



Future focus

Recruiting vocational trainers for
tomorrow's manufacturing workforce

RESEARCH REPORT

K. L. O'Reilly-Briggs
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MISA
Manufacturing Skills Australia

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Executive summary

The importance of vocational education and training (VET) to Australian industry and society is difficult to overstate, yet there are at present serious concerns about VET teacher shortages, as well as the quality and availability of vocational education across Australia. In 2021, the state of our TAFE survey (AEU, 2021) found that 94% of TAFE practitioners were considering leaving the profession due to unmanageable workloads, excessive hours and paperwork, and arduous compliance requirements, resulting in overstretched VET teachers – many of whom are reported to be leaving the sector and returning to their former roles in industry. A VET sector without an adequate supply of teaching staff has grave implications for the efficacy of the sector and its capacity to produce the skilled workers needed to resource Australian industry – including the manufacturing industry.

This research report documents a small-scale study commissioned by Manufacturing Skills Australia (MSA) and conducted between July and December 2023 in response to concerns about the current difficulties of attracting and retaining an adequate supply of vocational teachers in the VET sector. The aim of this report is to assist MSA to develop a policy position and strategies to attract industry professionals into the VET teaching profession. The report examines the factors underpinning VET teacher shortages, presenting research findings and making recommendations to increase the supply of trainers entering the VET sector. Although the study has a focus on manufacturing, it is located within the larger context of perceived widespread teacher shortages in VET. The study set out to identify the factors that enable or inhibit Australian manufacturing workers from entering the VET teaching profession so that solutions can be found to remedy this predicament.

The study asked the question: *How can skilled manufacturing workers be encouraged to teach their vocation in the Australian VET sector?* It was conducted as applied research using a pragmatic and mixed-methods methodology: an online survey tool and structured interviews. The study also looked at some teacher-recruitment initiatives underway in Australia to gain an understanding of how registered training organisations (RTOs) and other organisations are contending with the employment and skilling of vocationally qualified workers for the teaching profession. The participants in the study were employed in a range of manufacturing sectors, trades and occupations. All Australian states and territories are represented; however, the majority of participants came from Victoria, New South Wales and Queensland. The online survey and interviews were processed using interpretive and thematic analysis to identify the most frequently encountered – and thus most significant – barriers and enablers experienced by manufacturing workers when considering whether or not to engage in a career change to the vocational teaching profession.

The report concludes with some recommendations designed to mitigate or eradicate the barriers identified in the study, as well as facilitating the enablers, so as to encourage more workers to enter the VET teaching profession. These recommendations have powerful potential not only to increase the quantity of VET teachers in the sector, but also to lift the quality and capability of the VET sector more generally.

The most significant barriers for manufacturing workers considering a transition to the vocational teaching profession were found to be: the gamble of pursuing a Certificate IV Training and Assessment (TAE)

qualification without the guarantee of secure and well-paid teaching employment on completion of study; the cost of the TAE qualification; lack of time to study; perceived low rates of teacher pay; obstacles presented by the TAE qualification itself; and hostile work environments in some RTOs.

The most significant enablers for manufacturing workers were mostly altruistic desires such as wanting to: pass on work skills and vocation; help others be their best; give back to industry and the community; and have a positive impact on society. Extrinsic enablers were: a higher salary than currently earned; job security; and a more suitable way to achieve a teaching qualification.

This report makes an important contribution to the sustainability of the VET sector and the teaching of vocational skills in Australia. The report's findings will be of value to the manufacturing industry, as they provide compelling insight into the thoughts and circumstances of manufacturing workers from around Australia. Based on these findings, decisions can be made that smooth the way for more workers to enter the vocational teaching profession and help secure the future of the Australian manufacturing industry.

Key findings

The most significant barriers for manufacturing workers considering a career move to the vocational teaching profession are: the cost of the training qualification; lack of time to study; risks involved in changing career; job insecurity; low levels of remuneration; the TAE qualification; the hostile culture of the Technical and Further Education (TAFE)/VET sector; concerns about the efficacy of VET; concerns about the attitudes of learners; and concerns about the future of manufacturing in Australia.

The most significant enablers for manufacturing workers considering a career move to the vocational teaching profession are: intrinsic desire to pass on work skills and vocation; desire to help others be their best; desire to give back to industry and the community; desire to have a positive impact on society; sense of pride and satisfaction gained when students succeed; opportunity to receive a better salary; job security; a better way to achieve a training qualification; pride and passion for their vocation; and feeling "ready to give back".

Recommendations

Below is a summary of the recommendations.

1. Offer more full-time vocational teaching positions with generous remuneration, good conditions and secure employment to attract workers from industry across to the vocational teaching profession.
2. Offer full-time remunerated vocational teaching internships to give manufacturing workers opportunity to engage with work-integrated experiential learning while concomitantly working towards a VET teaching qualification.
3. Create an alternative entry-level qualification to the vocational teaching profession more suited to tradespeople and manufacturing workers.
4. Improve the culture of TAFE and the VET sector.
5. Establish a teacher-training initiative designed for senior industry experts and retirees.
6. Promote the vocational teaching profession to apprentices and skilled manufacturing workers studying towards a vocational qualification.
7. Create and promote a national vision for manufacturing in Australia.
8. Embark on a recruitment drive to encourage manufacturing workers to enter the vocational teaching profession.
9. Consider establishing a vocational teachers' centre of excellence specialising in the vocational teaching preparation of manufacturing workers.

About the study

This report documents a small-scale research project for Manufacturing Skills Australia (MSA) conducted by K. L. O'Reilly-Briggs. The study aims to identify the factors that both enable and inhibit Australian manufacturing workers from transitioning to the VET teaching profession and offers recommendations to inform MSA in developing policy positions to help smooth the path for manufacturing workers considering careers as trainers in the Australian VET sector.

In July 2023, the author was approached by Richard Jenkins, MSA Chair, and requested to conduct a small-scale study to find ways to encourage Australian tradespeople in manufacturing and engineering to consider vocational training careers in the VET sector. The original request involved identifying the barriers that tradespeople face when transitioning from industry to a vocational training or teaching career; however, the scope of the study soon expanded to include other manufacturing workers, as well as those factors that might assist or enable workers to enter the VET teaching profession.

Another objective of the study was to identify some of the initiatives currently underway in Australia to gain an understanding of what organisations are doing to ease the transition of workers into the vocational teaching profession. These are presented as case studies in Section 6.

The primary goal of this study is to identify the factors that both help (the enablers) and inhibit (the barriers) Australian manufacturing workers in transitioning to the VET teaching profession.

The study was conducted between July and December 2023.

1. Introduction



Australia, like many OECD countries, reports shortages of vocational education and training (VET) teachers (Australian Government, 2022; Garcia & Weiss, 2019; OECD, 2021). Although empirical data quantifying shortages is yet to materialise, VET teacher shortages have been reported in almost every industry. The OECD tells us that not only are VET teacher shortages endemic, but the present challenges facing VET globally are significant (OECD, 2021). Today it is widely believed that shortages of vocational teachers in Australia, to varying degrees across the country, are limiting the quality and availability of vocational education to prepare workers with the skills and knowledge they require.

Attracting industry experts to teach in the Australian vocational educator sector is a complex business. To be eligible to teach or assess nationally recognised vocational qualifications in Australia, candidates must meet two conditions. Firstly, the individual must hold an Australian vocational qualification and have industry experience in the field of their qualification and, secondly, they must hold a current Certificate IV in Training and Assessment (hereafter TAE). Both of these qualifications are required to teach accredited vocational education in registered training organisations (RTOs) such as Technical and Further Education (TAFE) colleges in Australia. Factors believed to be placing strain on the existing VET workforce in Australia include an ageing VET teacher demographic, high levels of casualisation, difficulties associated with maintaining dual industry and training currency, and the capacity of VET trainers (Tyler & Dymock, 2021).

It has been reported that the requirement to gain and sustain a current version of the TAE qualification is a barrier for industry-qualified workers in relation to supporting VET delivery. Further, the TAE qualification itself is widely criticised as inadequate to prepare individuals for the rigour of the teaching or training of students in the VET sector. The Victorian government proposes that these qualification-linked issues are exacerbated by general skill shortages, resulting in fewer people moving from industry to a VET teaching or training career. Also, many existing VET trainers are reportedly returning to their former occupations in industry where their pay and conditions may be more favourable (Victorian Government, 2023).

Factors impeding the transition of manufacturing industry experts to the VET training vocation are largely anecdotal and require further research to better understand what it is that is preventing these workers from transitioning to the VET teaching or training vocation so that potential solutions to this problem can be identified. To address manufacturing VET workforce challenges, research is needed in order to gain a more detailed and nuanced understanding of the reasons manufacturing workers appear uninspired or unwilling to transition from industry into the VET teaching profession.

In light of the difficulties associated with recruiting mid-career manufacturing workers to the VET teaching or training vocation, MSA has commissioned this research study to gain a better understanding of the factors currently impeding skilled manufacturing workers from transitioning to teaching or training in the Australian VET sector so that solutions may be identified. This report documents the study, along with its findings, and offers recommendations to inform policy in order to remedy manufacturing VET teacher shortages in Australia.

This report is structured as follows:

Section 2 investigates, presents and reviews literature of relevance to the study. It considers the manufacturing and vocational education landscape in Australia, and looks at what the current literature can tell us about the barriers and enablers faced by industry professionals and VET teachers in relation to transitioning into the vocational teaching profession.

Section 3 explains the research methodology of the study.

Section 4 presents the online survey findings and analysis of this data.

Section 5 presents the participant interview case studies and analysis of this data.

Section 6 provides insight into some initiatives being utilised as teacher-recruitment programs to assist workers to enter the teaching profession.

Section 7 discusses the findings of the study.

Section 8 offers some recommendations to encourage manufacturing workers to enter the vocational teaching profession, as well as some suggestions for future research.

Section 9 concludes the research report.

The Appendix to this report is presented as a companion document.

2. Literature review



As societies and industries evolve, the landscape of teaching and learning in VET in Australia and around the world is changing in the face of Industry 4.0, digitisation, automation, responses to support climate adaptation and increased student expectations (OECD, 2021). To keep abreast of evolving social and workforce needs, Australia requires new and innovative approaches to recruiting new and upskilling current VET teachers¹ and to building a cohort of high-quality VET professionals with the pedagogical and industrial knowledge needed to prepare students for citizenship and the labour force – now and well into the future. It will be vital that this teaching workforce is fit for purpose, equipped with the industry knowledge, pedagogical know-how and capability to impart their skills and knowledge to future generations of workers. As knowledge about teaching and learning develops, and technologies advance and disrupt societies and ways of working, Australia will need a new class of VET teaching workforce with an eye on the future and an ear to the ground, willing and able to keep abreast of new skills, knowledge, capabilities, attitudes, pedagogical approaches and classroom technologies to ensure their efficacy and relevance into the future.

However, the development of a high-quality and capable VET teaching workforce requires a steady supply of high-quality and capable industry professionals intent on transitioning into the VET teaching profession – and

¹ The terms “VET teacher”, “VET trainer”, “VET practitioner” and “vocational teaching professional” are used interchangeably in this report. They all refer to a qualified person responsible for teaching/training and assessing nationally recognised vocational education qualifications in Australia.

it is at this step in the career trajectory of future manufacturing VET teaching professionals that this research is located.

Overview of the Australian vocational education sector

In Australia there are approximately 4000 RTOs (ASQA, n.d.; Joyce, 2019; Knight et al., 2020). According to Joyce (2019), 75% of these RTOs are private providers responsible for training 60% of Australia's VET students. The other 25% of RTOs are made up of TAFE colleges, universities, secondary schools, adult and community education providers, and enterprise providers. TAFE is the public provider of Australian vocational education and there are currently 21 TAFEs offering vocational education on 556 campuses around Australia (TAFE Directors Australia, 2020).

Of importance to manufacturing are concerns expressed by Carney and Stanford (2018) that the industry may be constrained by the damage caused to the Australian VET sector after years of underfunding and failed policy experimentation. Following a period of contraction, Australian manufacturing had found a stable economic footing by 2018, but remained vulnerable following years of underfunding to VET, the erosion of TAFE, employers failing to invest in the skilling of employees and apprentices, and the fragmentation of VET following years of severe spending cutbacks and damage caused by private-delivery models. The authors argue that the VET sector was in a "full-blown crisis" (p. 6) requiring urgent attention, including a concerted and cooperative effort by all stakeholders (government, industry, educational institutions and unions) to strengthen the Australian VET sector so as to better support manufacturing in Australia (p. 4). Although that report was published five years ago, the effects of this crisis arguably continue to be felt to this day.

Overview of Australian vocational education teachers

The Australian Government (2023b) offers an overview of vocational education teachers in Australia. There are 28,000 people employed as VET teachers and 58% of these work full-time – 8 percentage points below the all-jobs average (66%). More than half of these workers regularly work overtime or extra hours (either paid or unpaid). Full-time non-managerial VET teachers earn a median weekly wage of \$1780, which is higher than the all-jobs median of \$1593, and women make up 51% of the VET workforce. The average age of VET teachers is 50 years. The job is classified as "professional" and "very high skilled". Jobs and Skills Australia predictions tell us that the need for VET teachers is expected to grow strongly and is likely to reach 40,600 by 2026, a necessary increase of more than 12,000 workers in the next three years (Australian Government, 2023b; National Skills Commission, 2022). In 2020, Knight, White and Granfield (2020) estimated the size of the Australian VET workforce in February 2019 to be 246,167 and almost 30% (71,390) of this workforce were trainers and assessors. The report further estimated the employment status of this workforce, explaining that: only 3.5% were employed on a permanent basis; 13.9% were employed on contracts or in temporary positions; and 32.6% were employed on a casual or sessional basis (p. 7). Large discrepancies between statistics concerning the VET teaching workforce in Australia demonstrate that the actual size and make-up of the VET teaching workforce is unknown.

What is known however is that the VET teaching workforce in Australia is a diverse mix of vocational teachers, trainers, assessors and part-time and casual practitioners who either cannot obtain secure employment as professional practitioners or wish to maintain their primary employment in industry, regarding training as a secondary occupation. VET practitioners work in the public TAFE system, in private, industry and community RTOs, and in enterprises that provide vocational qualifications to their workforces (Smith & Yasukawa, 2017, p. 24), as well as in secondary schools (AITSL, 2021b; ASQA, 2021; Clarke, 2013).

VET teachers are generally mature-aged when they enter the profession to teach their field of expertise as a subsequent career (Smith & Yasukawa, 2017; Tyler & Dymock, 2017). Many entering the VET teaching profession bring with them existing financial responsibilities, and employment and family commitments. They are likely to come from a minority community or low socioeconomic background and may not be academically inclined (Brown, 2017; Downing, 2015). More than half (51.8%) hold a Certificate III or IV as their highest level of qualification for their main field of training delivery (Knight et al., 2020, p. 18) and helping the next generation

of workers by passing on their trade or vocation is a key motivation for many of those who enter the VET profession.

At this time in Australian social history, there is a lack of distinction and definition in relation to how the Australian VET sector can recruit and retain vocational teachers (Tyler & Dymock, 2021a, p. 4) and the absence of an attractive and well-defined pathway for workers to enter the vocational teaching profession has arguably helped to create the present VET teacher shortages. Although the OECD (2021) reports the existence of worldwide VET teacher shortages, it is worth noting that not all countries experience this. For example, in Finland where vocational education is well structured and respected, and teaching is a highly esteemed profession (Sahlberg, 2011), VET teacher education programs attract more applicants than can be accepted. In 2016, there were 5329 applications for VET teacher programs but only 1590 applications were successful (Laukia et al., 2017). Later figures suggest that only one-fifth (or less) of applications to enrol in VET teaching programs in Finland are accepted (Isacsson et al., 2019, p. 79).

At the time of writing, empirical evidence to substantiate the existence of VET teacher shortages is not available. Even so, it is widely perceived that RTOs (e.g., TAFE colleges, secondary schools and other vocational training facilities) have been experiencing VET trainer shortages since 2021 (Smith, 2023). Notwithstanding this lack of empirical evidence, there is substantial anecdotal evidence to support claims of VET teacher shortages (AITSL, 2021a; Carey, 2020; Dymock & Tyler, 2022; Grimley, 2021; Legislative Council E-Petitions, 2020; O'Reilly-Briggs et al., 2021; Victorian Skills Authority, 2022). Further, recent research supports claims of a high turnover rate of teaching staff in the VET sector, as well as high levels of out-of-field teaching in the VET sector (AITSL, 2021a; Nakar & Du Plessis, 2023) – claims that underpin arguments that there are existing VET teacher shortages.

The state of our TAFEs survey (AEU, 2021) found that 94% of TAFE VET practitioners were considering leaving the profession, while 76% had considered leaving in the three years prior to the survey. The main reasons TAFE VET practitioners gave for considering leaving the occupation were: unmanageable workloads; excessive hours; lack of support; arduous compliance requirements; and overly bureaucratic work.

Tyler and Dymock (2021b) examined how RTOs might better recruit and retain industry experts to become vocational teachers. They investigated RTOs and VET trainers, uncovering a range of factors both deterring and attracting workers in relation to "boundary-crossing" to the vocational teaching profession. The most enabling factor was the altruistic motivation of "helping the next generation of workers to develop their skills and a vocation". The study also considered how best to retain VET trainers once they are employed in the VET sector and proposed that "a supportive culture, structured mentoring, and RTO-supported professional development" were the most effective strategies for retaining industry experts once employed as vocational trainers (p. 3). The key deterrents, or "barriers", for workers considering entering the vocational training profession were found to be "remuneration", a "perceived lack of career pathways" and "the continual upgrading of the Certificate IV TAE Training and Assessment qualification" (p. 3). A key message of that study is that the process of becoming a vocational trainer may be better understood as a journey, rather than a destination.

A recent study by Smith, South and Foley (2023) investigated the motivations of people who have transitioned from industry to the vocational teaching profession, as well as their motivations for remaining employed in the VET sector. The study reported that more women than men enter the VET teaching profession via casual teaching arrangements, while nearly twice the proportion of men compared to women move straight into full-time VET teaching positions. They also found that women are more likely (at 44.1%) than the average (37.8%) to be paid more as a VET teacher than they were paid beforehand, while over half of the men surveyed (53.0%) are paid less than before they entered the profession. This may be reflective of the fact that "feminised occupations-of-origin" are frequently paid less than "masculinised occupations-of-origin". More women (64.8%) than men (60.8%) reported being "very happy" with their decision to become a VET teacher. The study found that the most important reason current VET teachers give for wanting to transition into the profession is "because they thought they would enjoy it". As also identified by Tyler and Dymock (2021b), "giving back" was another major motivator for participants to transition into the vocational teaching profession, as well as the hope or promise of a "better work-life balance".

There is a growing body of evidence indicating that the current minimum entry-level qualification, the TAE, is unsuitable for preparing candidates to teach, confusing to people unfamiliar with the VET sector, expensive, often poorly taught (where it is taught at all), frequently complained about by VET staff and problematic enough to turn many potentially good candidates away from the VET sector altogether (Tyler & Dymock, 2021). That is, the TAE qualification is arguably not only unfit for purpose but a deterrent to many industry experts considering a career change into the sector. It follows that innovative solutions are needed to begin attracting (rather than deterring) industry professionals to become VET practitioners. The TAE has had many iterations since its inception, each iteration intent on improving upon its predecessor, but many still hold the view that it is not possible to make a silk purse from a pig's ear. Tyler and Dymock (2021) suggest that government and education authorities can help "smooth the way" for industry professionals to enter the VET teaching profession by overseeing the establishment of a more suitable and fit-for-purpose entry-level qualification (p. 34).

Smith et al. (2023) also identify the TAE qualification as problematic and consider it to be one of the greatest barriers to entering and sustaining a career as a vocational trainer. Concerningly, their study respondents did not believe that it gave them a good preparation for the vocational training profession, raising questions regarding the usefulness of this mandatory qualification as the most suitable gateway to the vocational teaching profession. Not only does the TAE have questionable efficacy, but it can also be quite expensive to study. Seeklearning (2023) estimates the TAE course costs between \$2500 and \$5000; however, a desktop search reveals that some training providers charge more than this.

Chan (2012) argues that although tradespeople entering the VET teaching profession are less likely to have well-developed reading and writing literacies, they do have other developed literacies including tacit understandings (Gamble, 2001), workplace curriculums (Billett, 2006) and maxims (Farrar & Trorey, 2008), along with multiple intelligences such as bodily-kinaesthetic intelligence (Gardner, 1983/2011), that form the basis of vocational expertise and notions of craftsmanship (Sennett, 2008). Consequently, it is worth considering how the multiliteracies of tradespeople could be maximised through a well-designed entry-level program – one designed to draw on their strengths, instead of showing up their weaknesses.

In 2019, the Australian Bureau of Statistics (ABS) estimated that secondary jobs are particularly common in the education and training industry, placing the industry in the top three industries for secondary jobs (Knight et al., 2020). Knight et al. (2020) suggest that it is reasonable to assume that a sizeable proportion of VET trainers and assessors are multiple job holders not working full-time in VET. Given that 83.5% of the Australian manufacturing workforce are employed full-time (Australian Government, 2023a), the landscape of VET and its highly casualised job offerings are unlikely to attract many manufacturing industry professionals with secure full-time employment towards wanting to transition into more casual and less secure employment.

O'Reilly-Briggs (2016) investigated how vocational teachers and the quality of metals and engineering trade vocational education in Victoria were being affected by changes taking place in the VET sector. The study made many findings, including that regardless of VET teachers' passion for their trade and desire to give back, they experienced high levels of stress and frustration with their RTOs and managers due to what was widely perceived as an attack on the quality and integrity of their trade vocations. Following the marketisation of the VET sector and associated funding cutbacks, many metal and engineering trade departments became toxic places of work where trade teachers were coerced into teaching and assessing students in reduced timeframes and even forced into passing students who were not yet competent and not ready to graduate – negatively affecting the quality and integrity of their trade vocations, their self-esteem and the overall quality of vocational education on offer. In the face of this new reality, many teachers left the sector, while many others resorted to bending and breaking the rules for the greater good of protecting their apprentices and the integrity of their trade vocations.

Overview of the Australian manufacturing industry

In August 2023, there were a reported 925,800 people employed in manufacturing in Australia (ABS, 2023) with median weekly earnings of \$1300 (Australian Government, 2023a). Females make up a relatively small proportion of the sector at 28.3% and the average age of manufacturing workers is 43 years (Australian Government, 2023a). Manufacturing is a large industry, employing around 6.3% of all Australian workers. Manufacturing involves transforming materials, substances and components into new products, and within this industry are many sectors that produce products from materials such as: food and beverage; textiles, clothing and footwear; wood and paper; petroleum and coal; chemical and rubber; minerals and metals; machinery and equipment; and furniture and other products (2023a). In the manufacturing industry, over one-third of workers have a VET qualification, although many workers are employed in low-skilled jobs that do not require postsecondary education. The largest employing sector in manufacturing is food product manufacturing (employing 194,000), followed by machinery and equipment manufacturing (employing 121,800), transport equipment manufacturing (employing 83,800), furniture and other manufacturing (employing 81,600) and fabricated metal product manufacturing (employing 74,900) (Australian Government, 2023a).

While Smith et al. (2023) and Tyler and Dymock (2021b) have conducted recent studies examining the reasons supporting VET teachers' reasons for transitioning into the vocational teaching profession, there is an absence of research that focuses on unique industry areas (e.g., manufacturing) or seeks the reasons that industry-based manufacturing workers may or may not want to consider a future career as a vocational teacher. This is the gap that this study addresses.

3. Methodology



Research questions

The study was designed as pragmatic mixed-method (qualitative and quantitative) applied research. Data collection methods included a literature review, an online survey and purposive interviews.

The study was designed around the research question:

How can skilled manufacturing workers be encouraged to teach their vocation in the Australian VET sector?

Sub-questions were:

- What are the barriers that restrict or prevent manufacturing workers from entering vocational teaching?
- What are the enablers that encourage manufacturing workers to enter the vocational teaching profession?
- What initiatives have already been trialled to recruit industry professionals to become VET trainers?

Online survey tool

An online survey was created using Survey Legend subscription software. The survey was designed to gather information from respondents such as their occupation/s, manufacturing sector, postcode, highest education level, factors that presented barriers to them entering the vocational teaching profession and factors that may enable them entry to the vocational teaching vocation. Participants could choose to give their name and contact details if they wanted to receive information about entering the VET teaching profession in Australia and enter a prize draw.

Prior to the release of the survey, MSA board members were given the opportunity to review and comment on the draft version of the survey. Comments were received and taken into consideration and, where possible, the survey was modified to accommodate feedback. The survey was launched on 25 September 2025.

The software was programmed to protect the identity of participants. This included not collecting IP addresses or location data. Survey respondents were also invited to participate in a follow-up interview. Those who agreed to be interviewed provided contact information.

Participants

To participate in the research project, participants were required to be currently working in the manufacturing industry in Australia. People who identified themselves as not employed in Australian manufacturing were excluded from the study.

To recruit as many Australian manufacturing workers as possible, an online survey was created and promoted on social media, the MSA website, industry newsletters, radio and community television. All Australian manufacturing workers were eligible to participate in the survey and participation was voluntary. Consent to participate in the study was implied via voluntary completion and submission of the survey. Survey participants could volunteer to participate in a follow-up interview.

Promotion and distribution of survey

To help promote and incentivise completion of the survey, five x \$100 shopping gift cards were offered by MSA as prizes. Survey respondents could volunteer to go into the prize draw during completion of the survey.

The survey was promoted on LinkedIn and in manufacturing-based Facebook groups including South Australian Manufacturing & Engineering, Welders in Australia and Welding Australia. Ian "Macca" Macnamara from ABC Radio interviewed the author to promote the survey to an audience of 2 million listeners on 1 October 2023. Kate Beltran published an article about the study in *Australian Manufacturing* magazine on 25 October 2023 (see Appendix 1).

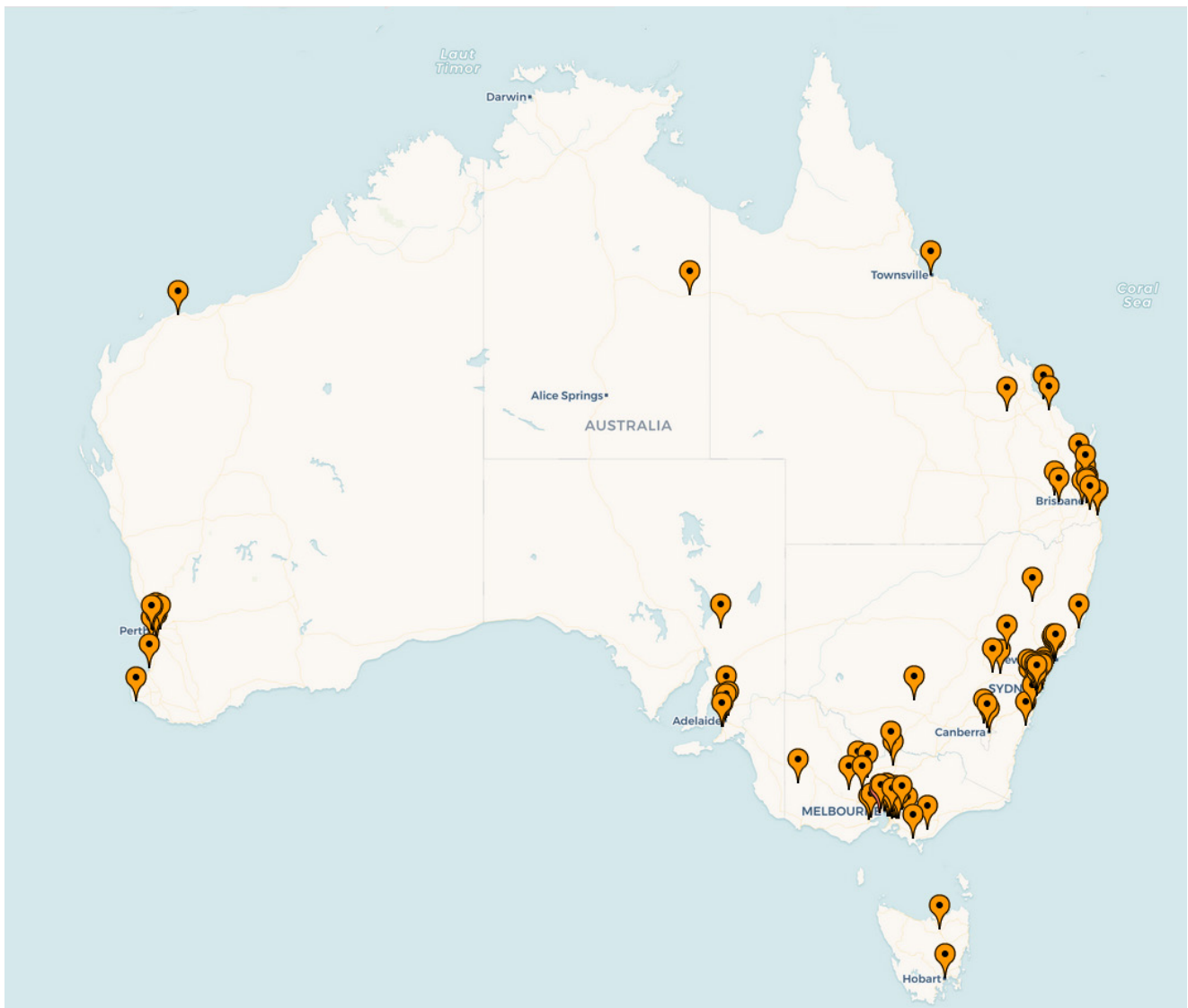
Two videos were produced on location at the Advanced Manufacturing Centre of Excellence (AMCOE) at Melbourne Polytechnic, Heidelberg Campus, to assist with efforts to promote the survey to Australian manufacturing workers. Michael Grogan (MSA and Manufacturing Growth Centre) and Natalie Ball (Locksmith and VET teacher at Melbourne Polytechnic) featured in the one-minute videos. The videos were shared online and broadcast on Channel 31 (community television) to promote the survey to a wide audience.

Leon Drury, MSA Executive Officer, produced a landing page for the survey on the MSA website. This web page contained further information about the study for potential participants (see Appendix 2).

Location of survey respondents

The online survey received a total of 126 eligible responses. The majority of responses came from Victoria and New South Wales. Figure 1 shows a map of Australia with orange pins identifying the postcode locations of survey respondents.

Figure 1. Locations of survey respondents by postcode



Interviews

One question in the online survey asked respondents if they would agree to participate in a short follow-up interview. Those who responded "thumbs up" (yes) entered their names and contact details. Request-for-interview emails were sent to those who agreed to a follow-up interview and they were asked to reply with a suitable time to conduct the interview. As a small-scale study, priority was given to those stating that they were from occupational areas offered in the Manufacturing and engineering (MEM) training package. Of the 36 request-for-interview emails that were sent, 12 replies were received and 11 phone interviews were conducted.

Prior to the phone interviews, those participants were asked if they would agree to the interview being audio-recorded. The majority agreed, but two interviews were recorded via written notes instead. From these recordings and notes, interviews underwent processing to devise short case studies. To produce these case studies, salient points and matters of interest to the research were converted to dot points and phrases of interest were retained as quotes. Dot points and quotes were then written up as short case studies, or vignettes, about the interview participants, their work lives and the factors presenting as either barriers or enablers to them entering the vocational teaching profession. Analysis of the interview data required some interpretation to determine whether a topic under discussion was, or could be interpreted as, either a barrier or an enabler.

Participant case studies were later divided into three stakeholder categories to facilitate an understanding of the different perspectives of each stakeholder group:

1. Manufacturing workers without VET teaching experience
2. Manufacturing workers who have previously taught VET but do not have a current training qualification
3. Manufacturing workers who are current VET teachers

Limitations

This study was limited by the small size of the participant sample and by the short turnaround time of 17 weeks from start to finish. The study was also limited by the difficulties involved in recruiting manufacturing workers for interview, especially female manufacturing workers. Female participation in this study was limited to survey responses because no female respondents volunteered to take part in a follow-up interview. Consequently, interview data in this study is limited to the perspectives of male manufacturing workers.

4. Online survey data and findings



Survey responses

On 31 October 2023, at the close of the online survey, 1224 responses to the survey had been received. Following inspection of these, it became evident that many responses were either from outside Australia, incomplete, deliberately damaging or otherwise ineligible for inclusion. Following this, data cleaning was undertaken and each individual response was scrutinised for its legitimacy to be included in the study. All responses identified as ineligible were deleted prior to data analysis.

After data cleaning, 126 responses were identified as eligible for the study. All results presented here have been generated from these 126 responses.

Gender of respondents

Respondents were asked "What is your gender?"

Figure 2. Gender of survey respondents

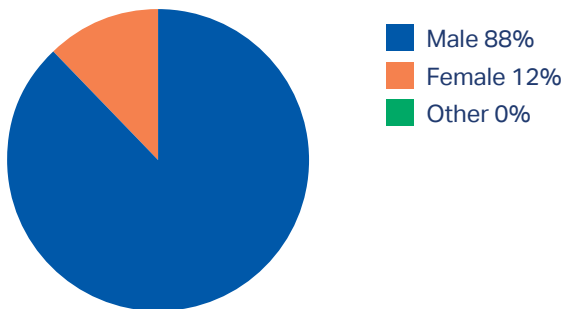


Figure 2 reveals the genders of survey respondents: 88% (n=111) male; 12% (n=15) female; n=0 (0%) other. The gender distribution of respondents differs from that of a recent ABS report (2022) which indicates that women make up 28.2% of the Australian manufacturing workforce. Why the survey received a proportionally higher response rate of males to females as compared to the national average is not clear. Differences between the populations and respondents may have affected the interpretation of survey results. Consequently, the low participation rate of female manufacturing workers has been flagged as a limitation of the study.

Location by postcode

Respondents were asked to provide their postcodes to reveal their locations throughout Australia.

Figure 3. State or Territory of respondents by postcode

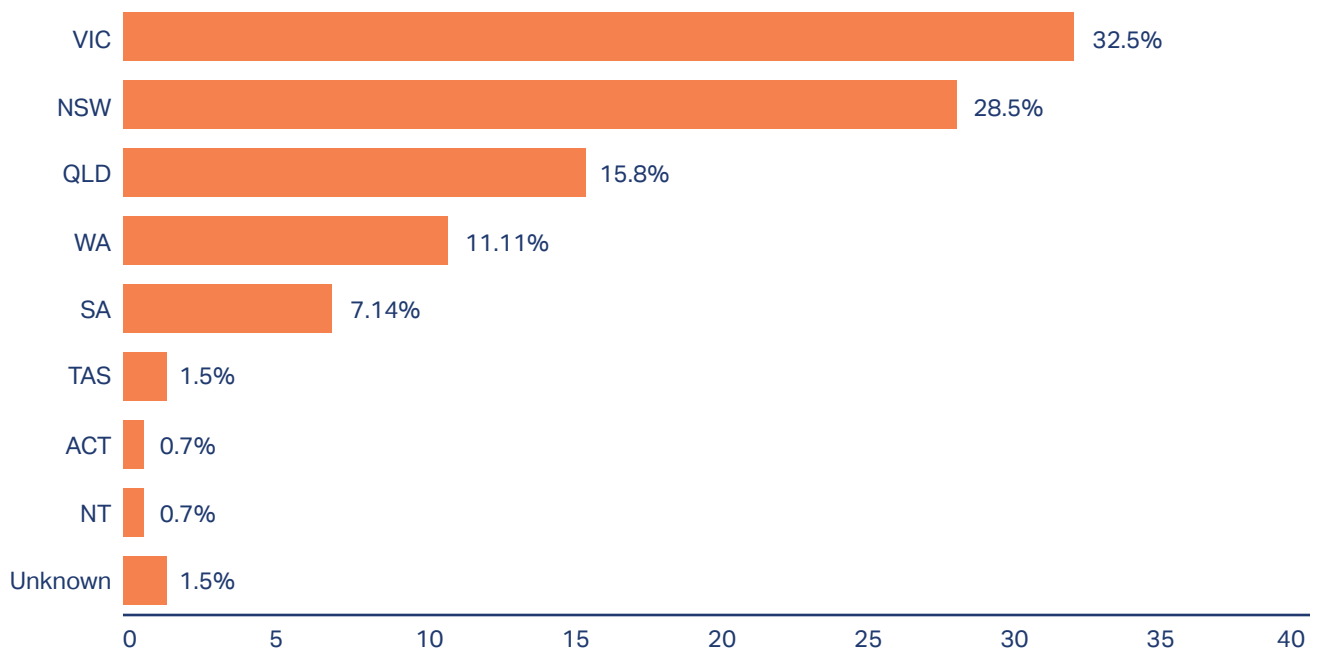


Figure 3 presents the locations of respondents by Australian state and territory postcodes: Victoria, 32.5% (n=41); New South Wales, 28.5% (n=36); Queensland, 15.8% (n=20); Western Australia, 11.11% (n=14); South Australia, 7.14% (n=9); Tasmania, 1.5% (n=2); Australian Capital Territory, 0.7% (n=1); Northern Territory, 0.7% (n=1) and unknown postcode, 1.5% (n=2). The largest numbers of respondents were from Victoria (32.5%), followed by New South Wales (28.5%) and Queensland (15.8%).

Occupations

Survey respondents were asked to state their occupation/s; many listed more than one occupation. Table 1 structures these responses by listing primary occupational areas as well as subsets of these occupational areas. The column on the right indicates the numbers of respondents who identified as belonging to the primary groups of occupational areas. Some occupational subsets cover more than one primary occupational area listed in the table and therefore may appear more than once in the table. For example, the occupation of "Engineering technician" appears in both the occupational categories of "Engineer" and "Technician". This analysis revealed the greatest numbers of respondents identified their occupations as "Technician" (n=14); "Boilermaker/Fabricator" (n=12); "Fitter" (n=12); "Engineer" (n=10) and "Welder" (n=10). See Table 1.

Table 1. Manufacturing occupations of survey respondents

Occupational area	Occupational subset	Numbers in occupational area
Technician	Mechanical engineering technician	14
	Operation technician	
	Equipment maintenance technician	
	Prosthetics technician	
	Vehicle technician	
	Electrical technician	
	Engineering technician	
	Hydraulics technician	
	Can line technician	
	Laboratory instrument technician	
	Process technician	
Electronics technician		
Boilermaker / Fabricator	Boilermaker-welder	12
	Shipbuilder – boilermaker/sheetmetal worker	
	Welding and fabrication teacher	
	Fabrication	
	Welder-fabricator	
	Metalworker	
Fitter	Fitter and machinist	12
	Fitter and turner	
	Mechanical fitter	
	Site mechanical fitter manager	
	Apprentice mechanical fitter	
	First-class machinist	
Engineer	Manufacturing engineer	10
	Mechanical engineering technician	
	Safety engineer	
	Mechanical engineer	
	Aircraft mechanical engineer	
	Engineering technician	

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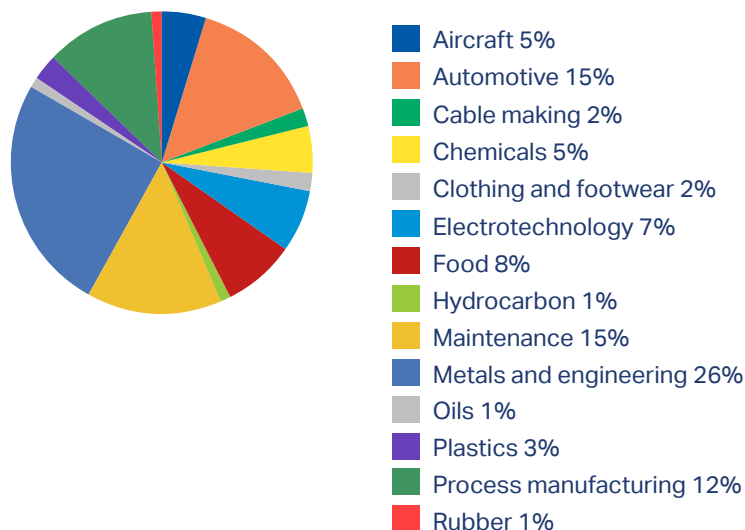
Occupational area	Occupational subset	Numbers in occupational area
Welder	Fabricator-welder	10
	Boilermaker/welder	
	Coded welder	
	Welding and fabrication teacher	
	Welding inspector supervisor	
Manager	Technical manager	9
	Production manager	
	Operations manager	
	General manager	
	Training manager	
	Site mechanical fitter manager	
	National technology manager	
	Managing director	
	Creative director	
Trainer	Training lead	7
	Assessor and trainer	
	TAFE teacher	
Electrician	Electrical technician	7
	Electronics trades	
	Auto electrician	
	Automotive electrical apprentice	
	Electronics technician	
Automotive	Auto electrician	7
	Automotive electrical apprentice	
	Vehicle repair	
	Motor mechanic	
	Diesel mechanic	
	Motorcycle	
	Apprentice mechanic fitter	
Toolmaker	–	4
Builder	Builder/carpenter	4
	Registered builder, open class	
	Shipbuilder	
	Building contractor	
Operator	Machine operator	3
	Senior operator	
CNC programmer	CNC machinist/programmer (fitter & machinist)	2
Consultant	–	2

Occupational area	Occupational subset	Numbers in occupational area
Maintenance	Aircraft maintenance worker Equipment maintenance technician	2
Storeman	Warehouse	2
Trade assistant	–	2
Process worker	Process technician	2
Designer	Industrial designer Mechanical designer	2
Retail buyer	–	1
Sales representative	–	1
Compounding chemist	–	1
Plastics worker	–	1
Assembler	–	1
Plumber	–	1
Environmental monitoring & ecological assessor	–	1
Chef	–	1
Racking	–	1
Printer	–	1
Painter blaster	–	1
Air-conditioning	–	1

Manufacturing sectors

Respondents were provided with a list of manufacturing areas and asked to note all that applied to their occupation/s in the manufacturing industry. Figure 4 offers an overview of responses.

Figure 4. Manufacturing areas of respondents



This data tells us that the majority of respondents worked in the manufacturing area of metals and engineering (26%), followed by maintenance (15%), automotive (15%), process manufacturing (12%), food (8%) and electrotechnology (7%).

Table 2 orders these manufacturing areas by frequency and percentage from highest to lowest.

Table 2. Manufacturing areas of survey respondents by frequency and percentage

Manufacturing area	Number of respondents	Percentage %
Metals and engineering	50	25.6
Maintenance	28	14.3
Automotive	28	14.3
Process manufacturing	23	11.7
Food	15	7.7
Electrotechnology	13	6.6
Chemicals	10	5.1
Aircraft	9	4.6
Plastics	6	3
Cable making	3	1.5
Clothing and footwear	3	1.5
Textiles	3	1.5
Rubber	2	1
Oils	1	0.5
Hydrocarbon	1	0.5
Jewellery	0	0

Qualifications

Respondents were offered a list of all post-compulsory Australian qualification levels (from AQF Levels I–X) and asked to select their highest level of post-school qualification. Figure 5 and Table 3 display these responses.

Figure 5. Highest level of post-school qualification



Table 3 orders the highest level of qualification data by frequency from highest to lowest.

Table 3. Highest level of post-school qualification by frequency and percentage

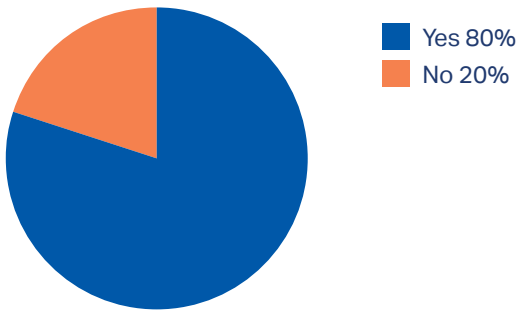
Highest level of post-school qualification	Number of respondents	Percentage %
Certificate III	26	20.6
Certificate IV	25	19.8
Advanced diploma or associate degree (level VI)	15	11.9
Diploma (level V)	13	10.3
Bachelor (level VII)	12	9.5
Graduate diploma (level VIII)	10	7.9
Masters (level IX)	5	3.9
Doctorate or PhD (level X)	3	2.3
Certificate II	3	2.3
Certificate I	2	1.5
Unsure or not applicable	12	9.5

This data shows that the majority of participants held a Certificate level III (20.6%) or Certificate level IV (19.8%) as their highest post-school qualification. Certificate III and IV are the levels at which most trade apprenticeships are offered in Australia. The data also shows that 9.5% of respondents (n=12) were either not sure of their highest level of post-school qualification or felt that the question was not applicable to their situation. Some respondents had received their qualifications pre-AQF (i.e., pre-1995), which may provide an explanation for this result.

Training experience

Respondents were asked "Have you ever taught your work skills or vocation to anyone?". Figure 6 presents these results.

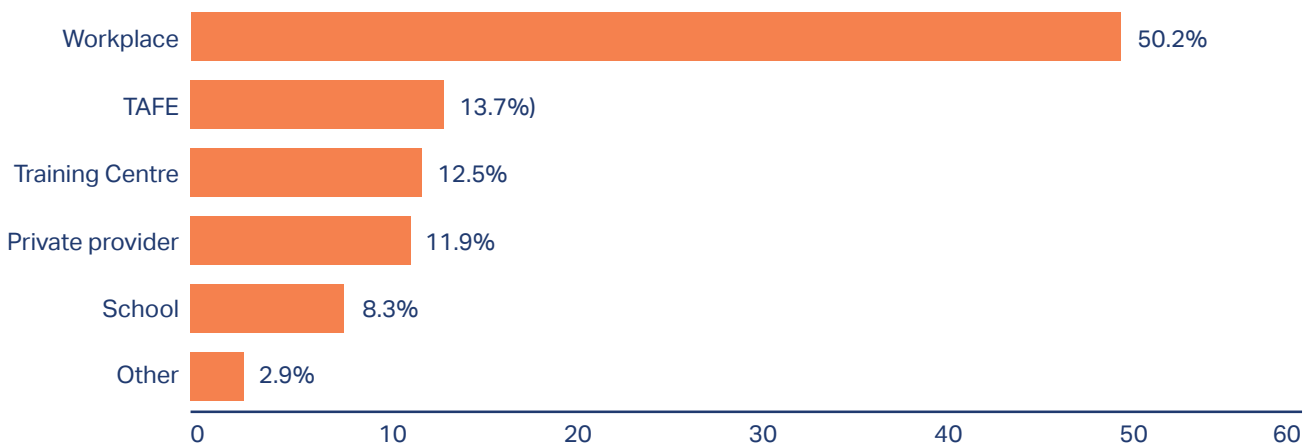
Figure 6. Responses to the question: *Have you ever taught your work skills or vocation to anyone?*



This figure reveals that 80% (n=101) had some experience teaching their work skills or vocation. Only 20% (n=25) of respondents had not taught their work skills or vocation before.

Respondents who indicated that they had taught previously were also asked where they had taught their work skills or vocation and asked to select all responses that applied. Figure 7 presents these results.

Figure 7. Responses to the question: *Where have you taught your work skills or vocation?*



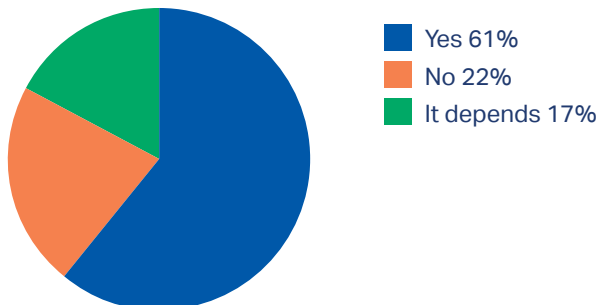
Of those 101 participants who had taught their work skills or vocation previously, 50.2% (n=84) had taught in the workplace, 13.7% (n=23) had taught at TAFE, 12.5% (n=21) had taught in a training centre, 11.9% (n=20) had taught for a private provider, 8.3% (n=14) had taught in a school and 2.9% (n=5) had taught elsewhere. Those who selected "other" told us that they had taught: in the "supply industry"; as a "volunteer to high-school students"; "apprenticeship"; "the Rural Fire Service"; and "the Royal Australian Navy".

The 25 participants who told us that they had not taught their work skills or vocation before were asked "Have you ever considered teaching your work skills or vocation to students in a TAFE or other training organisation?". Of these, 48% (n=12) indicated that they had considered teaching and 52% (n=13) told us that they had not considered teaching their work skills or vocation.

Would like to teach work skills or vocation at TAFE or training organisation

All respondents were asked "Would you like to teach your work skills or vocation at TAFE or another training organisation?". These results are presented in Figure 8.

Figure 8. Responses to the question: *Would you like to teach your work skills or vocation at TAFE or another training organisation?*



To this question, the majority of respondents, 61% (n=76), indicated in the affirmative – that they would like to teach their work skills or vocation at a TAFE or other training organisation. 22% (n=28) told us that they did not want to teach their work skills or vocation and 17% (n=21) selected "it depends". Those who selected "it depends" were given the opportunity to explain this answer in a textbox. Table 4 presents the "it depends" text-based reasons that respondents gave for whether or not they would like to teach their work skills or vocation in a TAFE or other training organisation.

Table 4. Responses of survey respondents who might like to teach their work skills or vocation depending on other factors

1	The current system does not respect educators' expertise
2	It depends on how and to whom I'm teaching
3	Pass on my work experience
4	Probably not because of bureaucracy behind teaching from political correctness to OHS and far too much irrelevant paperwork
5	I would like to pass on the skills acquired during 50 years working in the housing industry to help secure trades people for the future.
6	Rate of pay needs to increase and red tape/compliance to reduce
7	Better culture and trust
8	Currently working at higher levels – i.e., VET training systems
9	I am a TAFE teacher
10	I like what TAFE is and stands for, but my (outdated) experience of it is that it is officious, overworked, undervalued, full of nepotism and internal infighting and disrespect. I'd like to be a part of it, but not with those characteristics.
11	TAFE is too structured and inflexible
12	(It depends) on money and work life
13	Once I am closer to retirement age I would
14	If there is a financial benefit as I would be taking on additional work
15	Part time

table continued next page

16	Probably too old
17	If it were to be a viable option maybe
18	It depends. I don't know if my personality would cross over well.
19	I'd love to teach at TAFE, but I have to get PR first and get my equivalencies since I have a diploma from a trade school in the US.
20	Can't be between 7am to 3:30pm.

The "it depends" responses to this question have been broadly categorised into three main areas: (i) TAFE/VET culture; (ii) practicalities; and (iii) altruistic motivations. The author suggests that these written responses should be treated as particularly valuable to this study as they reveal important motivations for either wanting or not wanting to transition into the VET teaching profession.

Culture: Responses to this question in the "it depends" textbox captured some respondents' discontent with the TAFE/VET system. For example, the TAFE/VET system was criticised for not respecting educators' expertise and a need was expressed for "a better culture" of "trust" and "respect" of educators. One respondent told us that they liked what TAFE is and stands for, but their past experience of the system meant that they regarded it as "officious, overworked, undervalued, full of nepotism and internal infighting and disrespect". Other criticisms were too much: "red tape"; "compliance"; "bureaucracy"; "political correctness to OHS"; "inflexibility"; and "irrelevant paperwork".

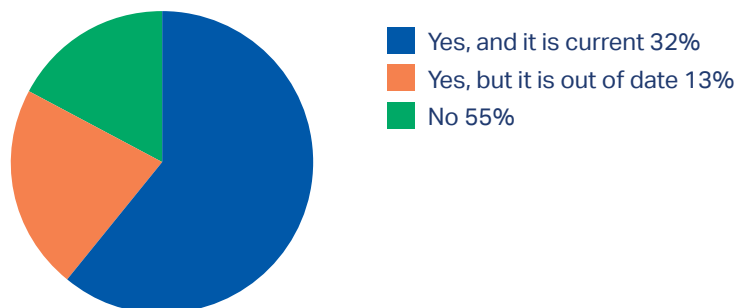
Practicalities: Some responses in the "it depends" textbox captured respondents' uncertainties about VET teaching and whether TAFE/VET teaching would fit into their lives or be worth their while financially. For example, one respondent told us that their decision about whether they would like to teach or not was dependent on "how and whom" they would be teaching and another told us that they could teach if it were outside the hours of 7am to 3.30pm. Others expressed that there would need to be a financial benefit and that the pay rate would need to rise to make VET teaching an attractive proposition. One person had an overseas qualification and would need to get their qualifications recognised in Australia before they could consider becoming a VET teacher. One person stated that they thought they might be too old to teach and another thought that they would only consider a VET teaching career once they were near retirement age. Another did not think that their "personality would cross over well".

Altruistic motivations: A few of these respondents expressed personal motivations for wanting to teach. For example, one said that they wanted to "pass on their work experience" and another said that they would like to pass on the skills they had acquired over 50 years working in the housing industry "to help secure trades people for the future".

Certificate IV TAE

Respondents were asked if they had the Certificate IV TAE qualification, as well as whether it was current or not. The results are presented below.

Figure 9. Responses to the question: *Do you have a Certificate IV TAE Training and assessment qualification?*

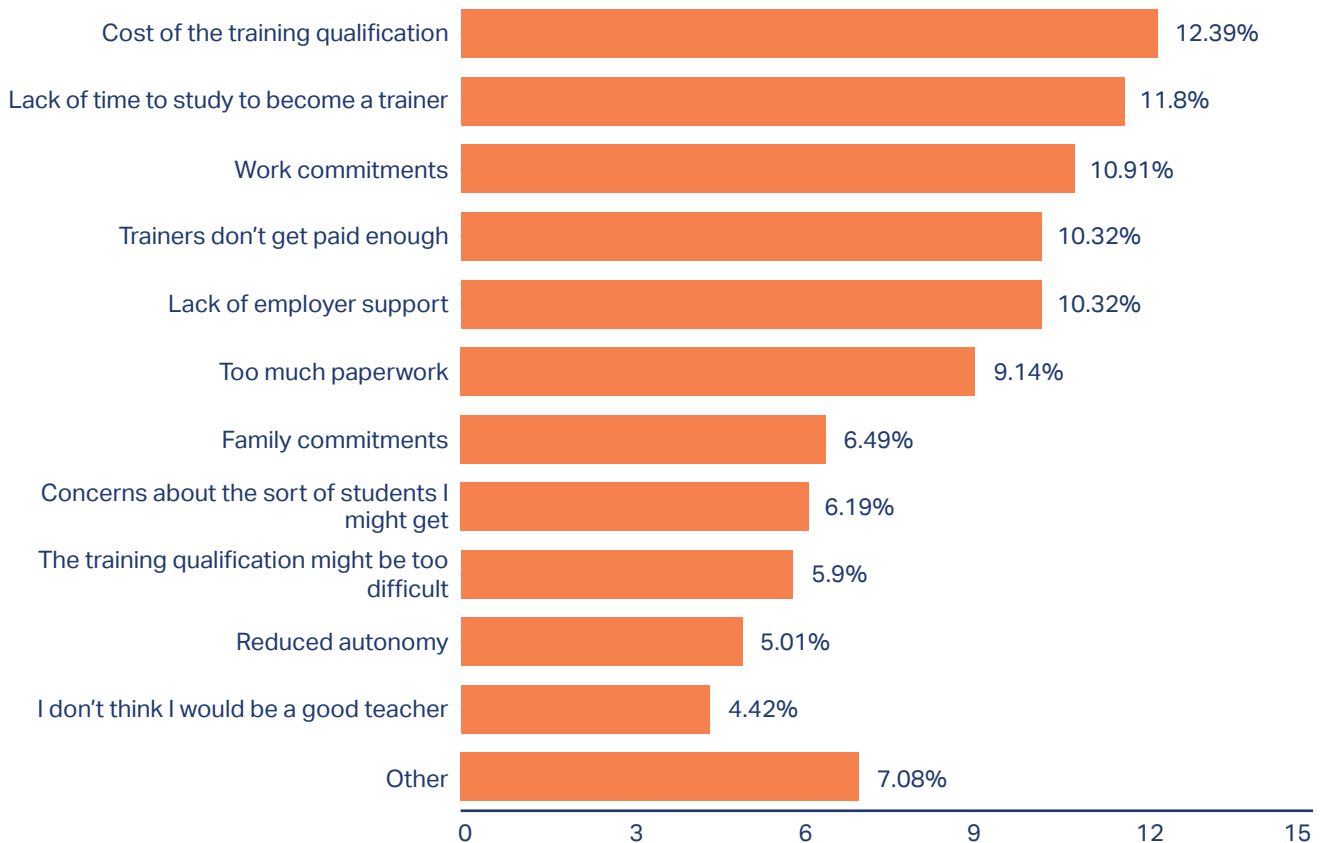


55% (n=70) of respondents did not have a Certificate IV TAE qualification. 32% (n=40) of respondents told us that they had a current Certificate IV TAE qualification and 13% (n=16) told us that they had the qualification but it was out of date. These results indicate that close to half (45%) of all survey respondents either have or had a VET training qualification.

Barriers to entering the vocational teaching profession

Respondents were asked "If today you were asked to become a vocational trainer, what obstacles, barriers or concerns might you need to overcome first? Select all that apply." Respondents could select as many options as they wanted to from a list of options and/or write their own response in a textbox. The responses to this question that have been interpreted as barriers are presented in Figure 10.

Figure 10. Responses to the question: *If today you were asked to become a vocational trainer, what obstacles, barriers or concerns might you need to overcome first? Select all that apply that have been interpreted as barriers.*



Of these responses, the "Cost of training qualification" received the greatest number of responses at 12.39% (n=42). This was followed by "Lack of time to study to become a trainer" at 11.8% (n=40); "Work commitments" at 10.91% (n=37); "Trainers don't get paid enough" and "Lack of employer support" received the same numbers of responses at 10.32% (n=35); and "Too much paperwork" received 9.14% (n=31).

There were also a relatively large number of "other" responses to this question (n=24). These text-based "other" responses are presented in Table 5.

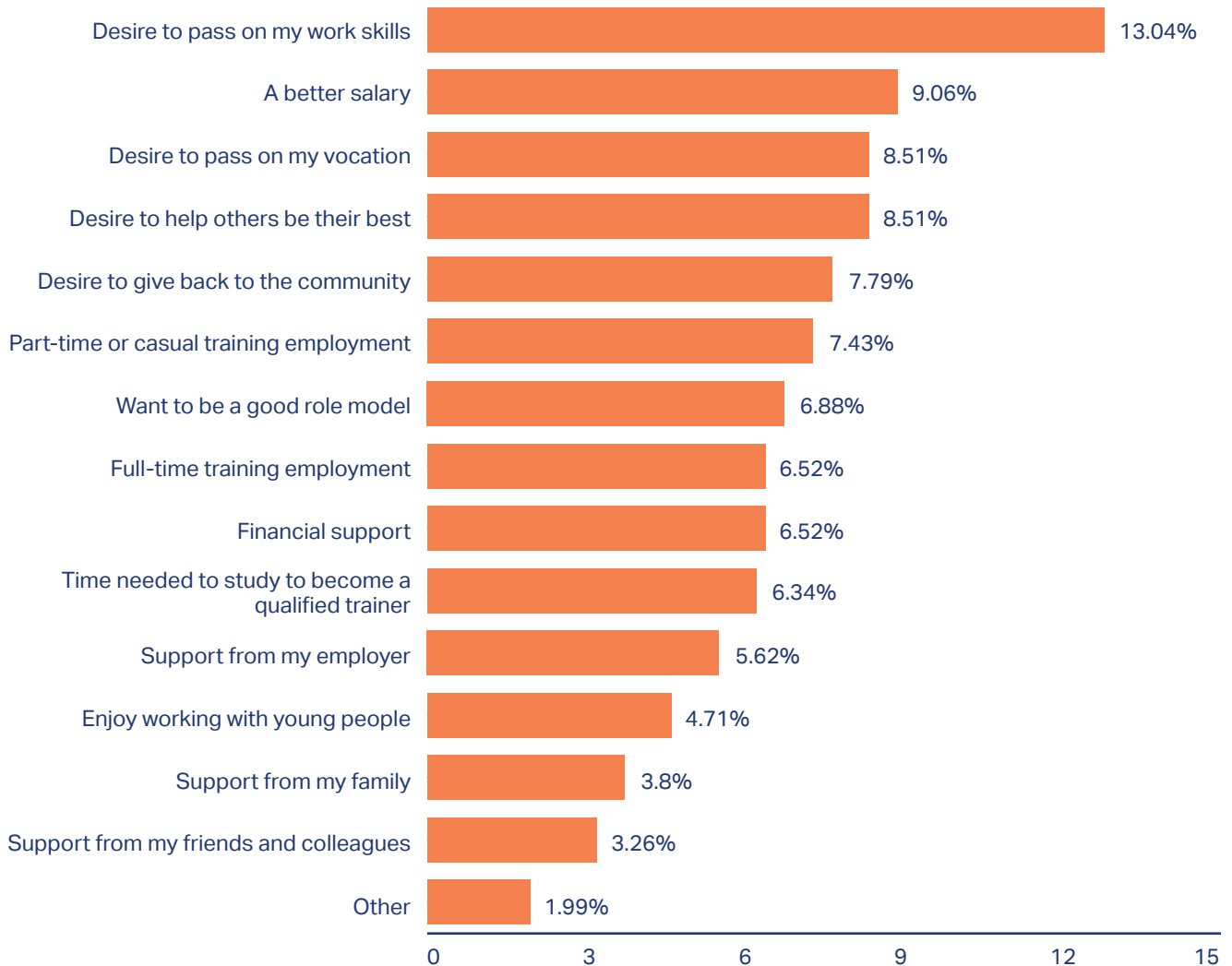
Table 5. Text-based responses to the question *If today you were asked to become a vocational trainer, what obstacles, barriers or concerns might you need to overcome first? Select all that apply that have been interpreted as barriers.*

1	I am not sure what training is involved.
2	Retired
3	Far too much political correctness ohs rubbish and not enough in front of students relevant training
4	Apprentices need to be committed to their training, and want to learn, not just be there to get a job and so no interest in the schooling side of the training.
5	TAFEs willingness to update/add new courses and machinery
6	At 60 I wonder if this would be too old.
7	None of the above.
8	Retired early (<60y) due to health reasons, but still able to teach and pass on knowledge.
9	Culture, lack of trust
10	I once paid the \$1500 to do the online Cert 4 course but got bogged down in the tedious nature of the course that I found completely irrelevant.
11	Depends – vocational trainer in current VET system then, just about all of the above apply. If workplace trainer then no barriers.
12	I would need to have my trainer and assessor RPL looked at as I need to complete final 2 modules but may need to start fresh as my training was a few years ago and was completed onsite at [a] coal mine.
13	Assistance with computer skills and safety standards simplified
14	Stupid claims by students about “unfair” treatment or shit like that
15	Tafe needs to be more innovative.
16	It would need to be funded heavily to make this work in my area. FYI we make leather bags in our workshop, and this is not taught anywhere at the moment in any vocational facility. It is extremely difficult to find skilled workers and we are always often training on the job which is so time consuming and too large a barrier. It would be great to have financial support so we can continue doing this work.
17	Simply put I've had a small interest in training but it appears TAFE has very high standards or they actually don't want teachers or want to train up their own teachers also their pay is not the greatest for when they are teaching the next generation in their trade and a person in their trade can go and get paid more doing their trade if that makes sense.
18	What position will be offered? If full-time is the pay comparable to what I receive now? If casual, would it fit into my current work commitments?
19	I don't have enough post qualification trade experience yet.
20	Will be retiring.in the near future.
21	I lack the confidence, experience and ability to talk in front of groups.
22	Location – must be close to home
23	I'd have to leave my current job. I've accumulated too much long service and redundancy to leave now.
24	Obtaining PR [permanent residency] since I'm on a 482 Skill Shortage Visa.

Enablers to entering the vocational teaching profession

Respondents were asked “If today you were asked to become a vocational teacher, what sort of things might help or enable you to do so? Select all that apply.” Respondents could select as many options as they wanted to from a list of options and/or write their own response in a textbox. The responses to this question that have been interpreted as enablers are presented below.

Figure 11. Responses to the question: *If today you were asked to become a vocational teacher, what sort of things might help or enable you to do so? Select all that apply that have been interpreted as enablers.*



The responses of the 11 survey respondents who selected “other” to this question are presented in Table 6.

Table 6. Text-based “other” responses to the question *If today you were asked to become a vocational teacher, what sort of things might help or enable you to do so?* Select all that apply that have been interpreted as enablers.

1	Guaranteed and well-defined direction/end goals of the TAFE in terms of what they are there to provide (high level training not make money)
2	Trade teachers need more administrative support to enable them to concentrate on delivering their trade skills.
3	An easier pathway into teaching unlike the present cert 4 course.
4	I am on shift work at the moment and would like to go back to normal hours. My wife is a teacher and she gets much satisfaction from her job. I have a long career in domestic, commercial, light industrial and heavy mining environments. Very broad list of skills and experience.
5	Negotiate fair package to cope with costs involved on going
6	Australia needs skills. Australia needs to make stuff. Australia, we are here and ready to make it happen.
7	Not interested in becoming a trainer
8	I ticked everything because they are all relevant.
9	As the founder I would be more than happy to pass on these skills, but there is little money in this work already. Financial support would be the biggest help.
10	Becoming less able to physically keep doing the work.
11	I really don't want to train.

Final comments

The final question in the survey asked “Is there anything else you would like to tell us about why you would or would not like to teach your work skills or vocation?” Respondents were given the opportunity to write a response in a textbox. Table 7 presents what respondents had to say.

Table 7. Text-based responses to the question *Is there anything else you would like to tell us about why you would or would not like to teach your work skills or vocation?*

1	I don't have time
2	Retain talent and resources
3	I am proud of my profession, and if my skills can be learned by more people, I will be happy.
4	I am happy to teach others, but I am worried that others will not learn.
5	Have a positive impact on society
6	Brings satisfaction and a sense of accomplishment
7	Provide training and guidance to the next generation or new recruits
8	I am willing to teach work skills, hope more and more people master a skill of their own, make life a little easier
9	Develop students' self-confidence and self-awareness to help them realise their potential
10	Through teaching, interacting with students and gaining new ideas and perspectives
11	Improve your leadership and organizational skills through teaching
12	Personal fulfillment from sharing knowledge and expertise

table continued next page

13	No time
14	Teaching skills can foster social connections and establish a broader network of interpersonal relationships
15	I believe the Australian manufacturing industry needs to focus in innovation and applying new technologies
16	I would like to pass on my skills and keep engaged.
17	As in primary and secondary education male teachers are few as the first thing that happens is that they don't want you to be male but some sort of hermaphrodite and this is unacceptable to a real man lot of people who are thinking I'll becoming teachers' political correctness has put the fear of being persecuted as being sexist racist or bigoted who in their right mind would even want to put themselves in a position. So that is the one of the reasons, very few males, take up teaching in primary or secondary schools and unfortunately this has crept in to TAFE teaching as well with more females thinking they would make great tradespeople some do and unfortunately what I have seen most get their qualifications and just drop out when they decide to have a family, or it's just too hard for them and it just feels to me it's a waste of an apprenticeship some young male could've had for this reason alone I'm sure your department would feel that I would not be suitable and this is OK but that is my view, also, the money is low compared to what I earn.
18	I still have a passion for engineering and would feel it would be a privilege to pass these skills on, just as I was privileged to attend many hours of TAFE night school course for little or no cost.
19	I answered the questions assuming I did not have 25 years' experience as a TAFE teacher. In that time I found the biggest barrier to trained tradespeople is the transition from trade to the teaching profession. When the Trade Trained Instructors Certificate and college training ceased, the ability and confidence of trade teachers reduced. In short, trade teaching colleges should be reintroduced that offered two days of academic tuition to the three days spent teaching at a TAFE institution.
20	My industry experience is not listed above, ie; box, carton and papermaking.
21	Centrelink issues, with being on pension now! but could do short time slots for teaching
22	Requirement to prove currency in the industry that you may have worked in for 30 years is unreasonable.
23	Left Tafe due to issues.
24	In my humble opinion, the administration demands outweigh the preparation time required to deliver quality trade skills
25	I would love to teach. I have much to give and impart into newcomer chefs. I have cooked commercially in restaurants, hotels, clubs, cafes and other for 30 plus years and ideas for a refreshed curriculum.
26	My vocational skills relate to training and assessment, and having been involved in the creation of the current VET system and standards for vocational trainers I'm keen to pass these on to others.
27	Industry wages are quite high 2-3 times what a trainer makes which is a huge reason I would not go into being a trainer
28	I hold a medium sized working sheep farm so I would prefer some part time work in our local area initially.
29	Should have trade up /skills days for tradies to do a couple of days at a RTO to see if they like teaching, almost like a pre apprenticeship course but paid. maybe two weeks
30	It would be hard be motivated to teach when high schools see apprenticeships as a second-grade option for students.

31	I have assisted in training several apprentices of various ages and origins made some lifelong friendships and many have continued to tap into my knowledge when challenges arise this has been very rewarding and I feel I have more to give.
32	It's about getting the job done (the training in this case). Keep it focused on that, then I'm cool.
33	Leading a consulting entity assisting helping manufacturing with digital (Industry 4.0) technologies
34	Happy with full time or part time employment
35	I'm at an age to give back
36	I don't think I would be a good teacher
37	Great
38	I don't have a good English language background.
39	Training on the jobs it were with a qualified teacher for a period of time, like work experience.
40	I work in a warehouse called [large food manufacturing company] as a forklift driver but I'm open to the idea because I don't want to be just a forklift driver for the rest of my life, and now I just signed up as union delicate for afternoon shift at my work.
41	Lack of confidence to be able to teach and pass my skills on
42	Many of the advertised positions are casual roles, leaving a well-paid full-time job in a growing industry for a casual position with similar remuneration and less opportunity to advance is unfeasible.
43	Just need more training and practice then I can teach well
44	I would not support working in a TAFE, I believe privatisation is more rewarding outcome.
45	My skills and industry exposure are too minimal to train people
46	I have allowed my work skills to become too specialised, so I don't have a broad enough knowledge base to teach others
47	I would be highly interested one day. I'm only 24 and would like some more time in industry and training before becoming a trainer/teacher.

The text-based responses in Table 7 were divided into three categories before being analysed. The three categories are:

1. Why I want to teach
2. Why I do not want to teach
3. Participants' helpful suggestions

These findings are presented below.

Narrative: Why I want to teach

The text-based reasons respondents gave for wanting to teach are shown in Table 7 and were analysed. The narrative presented below is a distillation of the motivations for teaching that respondents provided for this question.

I am proud of my profession and believe that teaching has a positive impact on society. When I share my knowledge and expertise with others, it brings me a sense of satisfaction, accomplishment and personal fulfilment. I want to develop my students' self-confidence and help them to master a skill as well as help them to realise their potential. I have a passion for my vocation and consider it a privilege to pass on my skills. I also want to foster social connections and relationships, and impart my industry knowledge. I have more to give and I am at an age where I want to give back.

Narrative: Why I do not want to teach

The text-based reasons respondent gave for not wanting to teach are also shown in Table 7 and were analysed. The narrative presented below is a distillation of the motivations for not wanting to teach that respondents provided for this question.

I don't want to teach because not only don't I have time, but I can earn two to three times more money in industry than I ever could as a teacher. Besides, I've had issues with TAFE in the past. The administrative demands of TAFE are onerous. They expect you to be all "politically correct" and it is unreasonable to expect me to prove industry currency when I have worked in my trade for the past thirty years. Why would I want to leave a well-paid job to work casually as a teacher for less pay and less opportunity for career advancement? Even if I did want to teach, my English language skills may not be good enough. Also, I don't think that I would make a good teacher because over the years my work skills have become so specialised that I may not have a broad enough knowledge base to teach others. Young people these days don't even want to work in manufacturing or take an apprenticeship – it's seen as a second-grade option.

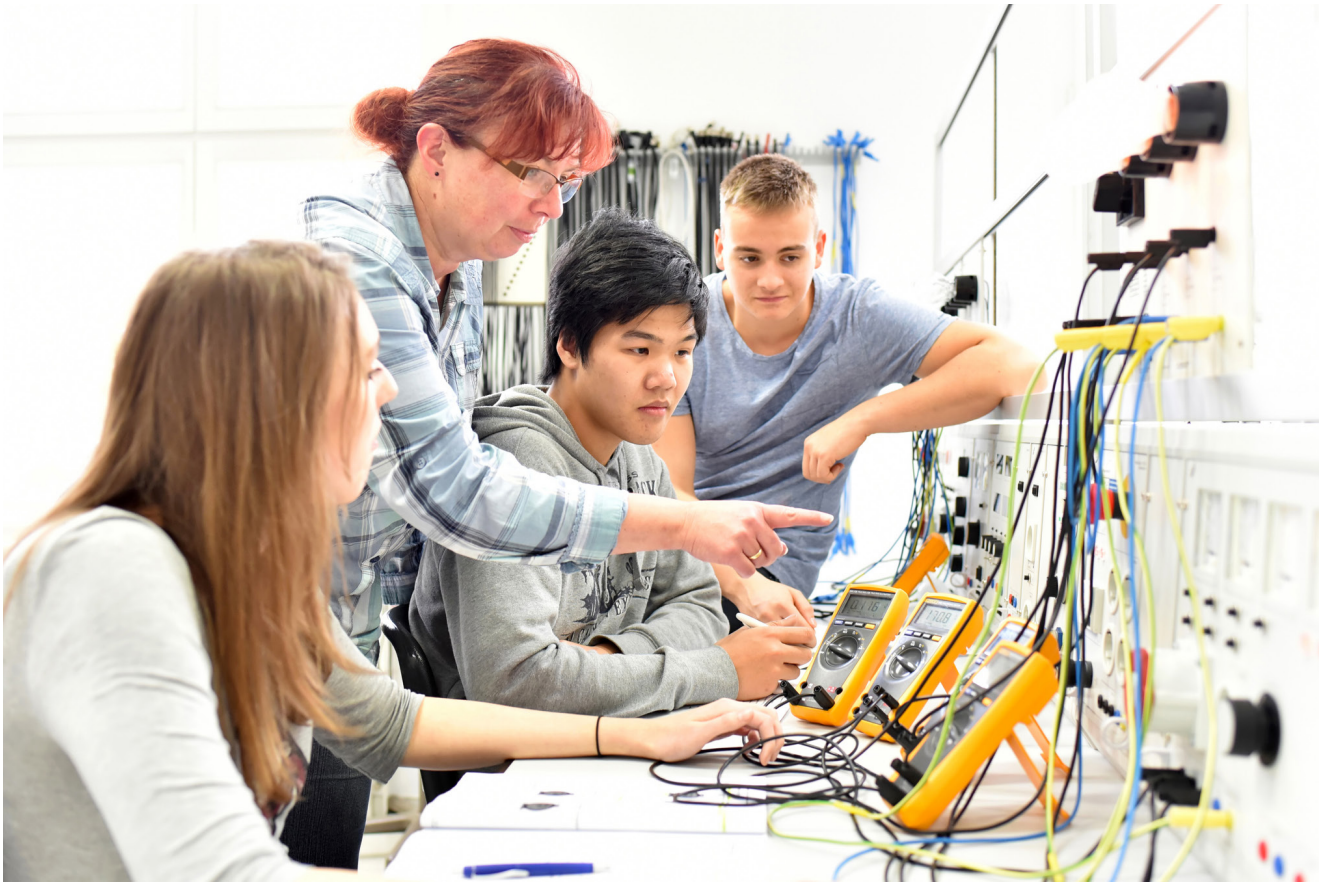
Participants' helpful suggestions

Some text-based responses shown in Table 7 offered suggestions to encourage more manufacturing workers to transition from industry into the vocational teaching profession. These suggestions are presented below.

- The biggest barrier for workers is in the transition from industry to teaching. Trade instructors' colleges and certificates need to be reintroduced and offer two days of academic tuition and three days of teaching in TAFE per week.
- Offer tradespeople "trade up" days at an RTO to see if they like teaching – like a paid pre-apprenticeship course over two weeks.
- Offer training on the job with a qualified teacher for a period of time, like work experience.

Section 4 has presented and analysed the data collected from the online survey component of the study. Section 5 presents the interview data and case studies of the interview participants.

5. Interview participant case studies



In Section 5, case study vignettes are presented of some survey respondents who agreed to participate in a short (approximately 10–15 minute) telephone or Teams conference interview. Emails were sent to those who agreed to a follow-up interview and they were asked to reply with a suitable time to conduct the interview. Priority was given to those stating that they were from occupational areas offered in the MEM training package. Of the 36 request-for-interview emails that were sent, 12 replied and 11 interviews were conducted. Although females were invited for interview, all who replied to the email requests for interview were male.

Interviews were sought in order to gain a richer understanding of the survey responses. The questions asked of interviewees were tailored to the responses they gave in the survey regarding the information they provided. The names of participants in these case studies have been changed to protect their identities. The occupational titles given to each participant are those they assigned themselves in the survey. Although the ages of participants were not requested, where an age appears in a case study, it was information volunteered by the participant during the course of the interview.

Each interviewee was asked three questions based on their survey responses for the purposes of clarifying their responses and “putting flesh on the bones” of the responses they gave in the survey. The three interview questions were as follows:

Question 1: *In the survey you told us that you have/have not taught your skills. You also said that the things that might present a barrier for you entering the VET teaching profession include: _____. Can you elaborate on this/these things?*

Question 2: *In the survey you told us that the things that might help or support you to enter the VET teaching vocation include: _____. Can you elaborate on this/these things?*

Question 3: *Is there anything else you would like to say about these issues?*

The case studies presented in this Section have been devised using a combination of the information collected in survey responses (e.g., occupation/s, location, manufacturing sector, qualification level) as well as the information communicated in the interviews.

The case studies presented are divided into three groups:

1. Manufacturing workers without VET teaching experience (n=4)
2. Manufacturing workers who have previously taught VET but do not have a current training qualification (n=5)
3. Manufacturing workers who are current VET teachers (n=2)

1. Case studies of manufacturing workers without VET teaching experience

Ralph Stanley, laboratory instrument technician, QLD

Ralph Stanley is a full-time laboratory instrument technician from Queensland and works for a company that deals with chemicals, electrotechnology and process manufacturing. His highest level of qualification is Certificate III and, although he has taught his skills in the workplace and would like to teach his work skills and vocation to others in a TAFE or RTO, he does not have a training qualification. Ralph explained that his employer presented a barrier to him studying as he had previously enrolled in a work-related Certificate IV program with his employer's approval but as things turned out, his employer would not let him take off the time he needed to attend lessons – which was only about two hours per week. He further explained that his employer, along with others at his workplace, viewed study as “slacking off” and much less of a priority than work and meeting workplace deadlines. As such, he had felt pressure to prioritise his job at the times when he should have been attending class. Because of this, he did not end up completing his course. Ralph also explained that he has a family and so finding the time and money to study a Certificate IV TAE course outside of work hours for a new career – which may not even exist once he has qualified – is a gamble and too big a risk to leave to chance. He also said that if he could earn a better salary and be employed full-time by a TAFE while completing the training qualification, he would regard this as a more practical and attractive proposition, and one that he would then like to pursue.

Barriers to entering the VET teaching profession (from survey): cost of the training qualification; lack of time to study to become a trainer; lack of employer support; and too much paperwork.

Enablers to entering the VET teaching profession (from survey): support from family, employer, friends and colleagues; time to study to become a trainer; financial support; desire to pass on vocation and work skills and to be a good role model; enjoyment of working with young people; full-time training employment; desire to help others be their best; and a better salary.

Sam Bush, mechanical designer, NSW

Sam Bush is a mechanical designer and senior officer with an advanced diploma who works in metals and engineering for a large advanced manufacturing organisation in New South Wales. Although Sam has taught his vocational skills in his workplace and would like to teach at TAFE, he does not have a Certificate IV TAE qualification. When asked about the barriers to entering the vocational teaching profession, Sam responded with a series of questions including: What position will be offered? If full-time, will the pay be comparable to what I receive now? If casual, would it fit into my current work commitments? – questions suggesting that it may be the unknowns themselves that present as barriers. Sam has friends who are TAFE teachers and said that they have been employed for a long time on a casual basis and have struggled to find ongoing work. Sam finds this situation unacceptable and so this has turned him off TAFE teaching. He also thinks that people don't generally change vocations until they are ready to move and if they are happy in their current vocation, then they are unlikely to want to enter vocational teaching. He suggests that if TAFE wants to attract people who are doing well, then it might want to "put feelers out" and tell people that it has "really good conditions and are offering good roles" to attract people. He says that if TAFE is relying on people to leave a well-paid job and teach as a casual employee, "then forget it". Although Sam is "pro-TAFE" and wants to support TAFE, he feels that not enough value is placed on TAFE and that "the historical underfunding of TAFE" has created a barrier for those considering a change of career and that "this stigma needs to be turned around".

Although Sam loves manufacturing and engineering, he is also concerned that the nation suffers from a lack of vision regarding manufacturing and pointed to the demise of the car industry in Australia as a turning point flagging the government's lack of support for manufacturing and the nation's loss of confidence in manufacturing. He expressed concern that without a strong manufacturing sector and significant government investment in manufacturing companies and in manufacturing training and apprenticeships, Australia may become a third-world nation. He also discussed some of the implications of this lack of confidence. For example, he is (as he suspects many others are) reluctant to encourage his children to enter manufacturing if there is, or appears to be, a lack of future opportunity to build a worthwhile career in the sector.

Barriers to entering the VET teaching profession (from survey): not knowing if he will be able to secure a full-time teaching position; not knowing whether a casual position would fit around his current work schedule; and not knowing whether TAFE would pay him a comparable salary to the one he is earning now.

Enablers to entering the VET teaching profession (from survey): support from employer; time to study to become a trainer; desire to pass on vocation and work skills; enjoyment of working with young people; part-time or casual or full-time training employment; desire to help others be their best and to give back to the community.

Josh Graves, boilermaker, QLD

Josh Graves is a boilermaker from Queensland who completed his apprenticeship in the 1990s. Over this time, he has worked in many different areas as a boilermaker, including construction, heavy industry, trailers, vehicles and maintenance. He once owned his own company but now works for someone else. Although he has taught a few apprentices in the workplace and found this experience to be rewarding, he does not have a Certificate IV TAE qualification. He would like to teach at TAFE "if it were a viable option". Josh explained the barriers for him when it came to entering the VET teaching profession as: the cost of the training qualification; a lack of time to study; and the fact that VET trainers do not get paid enough. He once made some enquiries into the idea of becoming a VET trainer and, after talking with someone in a TAFE, learned that he would earn less money as a TAFE teacher, that the training qualification was not funded and that there was no guarantee of any job placement once he had completed the qualification.

If you have to fork money out to start with and no guarantee of actually getting a job, is it going to be worth it in the long run?

Discussions he has had in the past indicated that he would get significantly less money as a trainer than what he could earn as a tradesman.

For me it's pretty obvious. It all comes down to conditions, I suppose, and the policies of TAFEs.

Barriers to entering the VET teaching profession (from survey): cost of the training qualification; lack of time to study to become a trainer; and trainers not getting paid enough.

Enablers to entering the VET teaching profession (from survey): a better salary.

Larry Sparks, chef, NSW

Larry Sparks is a chef working in the food manufacturing industry in New South Wales. His highest qualification is Certificate III and he has experience teaching his trade in the workplace. Larry told us:

I would love to teach. I have much to give and impart to newcomer chefs. I have cooked commercially in restaurants, hotels, clubs and other places for thirty-plus years and have ideas for a refreshed curriculum.

Larry loves interacting with apprentices and mentoring students who pick up his skills and experience in the workplace. He also loves to show students what good practice is and watch them grow. Although Larry wants to be a vocational teacher and even started the Certificate IV TAE course, he "got bogged down in the tedious nature of the course that [he] found completely irrelevant". Larry has worked as a head chef and in this role has witnessed a decline in apprentices over the past 14 years. He believes that the curriculum is not meeting industry needs, which is one of the reasons why he wanted to get the training qualification, so he spent \$1500 to enrol in an online Certificate IV TAE course – a significant amount of money. Although he put a lot of time into his study, he found the course difficult to manage around his work and found the curriculum and assessment components very difficult to complete. He expressed disappointment in not finishing the course. He had wanted to bring his industry experience into the classroom and share his knowledge and experience with students, but now he cannot because he "threw in the towel". When asked for potential solutions to the "TAE dilemma", he responded by saying that there is too much theory in the TAE qualification and there should be a more practical application of skills being assessed. He also thinks that the VET system needs to recognise that teaching and administration are two different things. The VET system needs to "let industry professionals teach".

In the survey, Larry said that the thing that would help industry professionals transition to the vocational

teaching profession would be “an easier pathway into the Cert IV course” and so he was asked what this might look like. He responded by saying “on-the-job training” and “recognising the experience that professionals bring to teaching” as potential improvements. He added that “there has to be a simpler way” and that “the current setup is flawed”. He further questioned how many professionals were not going into vocational teaching simply due to the nature of the TAE qualification.

Barriers to entering the VET teaching profession (from survey): Other: “I once paid the \$1500 to do the online Cert 4 course but got bogged down in the tedious nature of the course that I found completely irrelevant”.

Enablers to entering the VET teaching profession (from survey): Other: “An easier pathway into teaching unlike the present Cert 4 course”.

2. Manufacturing workers who have previously taught VET but do not have a current training qualification

Norman Blake, fitter, turner and toolmaker, VIC

Norman Blake is a self-employed fitter, turner and toolmaker in Victoria, working in automotive, metals and engineering, maintenance and electrotechnology. Although Norman has taught in TAFE before, he does not have a Certificate IV TAE qualification. As Norman received his trade qualification pre-1995, he is not sure of his highest level of qualification. Norman expressed his concern about the training system, including how it is run. He regards the poor level of skills and the poor attitudes of students graduating from the VET sector as reflections of the quality of training they have received and this is why he does not want to become a vocational teacher. He thinks that “the older style of training” of apprentices was better because it had greater expectations of them: “Trade school was a better system in the past.” For Norman, the poor attitudes of students he sees and the lack of pride they have in their work have created an obstacle that prevents him from wanting to become a vocational trainer.

When asked about the things that might enable him to enter the vocational teaching profession, Norman said that he would have to be given a full-time position and receive remuneration aligned with that in industry. He also discussed the importance of professional development and of recruiting experienced tradespeople as teachers to the VET sector.

Experienced teachers are the foundation of the sector.

Norman said that there is a lot of despair around where the country is heading. He thinks that manufacturing is disappearing and there is a lack of certainty for industry. Case in point, Bosch used to have an apprentice training school in Clayton, Victoria, but this does not exist anymore. He also discussed the demise of the car industry in Australia and explained that this event signified “a profound change in the industry”. He believes that manual skills are undervalued and pointed to a lack of detail in engineering projects as an example of this. Norman also expressed his concern around the viability of manufacturing trades in light of automation and changing practices that are being introduced. He understands that this is “about progress” but sees it as negatively impacting on traditional practices.

Barriers to entering the VET teaching profession (from survey): work commitments; concerns about the sort of students he might get; and reduced autonomy.

Enablers to entering the VET teaching profession (from survey): desire to pass on my vocation; desire to pass on work skills; full-time training employment.

John Hartford, manufacturing engineer, fitter and toolmaker, NSW

John Hartford is a manufacturing engineer, fitter and toolmaker working in metals and engineering in New South Wales. He holds an associate diploma in mechanical engineering and a degree in manufacturing from the University of Technology Sydney. John is 58 years old and suffers from industrial deafness. He has worked in manufacturing all of his working life. He had completed a Certificate IV TAE course, but this qualification has now expired. As an engineer in charge of processes and design, he has to train many different people on the job including skilled and unskilled workers, non-English speakers, people with low levels of literacy and people with higher level qualifications than he has.

John believes that the barriers to entering the vocational teaching profession include a lack of pay, a lack of respect for teachers and not enough kudos. He also thinks that teaching is regarded as a second-class choice of career. Most of his experiences of TAFE were in the 1980s, 1990s and 2000s. He found TAFE to be "a very toxic environment":

The overall system was one of defensiveness and toxicity. As a user of the system, it appeared to me that teachers were defending their positions, defending their funding, defending their right to exist in ... [organisations] with hostile policies.

As a person who values training, he felt like he was "on a losing horse". In the 2000s he could not see any national policy direction for manufacturing and vocational education seemed to be an afterthought, leading to younger generations with little awareness or appreciation of manufacturing. He explained that if he goes to a party and someone asks him what he does for a living and he tells them that he is an engineer, they think he is a train driver:

A generation has gone by ... not even comprehending what manufacturing is.

He is also critical of "the whole woke movement" and of students whom he has witnessed making teaching deliberately difficult. He shared a story about some students in a class he was attending who seemed to continually look for ways to get out of doing work. They were consistently looking for special considerations and complaining that the teacher did not give them due consideration. As a consequence, these students wasted everyone's time and created an uncomfortable learning environment. He empathised with the teacher by saying that it is difficult to build a good learning environment, but very easy for students like this to smash it down. In TAFE you need to build up positive learning environments of trust and cooperation, but when you get students like these in the class, they break down the trust so it becomes more like a lecture environment (in a negative sense) than a class environment.

John also discussed his discontent with the large number of compliance courses that he has had to complete over the years. He feels that many of these courses are "baby stuff" and take a lot of time to complete for very little return.

John expressed gratitude for his life in Australia and says that life has given him so much and he now has many skills. At 58, he feels he is in a position where he would like to give back and has a lot to give.

He commented about the number of fitters and machinists and toolmakers he sees in very influential and powerful positions in industry – people who have come from the trade. He also expressed frustration at being a white man in his late 50s in this day and age because he feels that men like himself are being overlooked for government jobs in favour of diverse community members such as Aboriginal people, women and people with disability.

Barriers to entering the VET teaching profession (from survey): trainers do not get paid enough; Other: "Stupid claims by students about 'unfair' treatment or shit like that".

Enablers to entering the VET teaching profession (from survey): desire to pass on my work skills and vocation; desire to help others be their best; enjoyment of working with young people; part-time or casual training employment; Other: "Australia needs skills. Australia needs to make stuff. Australia, we are here and ready to make it happen."

Jesse Brock, fitter and turner and CNC programmer, SA

Jesse Brock is a fitter and turner and CNC machinist in South Australia. Jesse completed his apprenticeship in the 1990s in the defence force. He left defence 18 months ago and is now employed by a company that works in metals and engineering, aircraft, electrotechnology and process manufacturing. In the defence force, Jesse gained qualifications in engineering, drafting and mechanical engineering. He also has a Certificate IV TAE qualification that is out of date. With the Cert IV TAE, Jesse was able to train others in the defence force. Although his training qualification has now lapsed, he still helps to train two metal trade apprentices on the job in his current workplace.

As much as Jesse enjoys teaching his work skills to others, he does not think that it would cross the minds of many manufacturing workers to consider a career change to vocational teaching. He explained that it is a big step for anyone to change jobs and there are so many unknowns that the risk of financial and career instability is too great. He thought that many TAFEs only offer teaching jobs on a three-year contract and this may not even be a full-time position. He also pointed out that TAFEs often restructure and when this happens people lose their jobs, so issues regarding stability and job security are big factors at play here:

It's such a big unknown that you just go, I'll play it safe and I'll stay where I am.

Jesse also thinks that "paperwork" is a barrier for people coming from a trade background and moving into the vocational teaching profession:

They're in a trade because they want to be hands-on. They're not driven by paperwork.

Jesse expressed concern that trades have not been a focus of governments for the past 25–30 years and that trade vocations have not been supported or promoted for a long time. He sees a whole generation of people who have not gone onto trades, and this situation has implications for funding and the motivation of schools to direct students away from trades and into university. Jesse said that he is the youngest tradesman at his workplace and that all of the tradespeople he works alongside are close to retiring:

There is a generational gap between those coming through and the older tradesmen.

He suggested that maybe trade and vocational teaching careers need to be better promoted, possibly by the union, "to put the thought in their head".

Jesse also talked about how, in the past, the defence force was treated as a training establishment and how people could complete a trade in defence and take that into the community. However, over time and in an effort to stem high attrition rates, the defence force purposefully changed the trade qualifications it issued so that when personnel leave the defence force, their trade qualification cannot be easily recognised or converted to a Certificate III trade qualification. He added that this strategy is now "backfiring on them".

Barriers to entering the VET teaching profession (from survey): lack of time to study to become a trainer; lack of employer support; and too much paperwork.

Enablers to entering the VET teaching profession (from survey): support from employer; time to study; financial support; desire to pass on vocation; desire to pass on work skills; desire to help others be their best; desire to give back to the community; want to be a good role model; enjoyment of working with young people; full-time training employment; a better salary.

Tim O'Brien, electrical technician, NSW

Tim O'Brien is a 56-year-old electrical technician working night shift in a regional New South Wales coalmine. Although he once completed some training and assessment modules to do some training on forklifts, his qualification is now out of date. He would like to renew it, however, so he can teach his vocation in a TAFE or RTO. Although his exposure to teaching is quite limited, he is married to a primary school teacher. Tim left mining in 2012 to start a business. He also intended to update his training qualification at the time, but his business got busy and he put on some apprentices, and "the time to finish the study got lost". By 2015, he had two daughters at university and was working his "butt off", so he eventually decided to return to work full-time in coalmining in 2018 for financial reasons. His current job role requires him to operate machinery, run the wash plant and work on electrical breakdowns.

Tim thinks that his work commitments and the need to update his training qualification pose the biggest obstacles to him entering the vocational teaching profession. He thinks that he is almost "ready to start giving back to my industry" and work as a vocational teacher when he retires at 60 years. Then, if possible, he would like to do some part-time teaching work after he sells his house and downsizes post-retirement. His knees are starting to cause him problems and so a job with less physical impact on his body makes teaching an appealing option. Tim is currently looking for avenues to return to regular work hours, refresh his skills and start teaching young people. There is a small TAFE college where he lives, but he is not sure if it offers electrical trade training, so he is willing to relocate in the next few years if necessary. Tim said that the MSA survey has revived his interest in updating his training skills and now he wants to find out how he can do this. The remuneration for a TAFE teacher is unknown to Tim, but earlier in the day he had been talking to his wife, who had assured him that the salaries in TAFE have changed a lot over the last ten years.

It concerns Tim that the completion rate of apprentices in the electrical trade is low:

It worries me that the actual completion rate of apprentices in the electrical trade is quite low. That worries me because we know that there is a shortage of tradesmen, and if my knowledge can help a few people actually get through their apprenticeship, then maybe I should give it a go because I like to help people out.

When asked why he thought apprentices were not finishing their apprenticeships, Tim responded:

A lot of the time, from the feedback I've had from contractors in town, it's that they won't turn up to work. They just won't turn up. Too many sick leave days, too many hangovers from mid-week binges. We gotta teach these young guys and girls – we've had a lot of girls in this industry the last two years – that all you've got to do is get through those first four years and the world is your oyster. But they don't realise that.

Tim explained that workers in the mining game get "super-duper wages" but a lot of younger people in town work for contractors. He has heard of traineeship schemes where contractors put apprentices on for a six-month trial that is subsidised by the government and then, one day before the six months is up, they sack them. "It happens time and time again, and it's wrong."

Barriers to entering the VET teaching profession (from survey): work commitments; Other: "I would need to have my trainer and assessor RPL looked at as I need to complete final 2 modules but may need to start fresh as my training was a few years ago and was completed onsite at [the] Coal Mines".

Enablers to entering the VET teaching profession (from survey): desire to pass on vocation, work skills, help others be their best; part-time or casual training employment; Other: "I am on shift work at the moment and would like to go back to normal hours. My wife is a teacher and she gets much satisfaction from her job. I have a long career in domestic, commercial, light industrial and heavy mining environments. Very broad list of skills and experience."

Other comments (from survey): "I hold a medium size sheep farm and would prefer some part-time work in our local area initially."

Vince Gill, electrician, QLD

Vince Gill is a recently widowed 74-year-old electrician from Queensland. He has recently retired from working for a large electricity supplier. Vince worked as a training assessor for linesmen in the company he worked for, but his training qualification is now out of date. Last year, after deciding that he would like to go and teach his trade part-time in TAFE, he enrolled in an online Certificate IV TAE program to update his qualification. Vince described the cost of the training qualification as a barrier to entering the VET teaching profession. He explained that he had paid about \$800 to upgrade his qualification but was not able to complete the course due to (what appeared to be) miscommunication and poor teaching practices:

I found that I couldn't get my message across to my tutor. You know, you get a series of questions as all email ... You put your answer down, send it to them and they'll come back and say "that's not what we're looking for". That's hard to read, what they're actually looking for as far as a specific answer is concerned because, you know, everybody has their own interpretations of everything.

Vince found his Certificate IV TAE tutors to be unhelpful. He explained that they were all located in different states and all came from different industries. When he would ask for feedback, he would be told that he had not answered questions in the way that they were looking for. He expressed immense frustration at the fact that he had not been given clear enough instructions to know what sort of answers they were looking for, to the point where it became too much to bear and he had eventually given up:

I contacted TAFE in Queensland and ... I had all the experience and the Cert IV I needed to do the upgrade. So, then I applied to do the upgrade, paid the appropriate fee and got to the last three or four modules, and then essentially gave up ... I couldn't, I couldn't fight the bureaucracy.

Vince thought that he would have done better in the course if he had had access to a tutor from the electrical supply industry or a similar industrial area and who was located in the same state. He thought that this was important due to the lack of uniformity of electrical regulations and legislation in his industry. Vince also added that he had recently joined his local Men's Shed and had noted that between the members, who are mostly all retired, there is "a huge bank of skills that could be tapped into if somebody was prepared to do that sort of thing".

Barriers to entering the VET teaching profession (from survey): cost of training qualification; Other: "Retired".

Enablers to entering the VET teaching profession (from survey): desire to pass on my work skills; part-time or casual training employment.

3. Manufacturing workers who are current VET teachers

Bill Monroe, metal fabrication and welding TAFE teacher, VIC

Bill Monroe is a boilermaker by trade who has worked as a metal fabrication and welding teacher in a regional Victorian TAFE since 2005. When asked about the barriers that industry professionals face when transitioning into the VET teaching vocation, Bill's first response was that there is "too much paperwork". He explained that when he had first moved into teaching, there was more paperwork than he was used to, and each year the amount of paperwork increases. He also thinks that TAFE management expectations of teachers have changed and management is not concerned about teaching anymore. Its main focus is on compliance.

Bill was asked to unpack what he meant by "paperwork". He explained that when he had first started teaching, there were still "time-based" apprenticeships and the trade teachers were required to do stage-based completions. This involved writing forms and pro formas, and sending letters to employers and then chasing them up for a reply. He would then enter results on the student management system (SMS). He explained that early on there was a lot of administration completed by "teacher support" staff. They would help with the apprentice training plans and enrolments, but over time this work slowly shifted onto the teachers:

The shift was gradual, but it's got to the point where nearly sixty per cent of a teacher's job is administrative tasks rather than teaching. I'd rather not do a lot of the admin sort of stuff because, to be bluntly honest, it's not in my skill set.

At the moment Bill is working with three or four Excel spreadsheets, plus the SMS, to try and convince teaching support staff that the results are in for every student. His area was audited earlier in the year and it did not go well. He explained that he spoke with an auditor on the phone and thought he'd done well, but "got slapped down pretty hard because some things were in the wrong column and this, that and the other":

In some respects, I feel like I should have been an accountant. I'm working on spreadsheets and spreadsheets aren't really my cup of tea, to be honest, it just goes on and on and on.

When Bill was a subcontractor, he would pay someone else to do his paperwork because he was not good at it and did not find it interesting, but he does not mind doing paperwork associated with student results because he sees this as part of the teaching role.

Bill also thinks that many tradespeople do not consider vocational teaching for financial reasons. When he first left industry to become a teacher in 2005, he had 20 years of industry experience and was a qualified tradesperson as well as a certified welding supervisor and welding inspector. He recalls that it cost him money to go back to TAFE. At the time he was married and was conscious that this drop in pay was going to place stress on the household financially. For him, the "gamble paid off". He explained that today he is at the top of the TAFE teacher pay scale, but for a person working in industry with a family and other financial responsibility, entering VET teaching at the lowest end of the pay scale is unlikely to be an attractive proposition:

You have other people relying on your income. You have to make responsible decisions and you may really wish to go and teach your trade, but if it's going to significantly impact you and your family, you're just not gonna do it, yeah. It's just pure dollars and cents.

Bill spoke of employment panels that he has been on to interview prospective TAFE teacher applicants. On a number of occasions, candidates he thought were potentially suitable had applied for positions and been keen to become teachers, "but the money just isn't there". Bill was asked if his TAFE offers teachers full-time teaching positions. He said that there are some now, but this has been an area of contention for some time:

The night before the court hearing, there'll be an offer made of a full-time position.

Bill went on to discuss the toxicity of his workplace and how he and other trade teaching staff are "hated" by TAFE management:

We've got a twenty-five per cent staff turnover at the moment. You know, it's a really, really toxic environment. I've worked for some fairly nasty people in industry. Yeah, but nothing as bad as where I am now. Our direct boss above us is great. He really looks after us [but] above him are some of the most hated people in Victoria. Well, that's what it feels like. All the tradies are hated by TAFE management ... Yeah, we're all seen as militant and we're seen as ... "pale, male and stale". We've had issues because we don't have many female apprentices. We're not out and out accused of sexism, but it's been hinted at ... so yeah, we're basically seen as the enemy. I would like to work in an institution where I felt that I wasn't the problem ... in some ways it's pure pigheadedness that keeps us there. We're trying not to let them beat us and we're there for the apprentices, like, you know, people went into bat for me when I was an apprentice and I'm returning the favour. I think any decent tradie has got the attitude that the trade is bigger than the institution or bigger than the individual, and I don't think a lot of our management people like that, they don't see that as being acceptable for whatever reason.

Bill is sure that his management is trying to break down and diminish the content of the trades he teaches. When questioned about the enablers that might help more workers to enter vocational teaching, Bill reiterated the importance of financial support, but quickly turned the question around to discuss the burden of the Certificate IV TAE qualification:

The TAE has really become a millstone around TAFE teachers' necks. I don't know what the answer is. But we've had prospective teachers that seem really, really keen. They interview well, they've got the right skill set. They seem to have the right people skills, and then you throw the TAE at them. They start it or they take one look at it and just go "Sorry, mate. Not for me. I'm not spending five grand to do this crap ... [to] start at the bottom of the pile again in middle age". And I can relate to that.

Bill has had to upgrade his training qualification numerous times since 2006 and is now "well over it". To him, the TAE qualification is a big barrier that he sees minimal value in:

You could do the TAE and it's supposedly the base teaching qualification. You could do your TAE and get thrown in front of a class and sit there and go "What do I do now?".

Bill is proud that he is a tradie and has worked hard to get where he is. He remembers when he was an apprentice and a young tradesman that people went in to bat for him and acted as mentors, and he is now in a position to return this favour. He explained that there is a certain status that comes with being a tradesperson and he thinks this "is what management hates" – because he is a somebody. When people ask him what he does and he tells them that he's a boilermaker and welder, they immediately know that he's achieved a certain level in life and he "can actually get something done". He enjoys working with apprentices and finds it very heartening and very rewarding when he has taught an apprentice and they come back in 10 years time and they've been over in WA and made big money in the mines or they're running their own businesses, and he gets to sign up their new apprentices. He can then see the value in his work. "You think, geez, I taught this kid when he was a sixteen-year-old, and now he's putting on apprentices! I find that very rewarding." He is aware that he has got a lot out of his trade and he sees vocational teaching as his way of putting something back in – by ensuring that it keeps going.

When asked if there is anything else he would like to discuss about this topic, he wanted to explain that one of the "hooks" when he went into teaching was the offer of a 42-week year and a 4-day working week. Not only has this promise not been kept, but HR now wants to take away teachers' 15-minute afternoon tea break because "that's teaching time that we owe them, apparently". He thinks that these issues need to be sorted out industrially:

If we had an industrial union, we'd be out on the grass ... so I think there needs to be more honesty [regarding] conditions.

Barriers to entering the VET teaching profession (from survey): too much paperwork; trainers do not get paid enough.

Enablers to entering the VET teaching profession (from survey): financial support; desire to pass on my vocation; a better salary.

Chris Thile, boilermaker, QLD

Chris Thile is a 61-year-old boilermaker and casual TAFE teacher in Queensland. As well as his trade and Certificate IV TAE qualifications, he also has a bachelor degree in further education. Chris currently runs a small blacksmithing business and takes on various other jobs as well, including: working in a mine; non-destructive testing of welds; house renovations; sheep shearing, and fabrication work for motocross bikes. Chris used to teach full-time in a TAFE, but resigned from this position in 2018 due to problems he experienced associated with "paperwork". Before he left the position, he had requested an exit interview with the general manager. He wanted to share these exit interview notes with this study (see Appendix 3).

Chris is passionate about his trade and taught his trade for quite some time at TAFE. Today, all but one of the trade teachers in the metal fabrication area of his local TAFE are former apprentices of his. He proudly explained how he has taught apprentices who have won World Skills competitions and established their own businesses. For Chris, there is much more to teaching than just passing on skills:

As far as mentoring goes, it's very dear to me. I'm not just a boilermaker teaching for something to do. There's more to it than that ... But there's too much paperwork. It's ridiculous. And a lack of admin support, it's just, it's beyond – yeah, it just makes me cranky.

Chris explained that his TAFE teaching area once had administrative support but management decided to restructure and move all of the administrative support staff to another area well away from the teaching area. The administrative staff had previously been "in tune" with the requirements of the department and, because they worked in the same area, often discussions taking place in the office were enough to get problems solved immediately. However, after the administrative staff were moved, processes became more difficult:

Some of those ladies were so in tune with what we did that they would do some of our admin work on the sly. The ones that were on contract were threatened with the sack. They were told, "If you are seen helping those blokes at all, you will be immediately dismissed". So we learned to be criminals. We'd sneak around to do these things. So the girls were on side.

Chris went on to explain that the TAFE hierarchy does not know the difference between the trades:

They don't know the difference between a fitter and turner and a diesel fitter and a boilermaker. And that's a fact. So they're making decisions and passing judgement on us, and they have no idea what we actually do because they never come down and see what we do.

When Chris was offered the TAFE teaching job, he was told that the TAFE gave "generous leave entitlements" as a "carrot" to get applicants, but the job did not offer the leave entitlements that he was promised. He also worked many more hours than he was paid for.

Chris believes that there is a cultural problem with TAFE:

So long as your paperwork is in ... it's all about ticking boxes, not teaching skills.

It's a crying shame that they're more worried about paperwork and being transparent and all this other bloody rot other than getting blokes to teach.

When blokes get there, they say "Oh I thought you were teaching, mate". "Oh f that", they say, "too much bloody paperwork". You've got to get online and do this and get online to do that ...***

You know, there's accumulation of a lot of things, but you know the funny thing with all this? I love the teaching part. It's just so sad ... when I first started, the faculty director at the time ... she said to one of the leading teachers in my area "Throw him in the deep end. He'll either sink or swim".

Chris discussed the conditions for early career teachers at the TAFE, explaining that they are “swamped with hours” even though they are supposed to be on a reduced load so they can ease into the job:

It's all about bums on seats. The mental health and mentoring of the teacher go out the window. It's not good.

Chris discussed many of the problems he has experienced as a TAFE teacher, including: being required to develop resources without time allocation; not being given any time to practise his welding skills before teaching high-end certified welding classes; poor-quality textbooks for students; lack of continuity (or standardisation) of trade skills between RTOs (“now it's like a dog's breakfast”); poor-quality online learning and testing of students (e.g., online tests have become a collaborative event between students who share answers in class – non-test conditions lower standards):

I actually learned to be a criminal to teach well ... It drives you insane. You gotta be sneaky. If it takes breaking the rules to get a good outcome, then that's what I'll do.

Barriers to entering the VET teaching profession (from survey): too much paperwork.

Enablers to entering the VET teaching profession (from survey): desire to pass on vocation and work skills; help others be their best; wanting to be a good role model; part-time or casual training role; Other: “Trade teachers need more administrative support to enable them to concentrate on delivering their trade skills”.

Other comments (from survey): “In my humble opinion, the administration demands outweigh the preparation time required to deliver quality trade skills.”

Analysis of interviews

Interviewees were categorised into the following three subgroups prior to thematic analysis:

1. Manufacturing workers without VET teaching experience
2. Manufacturing workers who have previously taught VET
3. Current manufacturing VET teachers

Tables 8–12 presented on the following pages have been compiled for the purposes of analysis. They offer a distillation of the barriers and enablers in relation to entering the VET teaching profession as discussed within each interviewee subgroup.

Interview analyses

Case studies of manufacturing workers without VET teaching experience

Participants were free to respond to open-ended questions during interviews. Absence of discussion of a particular barrier or enabler during an interview is represented in the tables by the – symbol. This should not be interpreted as disagreeing with the barrier or enabler listed in the left-hand-side column.

Table 8. Analysis of case studies of manufacturing workers without VET teaching experience

	Ralph Stanley, laboratory instrument technician, QLD
Barrier	<ul style="list-style-type: none"> • Does not have a training qualification • Employer not supportive • Time • Money to study • Family responsibilities • Changing career: a gamble too big to risk without promise of employment • Too much paperwork
Does not have a training qualification	✓
Lack of time to study	✓
Cost of Cert IV TAE course	✓
Problems associated with Cert IV TAE course	✓
Risk changing careers	✓
Teachers do not get paid enough	–
Lack of job security	✓
Employer not supportive	✓
Family responsibilities	✓
Too much paperwork	✓
Lacks confidence in the future of manufacturing	–

Below is a summary of the barriers discussed by interview participants without VET teaching experience, drawn from Table 8.

Barriers for manufacturing workers without VET teaching qualifications or experience (n=4): does not have a training qualification, 100% (n=4); lack of time to study for the Certificate IV TAE qualification, 100% (n=4); cost of the TAE qualification, 75%, (n=3); risk involved in changing careers, 75% (n=3); lack of job security, 75% (n=3); teachers do not get paid enough, 50% (n=2); problems associated with the Certificate IV TAE course, 50% (n=2); too much paperwork, 50% (n=2); lack confidence in the future of manufacturing, 25% (n=1); employer not supportive, 25% (n=1); family responsibilities, 25% (n=1).

Sam Bush, mechanical designer, NSW	Josh Graves, boilermaker, QLD	Larry Sparks, chef, NSW
<ul style="list-style-type: none"> • Does not have a training qualification • Unknown remuneration • Unknown employment prospects • Lack of full-time ongoing work opportunities unacceptable • Turned off TAFE teaching because of experiences of TAFE teachers he knows • Won't leave a well-paid job to work casually • Historical underfunding and undervaluing of TAFE • Lacks confidence in the future of manufacturing 	<ul style="list-style-type: none"> • Does not have a training qualification • Would only teach if it were a viable option • Cost of the training qualification • Lack of time to study • VET trainers do not get paid enough – significantly less than he currently earns • No guarantee of employment • Conditions and policies of TAFE • Lack of job security 	<ul style="list-style-type: none"> • Does not have a training qualification • Started a TAE but got bogged down in the tedious nature of the course and dropped out • Found the TAE course irrelevant • Cost of TAE course • TAFE/VET needs to appreciate that teaching and administration are two different things • Difficult to find time to study • Perceives that the Cert IV TAE is a barrier to industry professionals wanting to teach
✓	✓	✓
-	✓	✓
-	✓	✓
-	-	✓
✓	✓	-
✓	✓	-
✓	✓	-
-	-	-
-	-	-
-	-	✓
✓	-	-

Table 8. Analysis of case studies of manufacturing workers without VET teaching experience
continued

	Ralph Stanley, laboratory instrument technician, QLD
Enabler	<ul style="list-style-type: none"> • Would like to teach at TAFE or RTO • A better salary • Financial support • Desire to be a good role model • Desire to pass on vocation and work skills • Enjoys working with young people • Full-time training employment • Desire to help others be their best • If had time to study
Would like to teach at TAFE or RTO	✓
If TAFE had secure jobs with good salaries	✓
If had support from employer	✓
Desire to be a good role model.	✓
Desire to pass on work skills and vocation	✓
Desire to give back to the community	–
Desire to help others be their best	✓
If offered a better salary	✓
If had time to study	✓
Enjoys working with young people	✓
Wants to teach young people to improve curriculum	–
Better way to complete the Cert IV TAE qualification	–
Likes what TAFE stands for	–

Below is a summary of the enablers discussed by interview participants without VET teaching experience, drawn from Table 8.

Enablers for manufacturing workers without VET teaching qualifications or experience (n=4): if had time to study, 100% (n=4); would like to teach at a TAFE or RTO, 75% (n=3); desire to pass on work skills or vocation, 75% (n=3); if TAFEs/RTOs offered secure jobs with good salaries, 75% (n=3); if TAFEs/RTOs offered better salaries than what they currently earn, 75% (n=3); desire to give back to the community, 50% (n=2); desire to help others be their best, 50% (n=2); enjoys working with young people, 50% (n=2); if had support from employer, 50% (n=2); desire to be a good role model, 25% (n=1); motivated to teach to improve curriculum, 25% (n=1); if offered a better way to complete the Certificate IV TAE qualification, 25% (n=1); likes what TAFE stands for, 25% (n=1).

Sam Bush, mechanical designer, NSW	Josh Graves, boilermaker, QLD	Larry Sparks, chef, NSW
<ul style="list-style-type: none"> • Likes what TAFE stands for • If TAFE promoted ongoing positions with good job roles, conditions and salaries • If had support from employer • Time to study to become a trainer • Desire to pass on vocation • Desire to pass on work skills • Enjoys working with young people • Desire to help others be their best • Desire to give back to the community 	<ul style="list-style-type: none"> • Finds teaching apprentices rewarding • A better salary 	<ul style="list-style-type: none"> • Would love to teach his trade • Believes the curriculum is not meeting industry needs, which is why he wanted to teach • Wants to bring his industry experience and knowledge to the classroom • Easier way to complete the training qualification including on-the-job training • TAE needs less theory and more practical application
✓	-	✓
✓	✓	-
✓	-	-
-	-	-
✓	-	✓
✓	-	✓
✓	-	-
✓	✓	-
✓	✓	✓
✓	-	-
-	-	✓
-	-	✓
✓	-	-

Table 9. Analysis of case studies of manufacturing workers who have previously taught VET but do not have a current training qualification

	Norman Blake, fitter, turner and toolmaker, VIC	John Hartford, manufacturing engineer, fitter and toolmaker, NSW
Barrier	<ul style="list-style-type: none"> • Does not have a training qualification • Does not want to be a VET teacher • Concerns about the quality of the VET training system • Students exhibit poor attitude, poor skill level, lack of pride in work • Bleak outlook regarding future of the manufacturing sector • Concern regarding the future viability of trades given changing industry practices • Manual skills are devalued • Work commitments • Concern about the sort of students he might get • Reduced autonomy 	<ul style="list-style-type: none"> • Has an out-of-date training qualification • Lack of pay • Lack of respect for teachers • Teaching profession is undervalued • TAFE has a toxic environment with hostile policies • Lack of national policy direction for manufacturing • Young people do not know about manufacturing • Concern about the sort of students he might get • Feels white men are today overlooked for public service roles
Does not have a current training qualification	✓	✓
Concerns about students	✓	✓
Lack of national policy direction regarding manufacturing and trades	✓	✓
Manual skills devalued	✓	✓
Concerns about remuneration and job security	✓	✓
Lack of time to study Cert IV TAE qualification	–	–
Cost of Cert IV TAE qualification	–	–
The way the Cert IV TAE qualification is offered	–	–
Work commitments	✓	–
Concerns about the efficacy of the VET training system	✓	✓
Young people do not know or care about manufacturing careers	✓	✓
Reduced autonomy	✓	–
Lack of employer support	–	–
Perceive that white men are overlooked for public service jobs	–	✓
Too much paperwork	–	–

Below is a summary of the barriers discussed by interview participants who have previously taught VET but do not have a current training qualification drawn from the table above.

Barriers for manufacturing workers who have previously taught VET but do not have a current training qualification (n=5): does not have a current training qualification, 100% (n=5); concerns about remuneration and job security, 80% (n=4); concerns about lack of national policy directions regarding manufacturing and trades careers, 60% (n=3); young people do not know or care about manufacturing careers, 60% (n=3);

Jesse Brock, fitter and turner and CNC programmer, SA	Tim O'Brien, electrical technician, NSW	Vince Gill, electrician, QLD
<ul style="list-style-type: none"> • Has an out-of-date training qualification • Most manufacturing workers would not consider teaching • Too big a risk to change careers • Concerns regarding position security • Concern would not get a full-time ongoing position • Too many unknowns • Too much paperwork • Trades and manufacturing not supported by governments • Lack of time to study • Lack of employer support 	<ul style="list-style-type: none"> • Has an out-of-date training qualification • Work commitments • Time to study • May need to relocate to an area with a TAFE that offers his trade • Remuneration of TAFE teachers unknown • Work commitments 	<ul style="list-style-type: none"> • Has an out-of-date training qualification • Cost of training qualification • Poor quality / unsuitable / bureaucratic Cert IV TAE course • Could not complete Cert IV TAE course • Retired
✓	✓	✓/100
-	-	-
✓	-	-
-	-	-
✓	✓	-
✓	✓	-
-	-	✓
-	-	✓
-	✓	-
✓	-	-
✓	-	-
-	-	-
✓	-	-
-	-	-
✓	-	-

concerns about the efficacy of the VET training system, 60% (n=3); lack of time to study Cert IV TAE qualification, 40% (n=2); concerns about the students they might get, 40% (n=2); manual skills devalued, 40% (n=2); work commitments, 40% (n=2); cost of the training qualification, 20% (n=1); the way the Cert IV TAE qualification is offered, 20% (n=1); reduced autonomy, 20% (n=1); lack of employer support, 20% (n=1); perceive that white men are overlooked for public service positions, 20% (n=1); too much paperwork, 20% (n=1).

Table 9. Analysis of case studies of manufacturing workers who have previously taught VET but do not have a current training qualification continued

	Norman Blake, fitter, turner and toolmaker, VIC	John Hartford, manufacturing engineer, fitter and toolmaker, NSW
Enabler	<ul style="list-style-type: none"> • If offered full-time teaching employment • If offered remuneration aligned with industry pay • Desire to pass on vocation • Desire to pass on work skills • Reintroduce older style apprenticeship training that had greater expectations of students 	<ul style="list-style-type: none"> • Would like to be a vocational teacher • Would like to give back and has a lot to give • Desire to pass on work skills • Desire to pass on vocation • Desire to help others be their best • Enjoys working with young people • If offered part-time or casual teaching work • Belief that Australia needs skills and manufacturing
Would like to be a vocational teacher	–	✓
If offered secure employment	✓	✓
If had employer support	–	–
If offered remuneration aligned with or greater than industry pay	✓	–
Would like to teach when retired from industry	–	–
Desire to pass on work skills and/or vocation	✓	✓
Would like to give back to industry and community	–	✓
Desire to help others be their best	–	✓
Enjoys working with young people	–	✓
Belief that Australia needs skills and manufacturing	✓	✓
Reintroduction of older style apprenticeship training	✓	–
Work injuries make vocational teaching appealing	–	–
Opportunity to work regular hours	–	–
Observed skill deficiencies in industry inspire a drive to teach	–	–

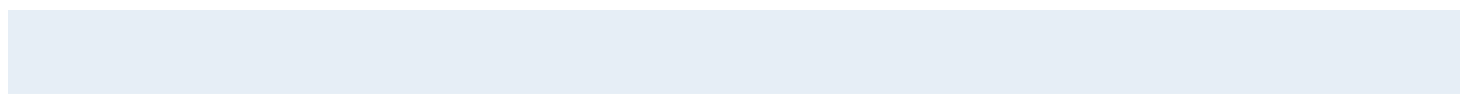
Below is a summary of the enablers discussed by interview participants who have previously taught VET but do not have a current training qualification drawn from the table above.

Enablers for manufacturing workers who have previously taught VET but do not have a current training qualification (n=5): if offered secure employment, 100% (n=5); desire to pass on work skills and/or vocation, 100% (n=5); would like to be a vocational teacher, 80% (n=4); would like to give back to industry and community, 60% (n=3); desire to help others be their best, 60% (n=3); belief that Australia needs skills and manufacturing, 60% (n=3); if offered remuneration aligned with or greater than industry pay, 40% (n=2); observed skill

Jesse Brock, fitter and turner and CNC programmer, SA	Tim O'Brien, electrical technician, NSW	Vince Gill, electrician, QLD
<ul style="list-style-type: none"> • Would like to be a vocational teacher • If had employer support • If had time to study • Desire to pass on vocation • Desire to pass on work skills • Desire to help others be their best • Desire to give back to the community; wants to be a good role model • Enjoys working with young people • If offered full-time teaching employment • If offered a better salary • If offered financial support 	<ul style="list-style-type: none"> • Would like to be a vocational teacher • Would like to teach at TAFE or RTO • Would like to give back to industry • Suffers work injuries – teaching less physically demanding • Retirement from industry • Regular (daylight) work hours • His concern about low apprenticeship completion rates inspires him to help • Desire to pass on vocation • Desire to pass on work skills • Help others be their best • Part-time or casual employment 	<ul style="list-style-type: none"> • Would like to be a vocational teacher • Retired from industry • Would like to teach at TAFE or RTO • Desire to pass on work skills • Part-time or casual employment
✓	✓	✓
✓	✓	✓
✓	-	-
✓	-	-
-	✓	✓
✓	✓	✓
✓	✓	-
✓	✓	-
✓	-	-
✓	-	-
-	-	-
-	✓	-
-	✓	-
-	✓	✓

deficiencies in industry inspire a drive to teach, 40% (n=2); enjoys working with young people, 40% (n=2); would like to teach when retired from industry, 40% (n=2); if had employer support, 20% (n=1); reintroduction of older style apprenticeship training, 20% (n=1); work injuries make teaching an appealing option, 20% (n=1); opportunity to work regular (daylight) hours, 20% (n=1).

Table 10. Analysis of case studies of current manufacturing VET teachers



Barrier

Too much paperwork
TAFE more concerned about compliance than teaching
Loss of administrative support
Remuneration less than industry
Gamble in transitioning from industry to teaching
Difficult for new teachers (e.g., low pay, low status and swamped with hours)
Few full-time ongoing positions
Toxic hostile workplace / cultural problems
Lack of management/hierarchy support
High turnover of staff
Perceive TAFE management trying to break down and diminish trades
Cert IV TAE "millstone" with little value
TAFE deceptive about leave entitlements at job interview
Need to be "sneaky"
Health concerns for teachers
Not enough time to do preparation
Poor-quality textbooks
Lack of trade skills continuity between RTOs
Poor-quality online learning
Poor-quality online testing of students (non-test conditions)

Below is a summary of the barriers discussed by interview participants who are currently teaching in VET drawn from the table above.

Barriers for manufacturing workers currently teaching in the VET sector (n=2): too much paperwork, 100% (n=2); TAFE more concerned about compliance than teaching, 100% (n=2); loss of administrative support, 100% (n=2); difficult for new teachers entering TAFE, 100% (n=2); toxic hostile workplace/cultural problems, 100% (n=2); lack of management/hierarchy support, 100% (n=2); TAFE deceptive about leave entitlements at

**Bill Munroe, metal fabrication and welding
TAFE teacher, VIC**

- Too much paperwork
- TAFE more concerned about compliance than teaching
- Loss of administrative support
- Remuneration less than industry / do not get paid enough
- Financial stress on family in transitioning from industry to teaching
- Gamble in transitioning from industry to vocational teaching
- New teachers start at bottom (low pay and status in hierarchy)
- Few full-time vocational teaching positions
- Toxic workplace
- Trade teachers "hated" by TAFE management
- High turnover of staff
- Perceives TAFE management trying to break down and diminish trades
- Certificate IV TAE a "millstone" with minimal value and inadequate for learning to teach
- TAFE deceptive about conditions at job interview: industrial issues

Chris Thile, boilermaker, QLD

- Too much paperwork
- Lack of administrative support
- Need to be "sneaky" to be a good teacher at TAFE
- TAFE hierarchy does not know about trades
- TAFE deceptive about conditions at job interview
- Cultural problem with TAFE
- TAFE cares more about ticking boxes than teaching
- Early-career teachers swamped with hours
- Mental health concerns for teachers
- No time to develop resources or practise welding skills before taking ticket welding classes
- Poor-quality textbooks for students
- Lack of trade skills continuity between RTOs
- Poor-quality online learning
- Testing of students not done under test conditions

✓	✓
✓	✓
✓	✓
✓	-
✓	-
✓	✓
✓	-
✓	✓
✓	✓
✓	-
✓	-
✓	-
✓	✓
-	✓
-	✓
-	✓
-	✓
-	✓
-	✓
-	✓
-	✓

job interview, 100% (n=2); remuneration less than received in industry, 50% (n=1); gamble in transitioning from industry to teaching, 50% (n=1); few full-time ongoing positions, 50% (n=1); high turnover of staff, 50% (n=1); perceive TAFE management trying to break down and diminish trades, 50% (n=1); Cert IV TAE a "millstone" with little value, 50% (n=1); need to be "sneaky", 50% (n=1); mental health concerns for teachers, 50% (n=1); not enough preparation time, 50% (n=1); poor-quality textbooks, 50% (n=1); lack of trade skills continuity between RTOs, 50% (n=1); poor-quality online learning, 50% (n=1); poor-quality online testing of students, 50% (n=1).

Table 10. Analysis of case studies of current manufacturing VET teachers continued

Enabler
Has current Cert IV TAE qualification
Determined not to be defeated by TAFE management
Feels obligation/duty-bound to help and protect apprentices
Perceives trade vocations as bigger (and more important) than the RTO
If offered financial support
Proud of trade / passion for trade
Enjoys working with and supporting apprentices
Rewarding to learn (past) apprentices are/have become successful
Giving back to trade and society
If offered a better salary
Desire to pass on vocation and work-skills
More to teaching than passing on skills
Help others be their best
Wants to be a good role model
If offered more administrative support or less paperwork
Secure employment (full-time or part-time)
If offered more teaching time

Below is a summary of the enablers discussed by interview participants who are currently teaching in VET drawn from the table above.

Enablers for manufacturing workers currently teaching in the VET sector (n=2): has current Cert IV TAE qualification, 100% (n=2); feels obligation/duty-bound to help and protect apprentices, 100% (n=2); perceives trade vocations as bigger (and more important) than the RTO, 100% (n=2); proud of trade / passion for trade, 100% (n=2); enjoys working with and supporting apprentices, 100% (n=2); rewarding to learn (past) apprentices

**Bill Munroe, metal fabrication and welding
TAFE teacher, VIC**

- Has a current Cert IV TAE qualification
- Determination not to be defeated by TAFE management
- Feels obligation to help and protect apprentices
- Perceives trades as bigger (and more important) than the institution or individual
- If offered financial support
- Proud of trade and achievements
- Enjoys working with apprentices
- Rewarding when he learns his former apprentices have become successful
- VET teaching is his way of giving back to the trade and to society
- If offered financial support
- If offered a better salary
- Desire to pass on vocation

Chris Thile, boilermaker, QLD

- Has a current Cert IV TAE qualification
- Passionate about trade
- Proud of his apprentices who win awards and start own businesses
- More to teaching than just passing on skills
- Loves teaching
- Desire to pass on vocation and work skills
- Help others be their best
- Wants to be a good role model
- Part-time or casual role
- If offered more administrative support
- If offered more time to teach

✓	✓
✓	–
✓	✓
✓	✓
✓	–
✓	✓
✓	✓
✓	✓
✓	✓
✓	–
✓	✓
–	✓
–	✓
–	✓
✓	✓
✓	✓
✓	✓

are/have become successful, 100% (n=2); giving back to trade and society, 100% (n=2); desire to pass on vocation and work skills, 100% (n=2); if offered more administrative support and less paperwork, 100% (n=2); secure employment, 100% (n=2); if offered more teaching time, 100% (n=2); determined not to be defeated by TAFE management, 50% (n=1); if offered financial support, 50% (n=1); if offered a better salary, 50% (n=1); more to teaching than passing on skills, 50% (n=1); help others be their best, 50% (n=1); wants to be a good role model, 50% (n=1).

Distilling interview data

Barriers to entering and sustaining a vocational teaching career

Table 11 presents the most frequently discussed and most significant issues identified as barriers to entering and sustaining a career as a vocational teacher in Australia from the interview data. The table displays only barriers discussed by 50% or more of interview participants in each of three categories: barriers for manufacturing workers without VET teaching qualifications or experience; barriers for manufacturing workers who have previously taught VET but do not have a current training qualification; and barriers for manufacturing workers currently teaching in the VET sector.

Table 11. Most frequently discussed and significant barriers to entering the vocational teaching profession from case studies

	Most frequently discussed /significant issues identified as barriers (50%+)
Barriers for manufacturing workers without VET teaching qualifications or experience (n=4)	<ul style="list-style-type: none"> • Does not have a training qualification • Lack of time to study • Cost of the Cert IV TAE • Risk involved in changing careers • Lack of job security • Teachers do not get paid enough • Problems associated with the Certificate IV TAE course • Too much paperwork
Barriers for manufacturing workers who have previously taught VET but do not have a current training qualification (n=5)	<ul style="list-style-type: none"> • Does not have a current Cert IV TAE qualification • Concerns about remuneration and job security • Concern about lack of national policy directions regarding manufacturing • Young people do not know or care about manufacturing careers • Concerns regarding the efficacy of the VET training system
Barriers for manufacturing workers currently teaching in the VET sector (n=2)	<ul style="list-style-type: none"> • Too much paperwork • TAFE more concerned about compliance than teaching • Loss of administrative support • Difficult for new teachers entering TAFE • Toxic hostile workplace / cultural problems • Lack of management/hierarchy support • TAFE deceptive about leave entitlements at job interview • Remuneration less than received in industry • Gamble in transitioning from industry to teaching • Few full-time ongoing positions • High turnover of staff • Perceive TAFE management trying to break down and diminish trades • Cert IV TAE a "millstone" with little value • Need to be "sneaky" • Mental health concerns for teachers • Not enough preparation time • Poor-quality textbooks • Lack of trade skills continuity between RTOs • Poor-quality online learning • Poor-quality online testing of students

For interview participants who do not currently teach in the Australian VET sector, aside from not possessing a current Certificate IV TAE qualification the most frequently discussed barriers to entering the VET teaching profession were: the remuneration of vocational teachers; lack of job security; risk/gamble associated with changing career from industry to teaching; perceived level of paperwork associated with vocational teaching profession; and completion problems associated with attaining the Certificate IV TAE qualification.

Drawing from this data, it is fair to argue that the development of policy positions that aim to: (i) increase the remuneration levels of early-career vocational teachers; (ii) improve job security in the vocational teaching profession; (iii) reduce the risk to livelihood associated with changing career from industry to the vocational teaching profession; and (iv) develop a more suitable way for manufacturing workers to attain a training qualification will support and encourage more manufacturing workers to enter the vocational teaching profession.

Worthy of consideration are the views of the manufacturing workers who have previously taught VET but do not have a current training qualification, who raised macro-level concerns about the nation and its apparent lack of vision for manufacturing in Australia. A number of interviewees independently discussed what they regard as (material and psychological) damage done to the Australian manufacturing sector following the closure of car manufacturing plants and governments' apparent lack of investment in the manufacturing sector in recent decades. These participants suggested that the nation's depleted interest in manufacturing has resulted in a generation of young Australians who do not know what manufacturing is and have little to no knowledge of the occupations within the manufacturing sector. Such concerns held by the broader community hold implications for the future manufacturing workforce, as this lack of confidence in manufacturing can (as evidenced in the data) result in adults (including existing manufacturing workers) discouraging young people from careers in manufacturing.

Of particular interest to this study is the data from the manufacturing workers currently teaching in the VET sector. Although this category only attracted two interview participants, the findings are likely to be of interest (and concern) to those in search of ways to encourage more manufacturing workers into the vocational teaching profession. These participants portrayed TAFE as a toxic and hostile work environment for trades and trade teachers, and an environment more suited to administrative personnel rather than those specialising in manual trades. Hostile work environments are unlikely to be attractive to potential employees and thus present an obstacle of some significance when considering ways to recruit or entice industry experts to the vocational teaching profession. Given the small size of this sample, this is an area worthy of further research investigation.

Enablers to entering and sustaining a vocational teaching career

Table 11 presents the most frequently discussed and most significant issues identified as enabling entry to and sustaining a career as a vocational teacher in Australia from the interview data. The table displays only the enablers discussed by 50% or more of interview participants in each of three categories: enablers for manufacturing workers without VET teaching qualifications or experience; enablers for manufacturing workers who have previously taught VET but do not have a current training qualification; and enablers for manufacturing workers currently teaching in the VET sector.

Table 12. Most frequently discussed and significant enablers to entering the vocational teaching profession from case studies

Most frequently discussed /significant issues identified as enablers (50%+)	
Enablers for manufacturing workers without VET teaching qualifications or experience (n=4)	<ul style="list-style-type: none"> • Offered time to study • Would like to teach • Desire to pass on work skills and vocation • Offered secure job with better salary than currently earning • Desire to give back to the community • Help others be their best • Enjoy working with young people • If offered employer support
Enablers for manufacturing workers who have previously taught VET but do not have a current training qualification (n=5)	<ul style="list-style-type: none"> • If offered secure employment as a vocational teacher • Desire to pass on work skills and vocation • Would like to be a vocational teacher • Would like to give back to industry and community • Desire to help others be their best • Belief that Australia needs skilled manufacturing
Enablers for manufacturing workers currently teaching in the VET sector (n=2)	<ul style="list-style-type: none"> • Has current Certificate IV TAE qualification • Feels an obligation/duty-bound to help and protect apprentices • Perceive trade vocations as bigger (and more important than) than the RTO offering training • Proud of trade / passionate about trade • Enjoys working with and supporting apprentices • Rewarding to learn that current and past apprentices are successful • Giving back to trade and society • Desire to pass on work skills and vocation • If offered more administrative support and less paperwork • Secure employment • If offered more teaching time • Determined not to be defeated by TAFE management/hierarchy (battle to protect trade vocations) • Better salary • Financial support • More to teaching than passing on skills • Help others be their best • Want to be a good role model

For all three categories of interview participants, the most frequently discussed enablers to entering and sustaining a vocational teaching vocation were: desire to pass on work skills and vocation; secure employment; and a good (or better) salary. These enablers were raised by the majority of interview participants and therefore identified as findings of significance.

Interview participants further expressed numerous altruistic motivations (i.e., internal drives) for wanting to teach, including: the desire to pass on work skills and vocation; the desire to give back to industry, the trade, society and the community; the desire to help others be their best; and wanting to be a good role model.

Manufacturing workers without VET teaching qualifications or experience said that they would like to teach but would be better enabled with the support of their employer and given time to study the Certificate IV TAE qualification. Manufacturing workers who have previously taught VET but do not have a current training qualification also expressed interest in teaching but need a promise of secure employment to make their transition to the teaching profession less of a risk or gamble careerwise. Manufacturing workers currently working as vocational teachers described many intrinsic motivations as factors sustaining their motivation to teach. These teachers were also critical of the TAFEs they work for and the high levels of administrative and compliance work they are required to perform as part of their teaching role. Even so, the factors that appear to enable and help sustain their employment as vocational teachers (aside from having a current Certificate IV TAE qualification) include: the personal obligation they feel to help and protect their apprentices/students; their belief that their trade is bigger (and more important) than the training institution they work for; pride and passion for their trade vocation; the reward (pride) they feel when their apprentices are successful; and determination to resist attempts to diminish trade areas and not to be beaten by TAFE management/hierarchy.

The following section offers four case studies to investigate initiatives being trialled to recruit industry professionals to become vocational teaching professionals in the Australian VET sector.

6. Case studies of vocational teacher recruitment programs



The project brief required the identification of existing initiatives designed to assist workers to transition into the VET teaching vocation. The following section offers overviews of some innovative programs that have recently been designed to ease the transition of workers into the VET teaching vocation: the Victorian Government TAFE Teacher Incentive training program; the Box Hill Institute Instructional Coaching pilot project (Victoria); Securing the Future of Australian Shipbuilding Skills (South Australia); and the Trade to Teach Internship Program (Queensland).

Victorian Government TAFE Teacher Incentive program

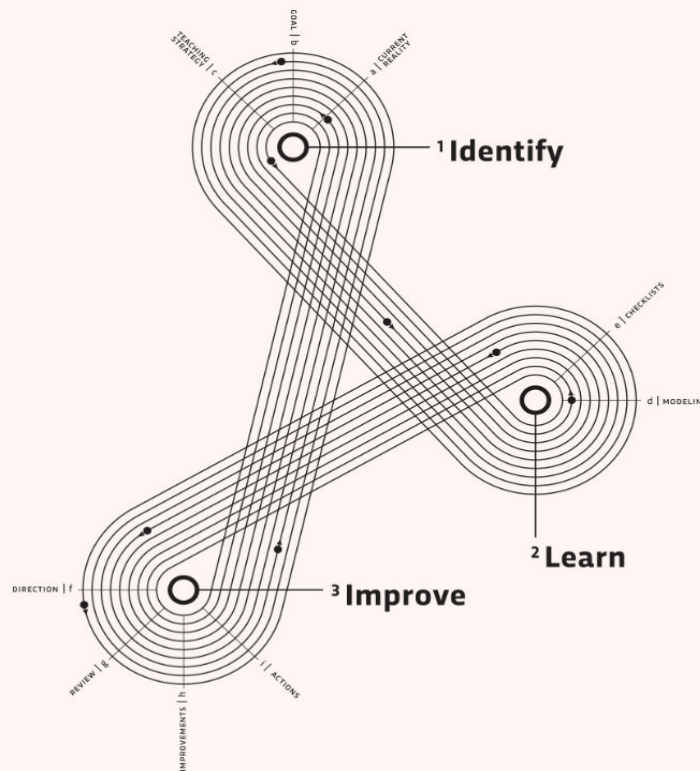
In 2021 the Victorian government Minister for Training and Skills, Gayle Tierney, launched the TAFE Teacher Incentive training program (Victorian Government, 2021). Two hundred study support scholarships, each valued at \$10,000, were offered to attract experts from a number of industries such as health, construction and electrotechnology into the TAFE teaching sector to support increasing VET enrolments. These rises were reported to be 13% to May 2021 as a result of the fee-free TAFE initiative launched in 2019. In TAFE nurse training, class sizes have tripled in size from 20 to 60 students per class. The increases have significantly increased teacher workloads and adversely affected students' learning experience. The \$6.5 million TAFE Teacher Incentive investment in TAFE over three years was intended to build the TAFE teaching workforce and reduce the costs associated with the retention issues at TAFE (TAFE Victoria, 2023). Successful applicants were required to complete the Certificate IV in Training and Assessment with access to two-year mentoring support from lead teachers. The funding was offered to trainers in three instalments: \$2000 on enrolment into a TAE course; \$2000 on completion of the TAE course; and \$6000 after two years of vocational teaching.

In the first six months after the initiative was launched, 125 skilled workers were reported to have signed up for the scholarships in industries such as health and community services, construction and electrotechnology. Nursing and plumbing accounted for 15% and 12% of the scholarship recipients, respectively. The Victorian government believed it had achieved success when the project met the targeted 200 enrolments. However, the initiative has been argued to have resulted in failure (Gillespie, 2023). The key hurdle identified here is the fact that the Certificate IV TAE – an entry-level training qualification – is the lowest paid classification in Victorian TAFE agreements. To be properly prepared for class instruction and delivery, teachers need to experience training in teaching methodology, curriculum design and development, as well as undertaking a mentoring and supervision component, which the targeted course unfortunately does not offer. Elaine Gillespie, Vice President of TAFE & Adult Provision at the Australian Education Union (AEU) Victoria, believes that a better approach to addressing the current teacher shortages at TAFE would be to conduct an evaluation of why teaching professionals are leaving the sector.

Box Hill Institute Instructional Coaching pilot project

Box Hill's Instructional Coaching pilot project is intended to enhance TAFE teachers' training capacity. It employed a research-based and job-embedded approach in Jim Knight's instructional coaching model (2007) summarised in the impact cycle (Figure 12).

Figure 12. Instructional coaching model impact cycle



The impact cycle directs course preparation and training in three interconnected parts (Kelly, 2021). The cycle starts with the *identify* stage, where teachers examine the training context and identify a goal. Teaching strategies are then developed to meet that goal. In the *learn* stage, specific objectives are determined to show the teacher what it will look like to achieve the goal and a checklist is created to guide the teaching practice. The list may specify changes that need to be made to achieve the goal. Tools and reference materials are collected to build understanding of the targeted task, and modelling of the targeted skills is conducted by the coach or peer teacher or through watching a training video. The coach and teacher then discuss to clarify any misinterpretations of the goal and strategies. The *improve* stage happens after the strategy has been implemented and students' performance has been monitored and recorded. The coach and teacher discuss how to improve the strategy and the student performance management approach. This model's adaptability offers an opportunity to enhance future training.

Box Hill Institute's implementation of the approach involves a plan with a half-day introductory session, initial coaching conversation, observation or filming of a class and coaching conversation to identify relevant learning activities, followed by trialling and conversations. Workshop activities are planned with awareness of learning difficulties such as dyslexia. Box Hill Institute's project has developed materials for the workshops such as a teacher reflection checklist, reflections on the playbook and student feedback survey template. Goal-setting templates, video clips and video notes have also been created to scaffold students' understanding of the targeted skills.

The initiative received \$20,000 in funding from the Victorian Government.

Securing the Future of Australian Shipbuilding Skills

Australia's future submarine build plan is planning an innovative opportunity to enhance the country's capabilities in marine engineering. One step to achieve the plan objective is to establish a specialist National Workforce Development and Industry Capability Precinct, which is expected to develop heavy engineering capability both nationwide and in South Australia (Australian Shipbuilding Federation of Unions, 2022). The plan has a number of implications for Australia's workforce development. Two of these are how to train workers for new engineering projects and how to encourage workers who retire or do not aspire to retrain to join the VET teaching workforce.

Regarding training workers for future engineering projects, the Naval Shipbuilding College has been planned to be repurposed into a Skills and Training Academy (STA) overseen by a tripartite board with representatives from government, industry and the trade unions responsible for developing the skilled heavy-engineering trade, technical and engineering workers, among many other important tasks. Apprentices are expected to be trained in key engineering trades with portable and transferable skills so that they are capable of deployment across the heavy engineering sector. Technical cadetships will be offered with training in generic technical skills while engineering cadetships will be offered as specialist programs in engineering disciplines.

While this plan presents a number of career choices for high school graduates and people who are new to the industry, it may also encourage senior workers who are near retirement or in need of retraining to think about a new career trajectory. The Australian Shipbuilding Federation of Unions also supports new initiatives to transition shipbuilding workers into the vocational teaching profession so they can transfer their skills to future shipbuilders in South Australia. This is an initiative the STA could support.

An initiative such as this has the potential to address the severe labour shortage in VET while offering senior workers in the shipbuilding sector an opportunity to continue to be part of the workforce while working in a role that might suit their lifestyle better, which is a trend among senior Australians. In a 20-year period, the workforce participation rate of Australians aged over 65 increased from 6.1% in 2001 to 15% in 2021 (ABS, 2021) and in 2021 approximately 619,000 Australians aged 65 and over were present in the labour force (Australian Institute of Health and Welfare, 2023).

Trade to Teach (T2T) Internship Program

In 2022, the Queensland Department of Education launched the Trade to Teach (T2T) Internship Program to support experienced tradespeople to complete an undergraduate teaching degree in industrial technology and design (ITD) at one of the partner universities, either Central Queensland University or the University of Southern Queensland. The department has expanded the project with an additional \$10 million in funding to support more tradespeople to become teachers in 2024 (Central Queensland University, 2023). In this project, one key selection criterion is the specialisation in ITD subjects, which include engineering skills, furnishing, building and construction, industrial graphics and industrial technology skills, among other materials and technologies specialisations. The program does not cater for training in fashion, hospitality or ICT. Successful applicants are offered a \$20,000 scholarship, a paid internship and a permanent position in a Queensland state secondary school. Participants, while on a half teaching load placement in a Queensland secondary state school, will be on a full-time internship wage of approximately \$66,000 annually for the second to fourth years of study.

Thirty-eight tradespeople participating in the pilot cohort of the program started their teaching training in 2023 at Central Queensland University or the University of Southern Queensland and will start teaching placements with 50% teaching loads of 25 hours a fortnight next year. The two universities provide free pre-course support such as skill enrichment for tertiary education (Department of Education, 2023a). Successful applicants will start their education training in 2024 and participate in their practicum in 2025. In the second year of their training, the participants have access to a range of benefits such as those for teachers (e.g., school holidays, non-contact time) for rural and remote schools, together with mentoring opportunities and access to a community of teaching practice.

The ITD curriculum provides instruction and learning of both theoretical knowledge and practical application in junior and senior secondary education (Department of Education, 2023b). The learning environments that potential students may work in include computer applications, workshops and practical workspaces. Daniel Parslow, one of the 38 T2T internship participants in 2023, believed the opportunity to achieve better work/family balance and the wage available in Years 2 to 4 of the training course are the biggest incentives for tradespeople to consider the career transition (Central Queensland University, 2023). Representing Central Queensland University as Head of Course for the Bachelor of Education and the Diploma of Secondary School Teaching, Dr Corey Bloomfield pointed out that the 2023 renewal and expansion of the T2T internship program benefit both the university and the trades industry (Central Queensland University, 2023).

The following section discusses the research data and findings.

7. Discussion



Encouraging skilled manufacturing workers to teach their vocation in the Australian VET sector

This study was designed to answer the research question: *How can skilled manufacturing workers be encouraged to teach their vocation in the Australian VET sector?* The three sub-questions were: *What are the barriers that restrict or prevent manufacturing workers from entering vocational teaching? What are the enablers that encourage manufacturing workers to enter the vocational teaching profession? What initiatives have already been trialled to recruit industry professionals to become VET trainers?*

This study has uncovered many factors that influence manufacturing workers' decision as to whether or not they might consider transitioning into the vocational teaching profession. The author considers all of the barriers and enablers presented within this report of importance and worthy of consideration, but this Section presents a further distillation of the research findings to conclude the most frequently discussed, significant and salient issues of importance to manufacturing workers making such a career-altering decision.

Significant findings from the online survey

The majority of respondents were male, with their highest level of qualification being Certificate III or Certificate IV. This data is consistent with ABS data regarding the characteristics of the Australian manufacturing workforce. Although the research did not set out to attract participants already teaching in the VET sector, 32% of respondents had a current TAE qualification, 13% had an out-of-date training qualification and 55% had never had a training qualification.

The online survey data tells us that 80% – the majority of manufacturing workers who took part in the study – had some training experience and that this training activity had taken place mostly in the workplace. These findings are of interest because they reveal that the vast majority of the surveyed population had some understanding of teaching work skills to other people. The findings also reveal that of those who had not taught their work skills before, almost half had at least considered doing so.

Almost two-thirds of respondents told us that they would like to teach at TAFE or other training organisations – a potentially optimistic finding. Although 22% told us that they did not want to teach, another 17% answered by saying “it depends”. The text-based responses offered by participants to this question are of particular interest to this study and were thus scrutinised further using thematic analysis to reveal the barriers and enablers. Responses to “it depends” were categorised under three main themes: (i) culture; (ii) practicalities; and (iii) altruistic motivations. These themes are discussed below.

Culture: Respondents expressed much discontent with the TAFE/VET system. Some said that the VET sector does not respect their expertise and that there is a need for a better culture, including a need for more trust and respect of educators. One respondent who had worked in TAFE previously described the institution as “officious, nepotistic and characterised by internal fighting and disrespect”. Some criticised the high levels of red tape, paperwork, compliance, bureaucracy and “political correctness” in VET. As such, the culture of TAFE and/or the VET sector was strongly criticised and thus has been interpreted as a significant barrier and disincentive for manufacturing workers considering a transition from industry to the vocational teaching profession.

Practicalities: The unknowns and high levels of uncertainty about whether working in the VET sector as a teacher would be a good career move or worth their while financially also presented as significant barriers for manufacturing workers. These concerns were echoed in other parts of the study as well. Consequently, the lack of knowledge about the VET teaching vocation, remuneration and other information that might help manufacturing workers to decide whether a transition to vocational teaching profession would be beneficial for them was another significant barrier. Some respondents expressed concern about the sort of students they might get (i.e., a barrier) and others expressed the need for a higher rate of pay than they already received to make the transition worth their while (i.e., an enabler). Others wondered about their age and whether they might be considered too old to teach – presenting as another unknown and so a barrier.

Altruistic motivations: This covers enablers in relation to moving into the vocational teaching profession. Here, respondents expressed a desire to pass on their work skills and experience, and wanting to help secure tradespeople for the nation’s future.

Survey respondents were also asked to select from a list of obstacles they would need to overcome if they were asked to become a vocational trainer. This survey question revealed that the cost of the training qualification was the greatest barrier, followed by lack of time to study for the training qualification, work commitments and concern that trainers do not get paid enough. Text-based responses to this question indicated uncertainty about the training requirements involved, more uncertainty about the positions available in VET and concerns about the culture, skills and paperwork the training profession would involve.

Respondents were further asked to select from a list of factors that might enable their transition into the vocational teaching profession. The most significant response to this question was the desire to pass on work skills, followed by a better salary, the desire to pass on vocations, the desire to help others be their best and the desire to give back to the community. Aside from receiving a better salary, all significant responses to this question were underpinned by altruistic motivating factors. These findings are consistent with those of Tyler

and Dymock (2021), who also found that (i) levels of remuneration and (ii) the desire to give back to the next generation of workers were both significant factors for people deciding whether to boundary cross from industry into the VET teaching profession.

Text-based responses to the question concerning enablers also received comments indicating that TAFE needs a well-defined direction, that trade teachers need more administrative and financial support, and that they want an easier or better or more suitable way to achieve a training qualification.

Curiously, although the lack of time to study to become a trainer rated highly as a barrier to entering the vocational teaching profession, time to study to become a trainer ranked only 10th (low) on the list of enablers. This suggests that the enablers of the altruistic motivations for wanting to teach may overshadow many of the barriers by comparison.

The final question in the online survey asked "Is there anything else you would like to tell us about why you would or would not like to teach your work skills or vocation?". This question elicited many interesting results that were thematically categorised as: (i) why I want to teach; (ii) why I do not want to teach; and (iii) participants' helpful suggestions. The first two categories were further distilled and presented as narratives.

The "why I want to teach" (enablers) narrative expressed pride in the vocation and a belief in the benefits of education and its positive impact on society. It further captured the satisfaction, sense of accomplishment and sense of personal fulfilment that the act of teaching – or giving back – can bestow on a practitioner when their students succeed in life. The narrative further captured participants' desire to develop their students' self-confidence and mastery of skills and to help them realise their own potential. One respondent discussed being of an age where they want to give back.

The "why I do not want to teach" (barriers) narrative raised issues relating to time constraints, perceptions of low-level pay and negative memories of past experiences with the VET sector, portrayed as onerous, politically correct and filled with unreasonable expectations such as having to regularly demonstrate industry currency even after having worked for 30 or more years in a vocation. Concerns about job insecurity and the risks involved in leaving a well-paid full-time job in the manufacturing industry to enter a highly casualised and financially precarious profession were also raised. Some participants said that they lacked confidence and others simply did not think that they would make a good teacher. Higher level concerns about the future of manufacturing in Australia and young people's lack of interest in manufacturing trades and vocations were also discussed in the context of barriers.

Significant findings from the interviews

The data from the interviews was categorised into stakeholder groups prior to analysis. The three categories were: (i) manufacturing workers without VET teaching experience; (ii) manufacturing workers who have previously taught VET but do not have a current training qualification; and (iii) manufacturing workers who are current VET teachers.

The first category, manufacturing workers without VET teaching experience, identified the most significant barriers as: not having a training qualification; lack of time to study for a training qualification; the cost of the training qualification; lack of job security; reduction in pay; problems associated with the TAE course; high amounts of paperwork in teaching; and the financial and livelihood risks involved in changing careers. The enablers for this group were: time offered to study for the training qualification; the desire to teach and pass on their work skills; the promise of job security and a better salary; and the desire to give back to the community.

The second category, manufacturing workers who have previously taught VET but do not have a current training qualification, identified the most significant barriers as: not having a current training qualification; concern about remuneration; concern about job security; concern about the efficacy of the VET sector; the absence of vision or policy direction for the manufacturing industry; and the attitudes of young people to learning. The enablers for this group were: the promise of secure employment; the desire to teach so as to pass on their work skills and vocations; and the desire to give back to industry and the community.

The third category, manufacturing workers who are current VET teachers, identified the most significant barriers as: the TAFE/VET sector being an uninviting and hostile environment more concerned with compliance than teaching; the lack of management and administrative support; too much paperwork; high turnover of staff; problems with the TAE; and the career gamble people take when transitioning into the vocational teaching profession. The enablers for this group were: having a current training qualification; feeling duty-bound to protect students; the belief that their trade vocations are more important than any RTO (i.e., working for a greater good); pride and passion for their trade vocations; enjoying working with apprentices; a sense of achievement when students are successful; secure employment; helping others to be their best; and being a good role model. Determination not to be defeated by TAFE management/hierarchy was also an enabler. Going in each day to fight for a greater good and the willpower it takes not to be worn down or defeated by the system, in a curiously unhealthy way, sustains these teachers' motivations to work as vocational teachers. Although this sample is small and this warrants further research, these findings are consistent with those of O'Reilly-Briggs (2016), who found an alienated, battle-fatigued engineering trade teacher resisting the VET sector's perceived efforts to erode and diminish the quality and integrity of their trade vocation.

Tables 13 and 14 summarise these findings to present the most significant barriers and enablers for manufacturing workers considering transitioning from industry into the vocational teaching profession.

Table 13. Significant barriers from survey and interviews

Barriers from survey	Barriers from interviews
<ul style="list-style-type: none"> • Not having a current training qualification • Cost of the training qualification • Lack of time to study for the training qualification • TAFE/VET: hostile culture with high levels of compliance and paperwork • Job insecurity • Uncertainty about whether transitioning to the vocational teaching profession would be a wise career move – too many unknowns • Low levels of remuneration (reduced pay) • Existing work commitments • Past negative experiences with the VET sector • Concern about the future of the manufacturing industry in Australia 	<ul style="list-style-type: none"> • Not having a current training qualification • Cost of the training qualification • Lack of time to study for the training qualification • TAFE/VET: hostile culture with high levels of compliance and paperwork, and high staff turnover • Job insecurity • Uncertainty and perceived risks involved in changing careers • Low levels of remuneration (reduced pay) • Problems associated with the TAE course • Lack of TAFE/VET management and administrative support • Concern regarding the efficacy of the VET sector • Concern about the future of the manufacturing industry in Australia • Perceived negative attitudes of young people to learning

Table 14. Significant enablers from survey and interviews

Enablers from survey	Enablers from interviews
<ul style="list-style-type: none">• Altruistic motivations: desire to pass on work skills and vocation; help others be their best; give back to industry and the community; have a positive impact of society• A better salary• Sense of satisfaction and pride when students achieve• Administrative and financial support• A more suitable way to achieve the training qualification• At an age when ready to give back	<ul style="list-style-type: none">• Altruistic motivations: desire to teach; give back to industry and the community; pass on work skills and vocation• Promise of job security and a better salary• Sense of satisfaction and pride when students achieve.• Having a current TAE qualification• Time to study for the TAE• Feeling duty-bound to protect students• Belief that trade vocations are important and worth fighting for• Pride and passion for vocation

Section 8 will draw from these barriers and enablers to present recommendations with the potential to encourage more manufacturing workers to transition into the vocational teaching profession.

8. Recommendations



Recommendation 1

Offer more full-time vocational teaching positions with generous remuneration, good conditions and secure employment to attract workers from industry across to the vocational teaching profession.

Possibly unsurprisingly, job security and levels of remuneration have been identified in this study as critical factors for manufacturing workers in their deliberation on whether or not to consider a career change from industry to the vocational teaching profession. The risks and uncertainties involved for manufacturing workers considering this career transition appear too great to make the leap an attractive or feasible proposition. The promise of secure full-time employment in the VET sector with high levels of remuneration and good working conditions would make the transition process less of a gamble than it is currently perceived to be. Offering many more full-time, well-paid and secure employment positions to vocational teachers would likely smooth the way for many more manufacturing workers to take up the profession. It is noted that some industry professionals may prefer the option of part-time positions, especially post-retirement, and that many RTOs may prefer the flexibility that a sessional or part-time labour force brings. Even so, the significance of the barriers confronted by mid-career industry professionals when considering a transition to the vocational teaching workforce, as found in this study, makes entertaining the idea of a career change a difficult one. If secure full-time employment offering comparable or higher wages to those manufacturing workers presently receive in industry remains (or is even perceived to be) out of reach for mid-career industry professionals, then it is unlikely that the VET sector will attract the quantity of skilled workers it requires.

Recommendation 2

Offer full-time remunerated vocational teaching internships to give manufacturing workers opportunity to engage with work-integrated experiential learning while concomitantly working towards a VET teaching qualification.

Giving manufacturing workers the opportunity to work alongside experienced vocational teachers as trainee teachers in a TAFE or RTO while concomitantly studying towards a training qualification would be a learning-for-work practice, much like an apprenticeship, that has potential to attract manufacturing workers to the profession. As in an apprenticeship, the employer would be responsible for training fees, thus removing the barrier of the cost of the training qualification. A similar practice is used in the school teaching profession. For example, the Teach for Australia (2023) program offers pre-service teachers a school placement from day one, a full salary with benefits, on-the-job learning, assisted scholarships and one-to-one mentoring support. Offering full-time work and pay to trainee teachers in the VET sector would address many of the uncertainties and barriers that manufacturing workers currently contend with when considering transitioning from industry to the VET teaching profession, thus making it a more appealing proposition. Such an initiative would address workers' concerns regarding the cost of the TAE as well as finding time to study for the training qualification. This strategy would have the added benefit of potentially producing better vocational trainers. A similar approach is currently being trialled by the Queensland Department of Education's Trade to Teach Internship Program, which supports experienced tradespeople to complete a school teaching degree at a partnering university (see Section 6) while also working in a school.

One participant in this study put forward the interesting suggestion of providing manufacturing workers with 10 days of paid work experience to get a taste of what the vocational teaching position is like so they can decide more realistically whether this is a job that they may like to work in. Offering skilled manufacturing workers opportunity to experience working in the VET sector ("try before you buy") seems a reasonable suggestion worthy of further consideration.

Recommendation 3

Create an alternative entry-level qualification to the vocational teaching profession more suited to tradespeople and manufacturing workers.

The TAE qualification is the entry-level qualification to the vocational teaching profession in Australia, but for many years has been criticised for its failure to adequately prepare new trainers to teach in the vocational education sector. Further, this study has presented case studies of two well-intentioned individuals who wanted to enter the vocational teaching profession, and enrolled in and paid for a TAE program, only to be stymied by the poor quality of the course and lack of assistance by their trainers. Consequently, they could not complete their course and the VET sector lost the knowledge and skills of two potentially good teaching candidates. Despite their best intentions, these workers were denied entry to the vocational teaching profession due to obstacles encountered within their TAE course and by the way the course was offered. The author supports the notion of a vocational teaching qualification; however, the current entry-level TAE qualification is arguably unfit for purpose, excessively expensive and frequently taught badly. For people drawn to the vocational teaching profession who engage with but fail to complete the program, this experience is detrimental and it is unlikely that they will ever again consider working in the VET sector.

Smith (2004) emphasised that training people for the VET teaching profession is a highly complex endeavour and potentially less straightforward than it is for teachers in other sectors. Consequently, a "one size fits all" approach to VET teacher preparation is unlikely to work (Clayton, 2009). Drawing from education theory, poor-quality TAE offerings may be the result of a combination of a lack of concern for (or ignorance of) differentiation and lack of pedagogical knowledge by teachers and program developers, mixed in with the divergent knowledge bases and professions of the individuals studying the TAE course. In other words, the TAE course is frequently offered using a homogeneous approach and not generally either designed or taught by pedagogues with substantive knowledge in pedagogy or adult learning theory, nor is it offered in a way that is tailored to the learning literacies and intelligences of many of the learners undertaking the program.

Chan (2018) tells us that although tradespeople entering the VET teaching profession are less likely to have well-developed reading and writing literacies, they do have other developed literacies, understandings and intelligences that form the basis of vocational expertise and craftsmanship that should be acknowledged and respected. The multiliteracies of tradespeople can be maximised through well-designed entry-level VET teaching programs designed to draw on their strengths, instead of showing up their weaknesses. A program designed to draw on manufacturing workers' learning strengths (rather than their weaknesses) to facilitate entry into the vocational teaching profession has the potential to sidestep or leapfrog the "hideous beast" (Tyler & Dymock, 2021b, p. 16) that is the Certificate IV TAE qualification. Gillespie (2023) argues that the Certificate IV TAE is offered at too low a level to attract people to vocational teaching. In Victoria, the TAFE teacher agreement has provisions in place to financially reward teachers with an adult and vocational education teaching qualification at AQF level 6 or above. Combining a vocational teaching internship program with an entry-level teaching qualification at AQF level 6 or above has potential to attract more manufacturing workers to the vocational teaching profession, as well as lifting the capability and quality of teaching in the VET sector more generally. This arrangement would also serve to cushion the blow to remuneration and to professional status that new teachers currently experience when first entering the vocational teaching profession.

Recommendation 4

Improve the culture of TAFE and the VET sector.

Reports from trade teachers and former vocational teachers in this study of unsupportive and toxic workplaces, especially in trade teaching areas, have identified this workplace culture as a significant barrier for manufacturing workers in entering and sustaining employment as vocational education teachers. It is beyond the scope of this study to resolve this issue, but policymakers should be mindful of the precariousness of this situation when devising policies that may result in further distancing VET teachers from classroom- or workshop-based teaching duties. Recent research suggests that many vocational teachers spend as much as half of their working hours completing paperwork and compliance documents. That is, compliance and paperwork duties take teachers away from the very thing they signed up to do – teaching students. Denied administrative support, the weight of compliance and paperwork for vocational teachers has become so burdensome and performative (Ball, 2010) that many decide to return to their former occupations and exit the sector – one such individual participated in this study (see Appendix 3 for Chris Thile's exit notes listing reasons he gave for leaving a full-time TAFE teaching position). The toxic culture and performative nature of trade vocational education in TAFE, which appears particularly unsupportive of trade teachers and trade departments, have been identified in both the survey and interviews as a barrier to entering and sustaining a career in the vocational teaching profession. This is also an area in need of further research. Without a happy, healthy and functional work environment that empowers vocational teachers to pass on their vocations and give back to industry and the community, it is unlikely that many workers will be attracted to or willing to embark on a career change to the VET sector.

Recommendation 5

Establish a teacher-training initiative designed for senior industry experts and retirees.

A number of participants in the study indicated that they would like to enter the vocational teaching profession on retirement. Others talked about being at an age where they wanted to give back. This data, together with the Australian Shipbuilding Federation of Unions initiative to recruit senior shipbuilders to pass on their skills to younger workers before retiring (as part of the future submarine build project – see Section 6), suggests that there is both a want and a need for senior and semi-retired workers to spend time teaching before permanent retirement. It is the author's view that the lifetime of industry knowledge and skills held by senior workers who have spent the greater part of their lives developing and perfecting their vocations should be honoured and valued – not lost to history without any invitation or opportunity to turn their hand to vocational training. Such an initiative would benefit the manufacturing industry itself, and the VET sector would benefit from the expertise that these people embody. This arrangement would likely require special arrangements

with the Australian Skills and Quality Authority (ASQA), the Victorian Registration and Qualifications Authority (VRQA), the Training Accreditation Council (TAC) and at an institute level to remove many of the burdens experienced by regular VET teachers. For example, this group could be offered part-time workshop-only teaching tasks with a focus on their specialist skills. This type of arrangement would also preserve a great deal of important knowledge for the benefit of society overall. If developed properly, such an initiative would also stand as a genuine sign of respect for the knowledge and wisdom that elders can share with young people, industry and the community.

Recommendation 6

Promote the vocational teaching profession to apprentices and skilled manufacturing workers studying towards a vocational qualification.

Vocational teaching does not appear to be a profession at the forefront of the minds of many manufacturing workers. Consequently, discussing the vocational teaching profession and communicating it as a future career option with apprentices and other skilled manufacturing workers during their early years of training may be a simple yet powerful way to ensure the idea (or “seed”) of a future in teaching is planted to be recalled at a later time during their working lives. This communication strategy could be achieved either by asking current VET teachers to discuss the idea of moving into VET teaching with their students or by embarking on an industry-aided promotional strategy where the idea of becoming a vocational teacher is directly discussed with young people in TAFEs and RTOs.

Recommendation 7

Create and promote a national vision for manufacturing in Australia.

A number of survey respondents and interview participants discussed their concern about a lack of vision for manufacturing in Australia. Although beyond the scope of this research report, efforts to encourage governments and industry leaders to reignite enthusiasm for the manufacturing sector in Australia would likely benefit the industry and influence the decisions made by young people concerning their future careers. These manufacturing workers expressed their own lack of enthusiasm for teaching their vocations because they felt that the industry is on a downward trajectory and that young people are not interested in pursuing apprenticeships or other manufacturing occupations. That is, the perceived downturn and lack of national vision for manufacturing in Australia are contributing to a sense of apathy about the industry and to worker decisions not to enter the vocational teaching profession. This situation could be reversed if governments and policymakers created and widely promoted a grand vision for manufacturing in Australia.

Recommendation 8

Embark on a recruitment drive to encourage manufacturing workers to enter the vocational teaching profession.

This recommendation draws from the enablers identified in this study. Participants in the study made it quite clear that (aside from wanting increased remuneration) the most important things that would encourage or enable them to enter the vocational teaching profession are their own altruistic motivations. These motivations include: a desire to pass on work skills and vocation; a desire to give back to industry and the community; wanting to help others be their best; and wanting to be a good role model. These are all honourable motivations for becoming a vocational teacher—knowledge with the power to influence motivations. Although these enablers could be used to promote the vocational teaching profession, it would be unconscionable to tap into the goodwill and deeply held values of manufacturing workers without balancing promotional efforts with the realities of the profession.

Recommendation 9

Consider establishing a vocational teachers' centre of excellence specialising in the vocational teaching preparation of manufacturing workers.

In the online survey, respondents were offered the opportunity to write anything further they wanted to say about why they would or would not like to teach in the VET sector. This question elicited many comments, including a few helpful suggestions for consideration. One respondent said that "the biggest barrier for workers is in the transition from industry to teaching" and suggested that a trade instructors' college and teaching certificates need to be reintroduced. Data collected during this research supports this participant's comment about the career transition process being (at least one of) the greatest barriers for workers moving to the vocational teaching profession.

From 1970 through to the mid-1990s, the Hawthorn Institute of Education (HIE) was the only college of advanced education in Australia that specialises in training adults to become technical and vocational education teachers and instructors. The HIE had a unique relationship with secondary technical education, TAFEs, adult education, and industry and commerce, and was described as "essential" for the important role it played in helping Victoria and Australia to integrate and coordinate training and maximise resources (HIE, 1983, p. 5). Most who trained at the HIE were sponsored employees of the Education Department and given time release for teacher training. These "student instructors" (who were mostly tradespeople) were required to complete a two-year in-service degree-level qualification and to spend up to three days per week working in a technical school or college with a normal pro rata teaching load. The sponsorship system enabled mature people with extensive industrial experience to participate in full-time study "which they otherwise would not have been able to do" (Blunden, 1995, pp. 15–16). Following the closure of the HIE and the arrival of the Certificate IV level training qualification in 1998, TAFE stopped requiring degree-qualified teachers (Smith et al., 2018, p. 1). Today, many experienced VET practitioners lament the closure of the HIE and would like to see another institute established to create a place that specialised in the production of high-quality VET practitioners. Given the poor performance of the TAFE to attract and adequately prepare a sufficient supply of practitioners to the VET sector, the concept of establishing a vocational teachers' centre of excellence dedicated to the task of preparing degree-qualified VET teachers and practitioners is proposed here as a concept worth revisiting.

Areas for further research

This study has identified several areas for further research, including:

1. The supply of and demand for VET teachers and trainers in Australia
2. Why TAFE teachers are leaving the vocational teaching profession
3. The barriers that the TAFE sector presents to manufacturing workers in: (a) transitioning from industry and into the vocational teaching profession; and (b) sustaining a career as a vocational teacher in TAFE
4. The barriers and enablers for female manufacturing workers transitioning to the vocational teaching profession

The following section concludes the study.

9. Conclusion



VET teacher shortages bring implications for the quality and availability of vocational education in Australia. They restrict the nation's capacity to produce the skilled workforce needed to support Australian industry and society. VET teachers are critical to the production of the human capital that the nation depends on to maintain the economy and our high standards of living. This research project set out to identify how skilled manufacturing workers might be encouraged to teach their vocation in order to address this deficit by identifying the barriers that act to restrict them from transitioning into the vocational teaching profession. It also sought to identify the factors that might help smooth the way or better enable manufacturing workers to consider this career change.

The study found the most significant barriers faced by manufacturing workers when considering a career change to the vocational teaching profession include the risks to livelihood involved in transitioning from a well-paid and secure job in the manufacturing industry to an industry characterised by job insecurity and low pay. Other barriers are the expense of the Certificate IV TAE qualification, the time needed outside of working hours to complete the TAE, the obstacles presented by the way the TAE qualification is offered and the hostile and toxic work environments of some RTOs.

The study also found that the enablers, or factors that incentivised workers to want to teach their vocation, include mostly altruistic motivations such as wanting to pass on work skills and vocation, help others to be their best, give back to industry and the community, and have a positive impact on society. Extrinsic

motivations were found to be the promise of job security and a higher salary than the one currently earned, as well as a better, more suitable way to complete the TAE qualification.

Together, these findings have powerful potential to inform new practices and ways of working that will attract (rather than deterring) manufacturing workers to the vocational teaching profession. Providing practical assistance, recommendations have been made that take into account the barriers and enablers identified in this study. They are put forward in the hope of discovering new and better practices that will make the career transition from manufacturing to VET teaching a smoother and much more attractive proposition than it currently is.

If we cannot find effective ways to address those factors currently obstructing Australian workers from becoming vocational teachers, both the supply of VET teachers and the quality of vocational education available to young people and the workforce more generally will continue to diminish and Australia will be poorer for the experience.

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