March 2017
12 months ending 31 March 2018
12 months ending 31 March 2019
12 months ending 31 March 2020
12 months ending 31 March 2021
15 to 19 years
20 to 24 years
25 years and over

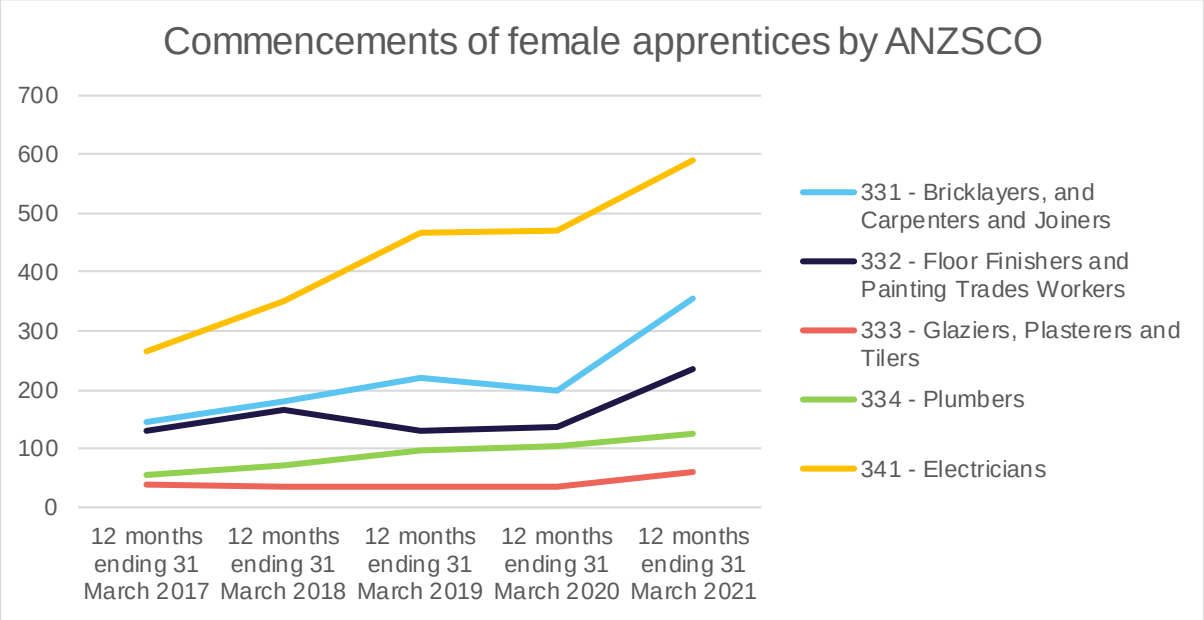

ANZSCO 334 - Plumbers
Commencements
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
12 months ending 31 March 2017
12 months ending 31 March 2018
12 months ending 31 March 2019
12 months ending 31 March 2020
12 months ending 31 March 2021
14 years and under
15 to 19 years
20 to 24 years
25 years and over

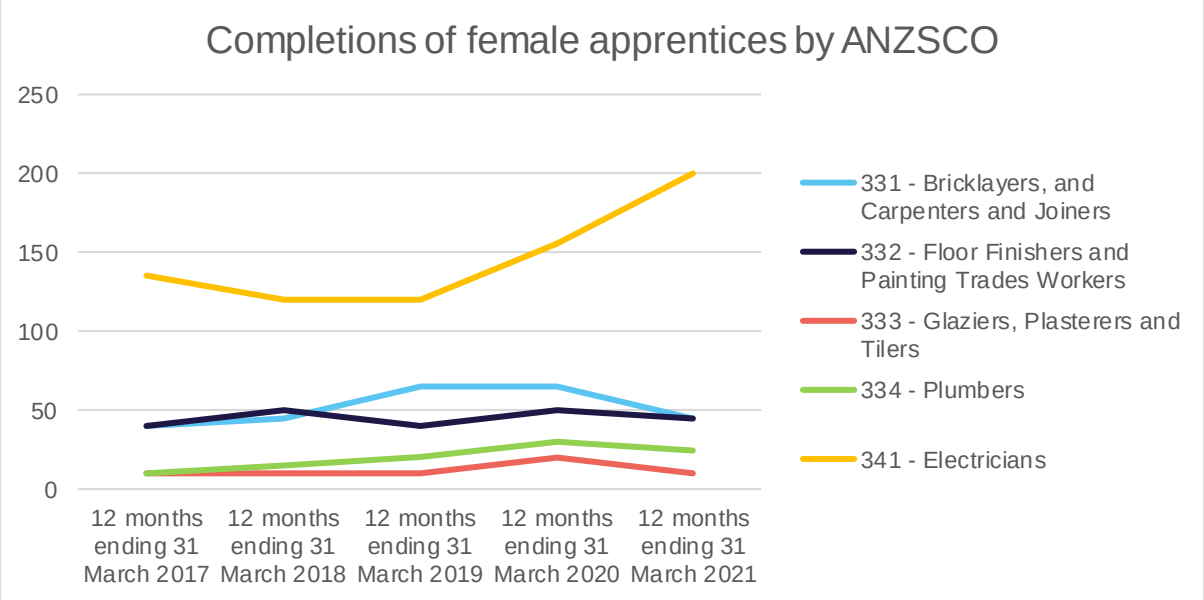

ANZSCO 334 - Plumbers
Completions
2,500
2,000
1,500
1,000
500
0
12 months ending 31 March 2017
12 months ending 31 March 2018
12 months ending 31 March 2019
12 months ending 31 March 2020
12 months ending 31 March 2021
Axis Title
15 to 19 years
20 to 24 years
25 years and over


ANZSCO 341 - Electricians
Commencements
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
12 months ending 31 March 2017
12 months ending 31 March 2018
12 months ending 31 March 2019
12 months ending 31 March 2020
12 months ending 31 March 2021
14 years and under
15 to 19 years
20 to 24 years
25 years and over


ANZSCO 341 - Electricians
Completions
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
12 months ending 31 March 2017
12 months ending 31 March 2018
12 months ending 31 March 2019
12 months ending 31 March 2020
12 months ending 31 March 2021
15 to 19 years
20 to 24 years
25 years and over

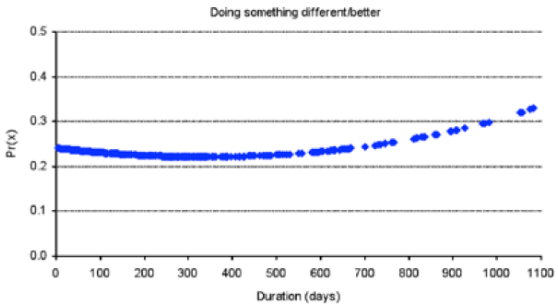
D) Commencements and completions of female apprentices by ANZSCO code

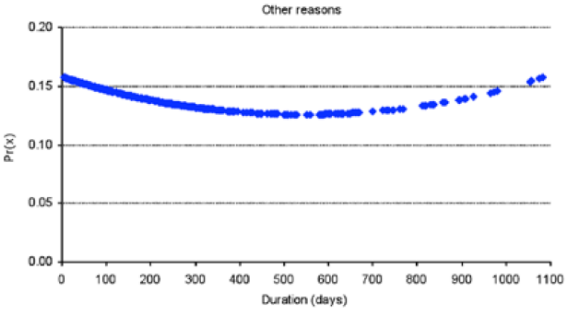


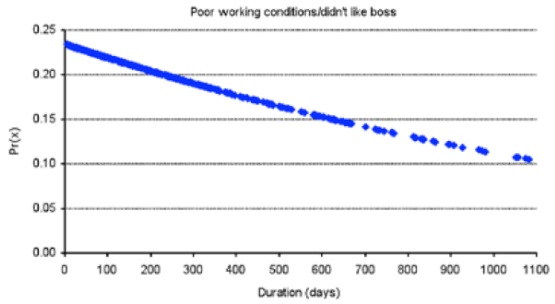


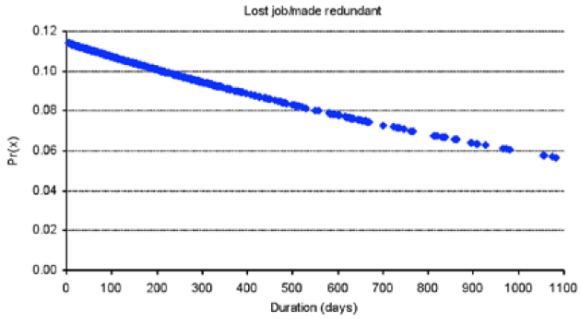
E) Probabilities Graphs - Main Reason for Non-Completion by Duration (Trades)

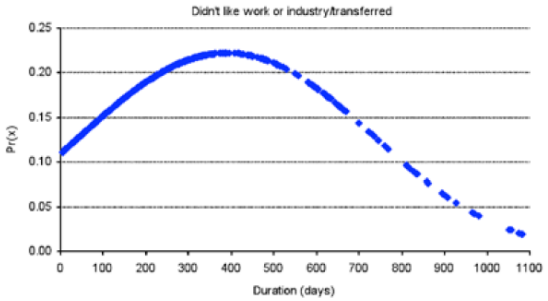
Source: Karmel and Mlotkowski (2010)

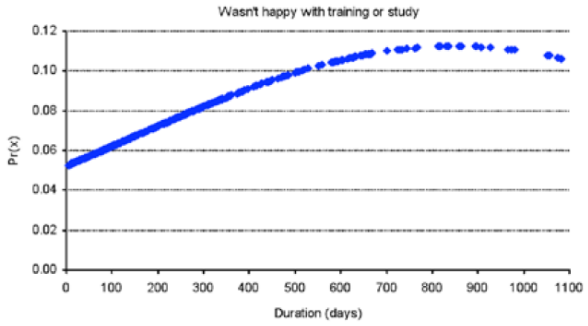


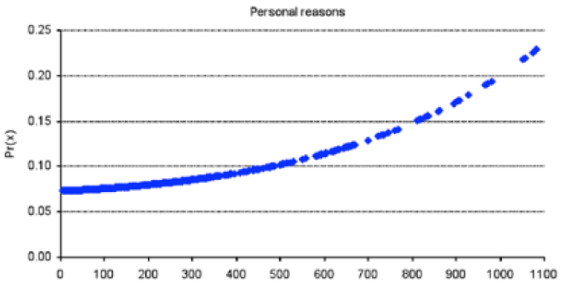












F) Buchanan et al (2016) - Key supports of large case study organisations studied

	Hutchinson Builders	Fairbrother Pty Ltd	MGT[a]	East Coast Apprenticeships (Group Training)
Organisational context	Founded: 1912 Employment: 1300 employees Apprentices: 80+ Regional presence: All states & NT Growth: turnover - 1960s crisis - 1992: $20m - 2000: $215m - 2012: $1.15b	Founded: 1973 Employment: 500 employees Apprentices: 80+ Regional presence: All Tasmania*, rural Vic. Growth: (apprentice numbers) - took 20 years to train first 100 - now graduates 15–20 annually	Founded: 1981 Staff: 15 Apprentices: 290 (two-thirds in construction) Field officers: 4 Hosts: 100+ active at any one time. 20 in construction: 5 or so largest account for large percentage	Founded: 1988 Staff: 51 Apprentices: 300 Hosts: around 485 active at any one time Regional presence: Brisbane (and nationally for mining) Growth: three stages, with latest extending services to adult apprentices and down the occupational hierarchy
Nature of apprenticeship model of vocational development	Full integrated system with: (a) two streams – trades & managerial/leadership (b) own RTO does off-job element (c) prevocational arrangement – 'doorway to construction'. All coordinated by a self-financed Workforce Development Unit	Highly developed system built into operations – not out of the HR function. Has two streams – trades & managerial/leadership	Group training operations + in past had Aust Apprentice Centre and contract to provide Apprenticeship Mentoring Services	GTO is flywheel for comprehensive VET & employment services. Apprenticeship model applied widely for second-chance learning – accelerated adult apprentices & for supporting 'at risk' social groups
Formal support arrangements	Director Workforce Dev't Unit Apprentice Development Coordinator Site managers Site supervisors	Construction manager Site manager Designated supervising carpenter (OzHelp education & Employee Assistance Program)	Field officers for group apprentices Site visits every 8 weeks	Field officers 'Manager once removed' arrangement
Informal/de facto support	Firm's own skilled workers on site Tradie subbies on site Other apprentices, especially in later years.	Firm's own skilled workers on site Tradie subbies on site Other apprentices, especially in later years.	Site-based supervisors Tradie subbies on site Other apprentices, especially in later years TAFE teachers.	As for other organisations & extensive array of supported pathways for disadvantaged groups.

Note: In the course of field work involving My Gateway Group training a very fruitful lead was provided that resulted in extensive field work being done with Barangaroo Skills Exchange (BSX). The experiences of the BSX and apprenticeship at Barangaroo are reported as part of the MGT case study. It important to note, however, that the BMX is an independent skills centre, organised by Lend Lease and West Sydney Institute of TAFE.

G) Buchanan et al (2016) – Key supports of small case study organisations studied

	Small business 1 (NSW)	Small business 2 (WA)	Small GTO 1 (WA)	Small GTO 2 (Tas.)
Organisational context	Business has employed apprentices for over 11 years Specialises in structural carpentry Owner is a licensed carpenter Employees: 2 licensed carpenters Apprentices: 2 (1st year and 4th year) Employee number varies, with previously as many as 10 employees (including 4 apprentices) Business sometimes subcontracts other carpenters for larger jobs	Owner is a licensed carpenter and his wife manages administration and recruitment Owner has been self-employed for 14 years and operating current business for over 10 years Specialises in fixing carpentry (e.g. hanging doors, fixing skirting) Employees: 1 licensed carpenter Apprentices: 2 in 1st year	GTO in operation for approx. 30 years Staff: CEO/operating manager, administrative/HR/recruitment officer, 1 client service manager (field officer) – usually has 2 client service managers Apprentices: Approx. 80 (10 carpenters and 30 cabinet makers)	GTO in operation for over 30 years Staff: CEO/operating manager, 4 field officers, a finance officer, administrative officer Apprentices: 120 (70% carpentry, mostly traditional)
Nature of apprenticeship model of vocational development	On-the-job learning and task allocations are customised to individuals' needs and abilities rather than the apprentices being required to undertake all tasks Apprentices are paid above award according to skill and performance	Training is on the job and customised to the needs and personality of the apprentice HR and recruitment is handled by the owner's wife Apprenticeships are advertised and candidates undertake a 1-week trial	Organisational philosophy is to build a personal relationship with the apprentice as a valued member of a team Apprenticeship applications are screened, with approx. 10% being selected; once accepted, apprentices are supported more broadly in their vocational development e.g. option to try out another trade or suspending their apprenticeship	Active role managing the fit between apprentice and host employer, including counselling the host on supporting apprentice and option to transfer the apprentice to another host Apprentices are allocated to work directly under a tradesperson or in a small workgroup of 3–5 under a senior tradesperson/leading hand
Formal support arrangements	Apprenticeship centre manages the administration ('paperwork') required for the apprenticeships plus contacts the apprentice and business twice in the first year No other formal mentoring support	Business engages an apprenticeship centre to sign up and register apprentices Previously arranged a counsellor through the apprenticeship centre and sought assistance from TAFE but does not generally engage formal mentors	Client service manager (field officer) required to check apprentices once every 6–8 weeks, more frequently if issues No engagement of external mentors Support given to apprentices to organise counselling or drug/alcohol rehabilitation	Field officers (generally with a trade background, but not exclusively) aim to check apprentices every 3–4 weeks, minimum of 8 times/year OzHelp Foundation Life skills training – 1 day mid 1st yr plus one day in 2nd yr No engagement of external mentors, but the host employer's worksite may have a formal mentor and HR support

Informal/de facto support	Owner and licensed carpenters Other apprentice Support embedded in everyday work practice and learning e.g. daily tool box talks outline goals and site risks Discussing personal issues and seeking advice was encouraged Community social networks.	Owner and qualified carpenter viewed as role models for both life and skills Often worksite will have other qualified tradespeople and other supervisors Peer support with apprentices helping each other.	Host employer owners/supervisors (quality varies) Other tradespeople on site Other apprentices A previous apprentice who is now a TAFE teacher provides informal mentoring GTO's administration officer is a point of contact for picking up and discussing issues.	Host employer's supervising tradesperson or group of 3–4 apprentices with a senior tradesperson/leading hand (quality varies) Other tradespeople on site Other apprentices.

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