

Bold policies to improve trade apprentice retention and course completion rates for a current and future Victorian workforce

Ann Baxter

Victorian Skills Authority Fellowship, 2024

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Acknowledgements

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- Senior Experten Service (SES) VerA plus mentor program, Germany
- Commercial Space Week Space Congress international conference, USA
- City & Guilds Annual Apprenticeship Conference, UK
- Leicester University Space Park, UK

02

Executive summary of fellowship

The Victorian economy is desperate for a steady supply of well-trained tradespeople to meet the current and future demands of the housing crisis, big build projects and clean economy workforce. Low retention and completion rates in apprenticeships have no hope of addressing these needs. (NCVER 2023A). Based around a survey of Victorian providers and their knowledge of common blockers to apprenticeship success (Appendices 1,2 & 3), this Fellowship was designed to explore international best practice in both current apprentice supports and future planning for the training of Victoria's current and pending trade workforce needs.

While many training organisations already test for, and offer standard interventions for apprentice education, Victorian trade apprentice completion rates remain low (NCVER 2023B). Additional interventions are needed to change this outcome and improve both the training and support of Victoria's trade apprentices.

The Victorian VET sector rests on the cusp of dramatic reform with the Australian curriculum of Training Packages no longer fit for purpose. The system focuses on highly prescriptive competency-based training that's too occupation specific, leaving our graduates ill-equipped for current and future workforce requirements. (JSA, 2024). Victoria's economy needs both immediate and long term policy change to intervene and cease this decline in trade apprenticeships, build quality and reliable

vocational career pathways for the supply of the trade workforce and to normalise a vocational career pathway choice.

Why a Fellowship?

This Fellowship grew from a study run by the author in 2022, (Baxter, 2023) which looked at the learning challenges for both electrical and plumbing apprentices. This work was timely as the Australian government launched their policy to address blockers to apprentice success (O'Connor, 2023) and the Victorian government raised the priority and access to LNSUPPORT by adding the package to the Free TAFE list, (July 2023).

With a strong history in both Higher and Vocational education and training, the author understood that addressing just the LLND gaps for apprentices would not be enough to overcome the wide range of challenges blocking their learning success. (Appendices 1-3). Further innovation, international best practice and other types of supports would be needed to holistically address the variety of blockers apprentices were experiencing.

This Fellowship has allowed the author to extend her preliminary work on apprentice learning needs, with the addition of international best practice and an understanding of the future evolution of apprenticeships, with the aim to provide bold considerations for both policies and interventions to Victoria's apprentice stakeholders.

Using the results of a bespoke Victorian provider survey and their knowledge of their own apprentice stories of challenge, (Appendix 3), this study has sought out a variety of programs, interventions and supports that can be adjusted to Victorian culture and improve apprenticeship outcomes.

Travel and Learning

This study, based around information from a survey conducted with Victorian providers and their understanding of blockers to their trade apprenticeship success, explored the effect of a low technology upbringing within a German dual education model. First hand observations and extensive interviews with members of the Danthonia Bruderhof community in NSW, revealed an intentional and staged introduction of technology for their youth that built strong employability skills among their community workforce. The integration of education and workplace learning (integral to the German dual education model) generated work ready young people with a more mature knowledge of their career pathways.

The Australian apprentice system was inherited from the UK on settlement. Understanding the UK current apprentice ecosystem and the challenges and solutions they have worked through, offers ideas for Australia from our progenitors. Attendance at the 2024 10th City and Guilds Annual Apprenticeship Conference in Birmingham was a prime opportunity to learn from their journey.

The UK system is progressive in recognition and intervention for neurodivergent apprentices. Their introduction of mandatory learning support testing (DET UK, 2024), in August 2023, streamlined the process for eligible apprentices to gain the support they need as soon as possible. The UK system continues to support apprentice learning with a focus on building trade teacher skills from multiple entry points and pathways as well as better employer support.

An exploration of the German VerA initiative in Bonn, provided insights into their successful senior volunteer apprentice mentor program. While Australia does not offer a similar culture of volunteering on

retirement, there are plenty of retirees looking to supplement their retirement income. This program offered training, ongoing support and professional development for mentors; a model that could be easily adapted to Victorian systems.

The future of Victorian apprenticeships may be reflected in the cluster apprentice programs of the Space Coast in Florida, USA. This system again bases itself around the German dual education model with industry led training. The centralised support of apprentices, core to a specialisation model of training delivery and close industry partnerships providing the latest training equipment, have much to recommend to Victorian apprenticeship training.

Impacts and future plans

This study journey has provided insights into Victorian apprenticeship challenges and international best practice. A list of eight bold and key considerations have been made which the author has plans to continue to develop and pursue. Some changes will take time to implement, others can be acted upon quickly if there is an appetite for change. Victoria must improve apprenticeship retention and completion rates to meet the economic workforce demands now and into the future. It is clear from this exploratory journey that we are not alone with our challenges, and we can build on processes others have already explored. What is certain is that, if we do not act, nothing will change. This author has working plans for the implementation of many considerations and is keen to start discussions with interested stakeholders.

03

Fellowship background

Context

In 2023, the Australian government launched its “Setting apprentices up to succeed” policy to address common blockers of apprenticeship retention and completion (O’Connor, 2023; NCVET 2023A). This new service model commenced with provision to understand individual learner needs, and possible supports required - an important starting point for all inclusive, educational models.

While many training organisations already tested for, and offered standard interventions for apprentice education, trade apprentice completion rates have remained at a low of 42%, 2022, (NCVER, 2023B). The question to be explored then was “*what else could be done to improve trade apprentice completion and attrition rates for current and future Victorian workforce needs?*”

Data from a 2022 pilot study of plumbing and electrical apprentice learning needs, indicated up to 30% of apprentices lacked the foundational literacy, learning, numeracy and digital skills (LLND) needed to complete their Certificate III level apprenticeship course. In addition, the study demonstrated that current LLND testing of apprentices on application was 50% inaccurate, therefore not providing reliable guidance on students’ true functioning academic skill levels as well as gaps in foundation science and learning skills (Baxter, 2023).

Victoria’s workforce needs qualified tradespeople to meet the economic demands of both the current housing crisis and to build the new clean economy.

This Fellowship offered an opportunity to acquire international best practice in apprenticeship support, an understanding of future apprenticeship training needs and learnings from the UK apprenticeship system, the progenitor of our own training system.

This Fellowship was designed to understand the impacts of technology on apprenticeships (at the Danthonia Bruderhof Community, NSW), the future of apprenticeship needs (on the American Space Coast in Florida USA), how mentorships can support apprentices (at the VerA program in Bonn, Germany) and the evolution of the UK apprenticeship ecosystem (at the 10th Annual Apprenticeship Conference, Birmingham). This study was aimed at generating a series of bold considerations, contextualised to Victorian apprenticeship cultural perspectives, for sharing throughout Victorian networks and providers.

Biography and reason for study

Impetus for this study grew from the author’s current working role as an Educational Manager for Swinburne University of Technology, currently delivering apprentice support. With a thirty-five-year career in a wide variety of educational systems, the author understood that the existing support available to apprentices was not addressing all of their needs.

The author has experience in both Higher education (with a Master’s by research) and Vocational education and training. She commenced an analysis of apprentice learning in 2022, with preliminary

findings demonstrating a clear need for further investigation. These results were presented at the AVETRA conference in 2023. (Baxter, 2023).

The author has worked in both international and domestic education at secondary and tertiary levels. She has taught in academic and vocational education across independent schools, community and Aboriginal education, TAFE's and dual sector universities. Her broad knowledge of educational pedagogy and andragogy, teaching programs and learner needs, has her well placed to explore the current state of blockers to Victorian apprenticeship completion while hunting for interventions that will improve outcomes for the Victorian workforce.

This Fellowship has allowed the author to extend her preliminary work on apprentice learning needs, with the addition of international best practice and an understanding of the future evolution of apprenticeships. She has aimed to provide bold considerations for both policies and interventions to improve apprenticeship results.

Research Methods

This exploratory study was designed to develop educational approaches that support inclusion and increase apprentice participation to improve Victorian trade apprentice retention and completion rates. The journey sought to understand existing blockers to apprenticeship completion and then collect examples of best practice in apprentice training, intervention and future training needs.

Research was conducted over several months commencing with a qualitative feedback survey of staff at multiple Victorian providers. One week was spent at the Danthonia Bruderhof community in NSW collecting observations and semi-structured interviews on their educational programs and apprenticeship opportunities. All participants were questioned on their personal experiences in, and knowledge of, their education programs within their community.

Ten days were then spent in Florida USA, attending the SpaceCom Space Congress 2024 to learn about future workforce needs and the future evolution of apprenticeships. This was followed with several meetings with teams from the Space Coast Consortium Apprenticeship Programs (SCCAP), NASA, Eastern Florida State College and Brevard Public School. These meetings provided a wealth of information on current apprentice needs and challenges with an insight into future workforce needs Victoria should anticipate.

By late February, three days were spent in Germany collecting information and interviews from staff at the Senior Experten Services (SES) in Bonn where the VerA apprentice mentor program was developed and implemented. This study of a best practice model of apprentice support was most relevant to the challenges being faced within the Victorian apprentice ecosystem.

This research journey concluded in Birmingham UK at the 2024 City and Guilds 10th Annual Apprenticeship Conference. The conference was an opportunity to hear updates from the system that seeded our Australian apprenticeship training model, learn about their challenges and gain an understanding about their working solutions. Leads from this conference led to further meetings at Leicester University Space Park and with members of the Satellite Applications Catapult to discuss their future workforce needs and challenges.

Research overview and timelines

The Fellowship funding provided for study tours in four countries (including Australia) and attendance at two conferences. A summary of the journey can be seen in figure 1, overleaf.

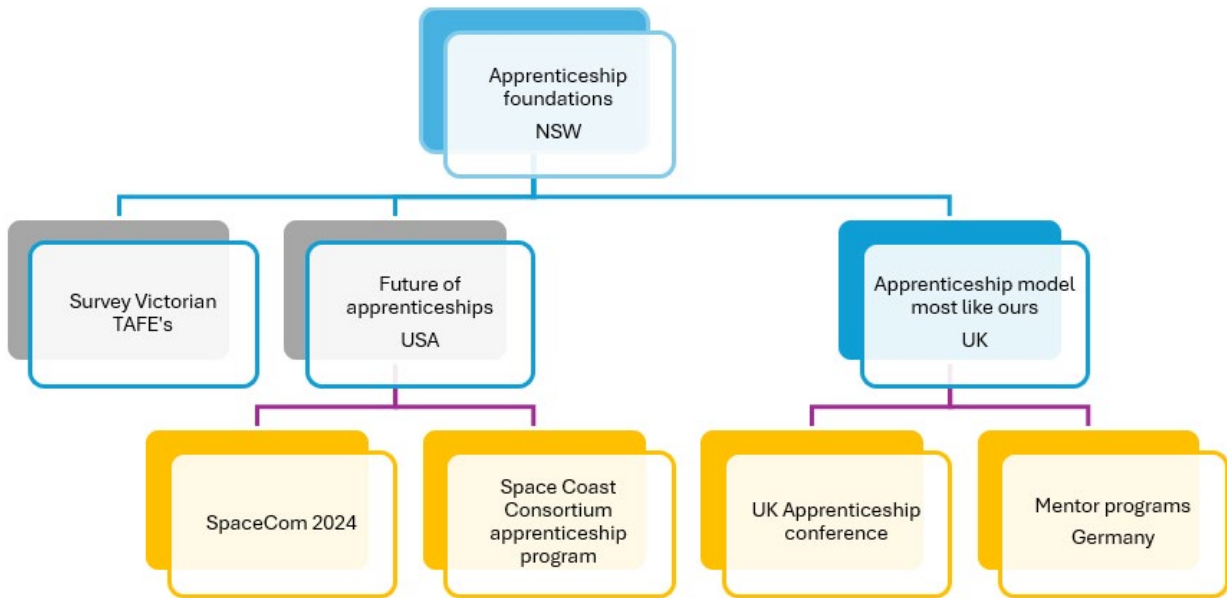


Figure 1. A summary of the Fellowship study journey.

Details of the journey experiences are elaborated on below:

Victorian provider survey

From January to April 2024, a voluntary survey (**Appendix 1**) was shared with provider staff throughout Victoria. VET provider staff were asked for their observations and opinions on challenges to their apprentice retention and course completion rates at their institution as well as any individual apprentice stories they felt confident to share. This survey provided a snapshot into factors staff observed affecting their apprentices, including shared stories of individual need.

Journey to Danthonia NSW – Low technology upbringing.

Trip 1- Bruderhof Community – December 2023, Inverell NSW Australia.

The Bruderhof community at Danthonia in New South Wales, offers a unique example of integrating a low-technology upbringing with elements of the German dual education model.

An intentional Christian community that emphasizes simplicity and communal living, Danthonia, is an education centre for the Bruderhof, located on 6,000 acres of rural land. They consciously incorporate aspects of the German dual vocational education and training system into their way of life. (Bruderhof, 2024A).

The community’s education system starts at home and emphasises practical skills, craftsmanship, and academic instruction without the pressures of social technology. Students are introduced to the “world of work” from primary school age, with workplace learning then scheduled into their normal school timetables from years 7-8.

Students in years 9-10 are introduced to keyboarding and computer skills, with strict content filtering and education on responsible internet use. Senior students (years 10-12) complete their studies based on international curricula and have the opportunity to pursue vocational qualifications.

The Bruderhof run a successful signage business, Danthonia Designs, which provides practical work experience and training for students as well as self-sufficiency for the entire community. After high school, young people can choose to attend university, receive vocational training, work in some aspect

of community life including Danthonia Designs, or explore other paths outside the community, all with full access to the benefits of modern technology (Danthonia Designs, 2024).



Figure 2. Year 10 student hand carved sign



Figure 3. Danthonia Designs factory (Photo courtesy of Danthonia Designs)

While not banning technology entirely, the Bruderhof community carefully considers its use, avoiding televisions in homes and limiting social media use. Their approach is a practical application of the German dual education model, adapted to a low-technology environment in childhood, emphasising practical skills, work experience, and academic learning in a holistic educational framework. (Niranjan, 2018).

The community model is an opportunity to understand how the education model combines theoretical knowledge with practical work experience, similar to the German dual system.



Figure 4. Ann Baxter and Joanne Barth (teacher)

Journey to the Florida Space Coast, USA. The future of apprenticeships.

Trip 2—Space Coast, January-February 2024, Florida USA

Conference

The 2024 SpaceCom 50th Space Congress was held at the Orange County Convention Centre, Orlando Florida. This conference gathers together all professional stakeholders from both commercial and defence space sectors providing unique insights into future workforce requirements. The conference organised multiple sessions on workforce planning and there were further opportunities for one-on-one discussions with panel members. The conference generated an understanding of the sector's future directions with implications for Australia's vocational education and training future planning.

Space Coast Consortium Apprenticeship Program & Eastern Florida State College

"SCCAP is an industry-driven apprenticeship program led by a consortium of advanced manufacturers in the Space, Aerospace, Aviation, and Defense industries, with a focus on implementing world-class apprenticeship programs in occupations that require higher levels of education to perform in today's competitive advanced manufacturing environment." (SCCAP, 2024).

They commenced their set up with a fact-finding mission to Germany to analyse the benefits of the German apprenticeship model. (Kamm 2022). Added to a survey of industries throughout the space coast area, the consortium developed a mission to provide a workforce with a higher level of proficiency in advanced manufacturing skills.

In partnership with Eastern Florida State College, their industry driven apprenticeship model is designed to provide a workforce for small to medium enterprises (SME's) with a focus on higher apprenticeships in mechatronics, advanced CNC machining, fibre composite manufacture, aerospace welding, additive manufacture and cybersecurity.

Meetings with this group offered an insight into the future of apprenticeship planning Victoria must consider, including an understanding of their challenges and solutions.



Figure 5. Steve Kane SpaceTek



Figure 6. Tom McCullough (SpaceTek) & Frank Margiotta (Dean Eastern Florida State College)

Journey to Germany. Mentoring apprentices.

Trip 3—VerA, February 2024, Bonn, Germany.

Germany's apprenticeship model is known internationally for its rigor, collaboration, and benefits that extend to both employers and apprentices. (Elliott, 2021). Germany's interventions for "Early leaving from vocational education and training" (ELVET), also reflect the rigour and collaboration expected from their systems. This study allowed for discussions with the German mentor program – the Verhinderung von Ausbildungsabbruechen (VerA initiative) run by the Senior Experten Service (SES) in Bonn.

Germany has a strong culture in volunteering on retirement and this program uses the expertise of volunteer technical executives in retirement to prevent failure in vocational training (ENETOSH, 2023). This meeting was an opportunity to learn how the team has developed their program which now has international outreach and understand the benefits for Victoria's apprentices.



Figure 8. VerA Office Bonn.Frankfurt



Figure 7. DB Train Station

Journey to the United Kingdom. UK apprenticeship system updates.

Trip 4—AAC 2024 Conference, February-March 2024, Birmingham, UK.

Conference

The 10th Annual Apprenticeship Conference is the leading conference for all UK stakeholders involved with the delivery of apprenticeships in the UK, providing advice and ideas for all apprenticeship providers. The conference was located at the International Conference Centre, Birmingham. As the British apprenticeship system was the progenitor of our Australian system, this conference was an opportunity to explore the current challenges and trends the UK system has had to deal with.



Figure 9. AAC 2024 Conference, Birmingham.



Figure 10. AAC 2024 Conference, Birmingham

04

Fellowship learnings and findings

All research findings have been identified through interviews, discussion, observation and research. The findings have then been contextualised to both the Victorian and in some cases Australian apprenticeship perspective and presented here as learnings and summarised findings as presented below.

Summary of learnings.

Victorian provider survey- observed blockers to apprenticeship completion.

The provider staff survey (Figure 11) gives an overview of key issues affecting apprenticeship completion in Victoria. From these results it can be seen that the Victorian free TAFE LNSUPPORT program is appropriate to meet the needs of one of the key apprentice learning issues, however, others learning needs remain to be addressed.

The general demographic of trade apprentices (young males) and their attraction to risk taking behaviours (Duell et. al., 2018) means the observed high percentage of disrupted learning due to physical injury and addictive behaviours is not unexpected. Guidance in both maturity and physical support may be a simple addition to Victorian apprenticeship training that will benefit apprentices and their course completion. Examples of this can be seen as part of the Swiss apprenticeship system which typically includes a core component of physical training,

with additional training at specialised Vocational Training Centres that offer practical instruction and equipment to develop job-specific physical skills behaviours, (Franke, 224).

Impairments including ASD, Anxiety, ADHD and Depression clearly have significant impact on apprenticeship completion rates within Victoria. In August 2023 the UK introduced mandatory learning support testing of all apprentices as part of their application process. This online assessment is enough to qualify an apprentice for support and is considered for Victorian apprentices to benefit their learning.

The impact of routine life issues has a clear effect on apprenticeship training (provider survey, APPENDIX 2 and apprentice stories APPENDIX 3); especially financial pressures and life in low-socio-economic communities. Young apprentices are particularly vulnerable to issues with their employers and the tyranny of distance has an impact on their ability to engage with their studies. A holistic approach is needed to support apprentices to overcome these blockers to success.

<i>Question</i>	<i>Key responses</i>	<i>Comments</i>
<i>Participants</i>	58	
<i>Providers</i>	12	Urban and rural
<i>Responders</i>	71% trade teachers	29% non-teaching roles
<i>Vocational training areas</i>	Multiple areas	
<i>Key issues affecting apprenticeships</i>		
<i>Learning</i>	Learning gaps -LLND (24%) Dyslexia – (20%)	
<i>Illness</i>	Sports/Physical related injuries (45%)	Physical injury
<i>Impairment/disability</i>	Hand/wrist/arm/shoulder injury – (28%) ASD – (27%) Back pain/chronic injury (16%)	Physical injury Physical injury
<i>Mental health</i>	Anxiety – (28%) ADHD – (24%) Depression (20%)	
<i>Life</i>	Financial (16%) Employer (15%) Drug abuse (11%) Addictive behaviours (11%)	
<i>Regional</i>	Long travel times (33%) Low socio-economic (20%)	
<i>Career choice</i>	Opportunity (17%) Tried it (15%) Better money (15%)	

Figure 11. Provider staff survey responses

Danthonia NSW – low technology upbringing in a German dual education style system.

Students at Danthonia Bruderhof community have a lifetime of career guidance starting in their family homes, developed through their primary and secondary schooling and contributed to by all members of the community. They are supported in their personal career pursuits and are patiently guided until they are mature enough to decide on their career of choice; however long that may take.

At Danthonia they live the German dual education model as an intentional approach to the education of the “whole child” (head, heart, and hand). (Bruderhof, 2024B). The benefits of a low technology upbringing are clear to see when meeting members of the community.

Their youth naturally display a wide variety of employability skills throughout their daily life. They develop and enjoy strong skills in reading and communication, leadership and teamwork, problem solving skills and responsibility within the safety and structure of a community that integrates school-based learning with work-based practice. These employability skills contribute to making these young people more work ready at a younger age than their peers at mainstream schools.

Adult members of the Bruderhof gain access to technology and the internet for their work-based needs. As a consequence of the community’s choice of a low technology upbringing, working adults develop their employability skills in their younger years, are slowly introduced to technology during their final years of education and then access high level technology for work-based processes, as required. This is a unique approach to a dual sector education model that develops a well-rounded, work ready workforce incorporating highly valued employability skills.

Journey to the Florida Space Coast, USA – the future of apprenticeships.

SpaceCom 2024

This two-day Space Congress was an opportunity to hear from commercial industry leaders and gain an insight into the future training needs of the multiple stakeholders working in this sector as well as the impact of the sector on the workforce of the future.

It was interesting to discover common themes that are occurring in both the USA and Australia. There was considerable discussion on the commercialisation of industries directing vocational pathway needs and the frustration in higher qualified staff (Masters and PhD's) lacking functional applied skills. Many businesses commented that they needed a “more usable” graduate, someone with an apprenticeship style Degree.

There was a strong awareness of the need to work with educators to improve vocational education to meet the ‘gaps’ in future workforce requirements, including an increased demand for both STEM and non-STEM vocational education and non-PhD workers.

Similar pressures on the American apprentice workforce included the cost of living which was impacting industries’ ability to attract staff and keep them. The poaching of qualified staff by large private companies, using high wage incentives, has had a devastating effect on both defence and small to medium enterprises.

There was significant concern about world issues requiring agile and responsive workforce development and the inadequacy of current training systems to meet those needs. While the US apprenticeship training system varies between states and is very different to our own, Australia too needs an agile and responsive workforce to meet our own pressures and regional demands.



Figure 12. SpaceCom 2024 USA



Figure 13. Princeton Cryotech, USA

Space Coast Consortium – Apprenticeship Programs & Florida State Community College

It was interesting to meet with members of SCCAP and discover that they too had commenced their structural planning with the German dual education model. The consortium apprenticeship program design starts with local industry needs and partners with Eastern Florida State College to deliver the calibre of apprenticeships necessary for local and future workforce needs.

Six key apprenticeships were deemed to meet multiple industry requirements following an extensive survey of local businesses. The consortium cluster training model builds a workforce for local small to medium enterprises - SME's, that these businesses could not provide for themselves. Clustering of the apprenticeship training begins with core offerings delivered as a hybrid training model. Apprentices then diversify into the key skill areas the current workforce requires with articulation into higher apprenticeships for a technician level workforce.

Input from both industry and defence has resulted in a symbiotic partnership with SCCAP's apprenticeship programs. The most up to date training equipment

is made available for apprentice training at Eastern Florida State College via SCCAP organised grants or by negotiation with industry/defence for specific equipment items.

The apprenticeship program is financed by industry, with SCCAP managing the entire process from recruitment industry fairs to the payment of tuition. The trade fair is a mandatory part of the process, designed to educate family and potential apprentices. Future apprentices must attend two weeks of learning and trial work with potential employers before they are offered a job.

Once they have successfully obtained a job their apprenticeship training is organised by SCCAP at no cost to them. The process is designed to remove pressure from apprentices with overarching management designed to address apprentice issues in a pragmatic manner. If travel is an issue SCCAP will organise a bus. If family and childcare is a problem, SCCAP book childcare. Simplicity in the process for the apprentice, is the key.

The consortium industry-based model with central management to support apprentices has much to be considered for the Victorian apprenticeship model.

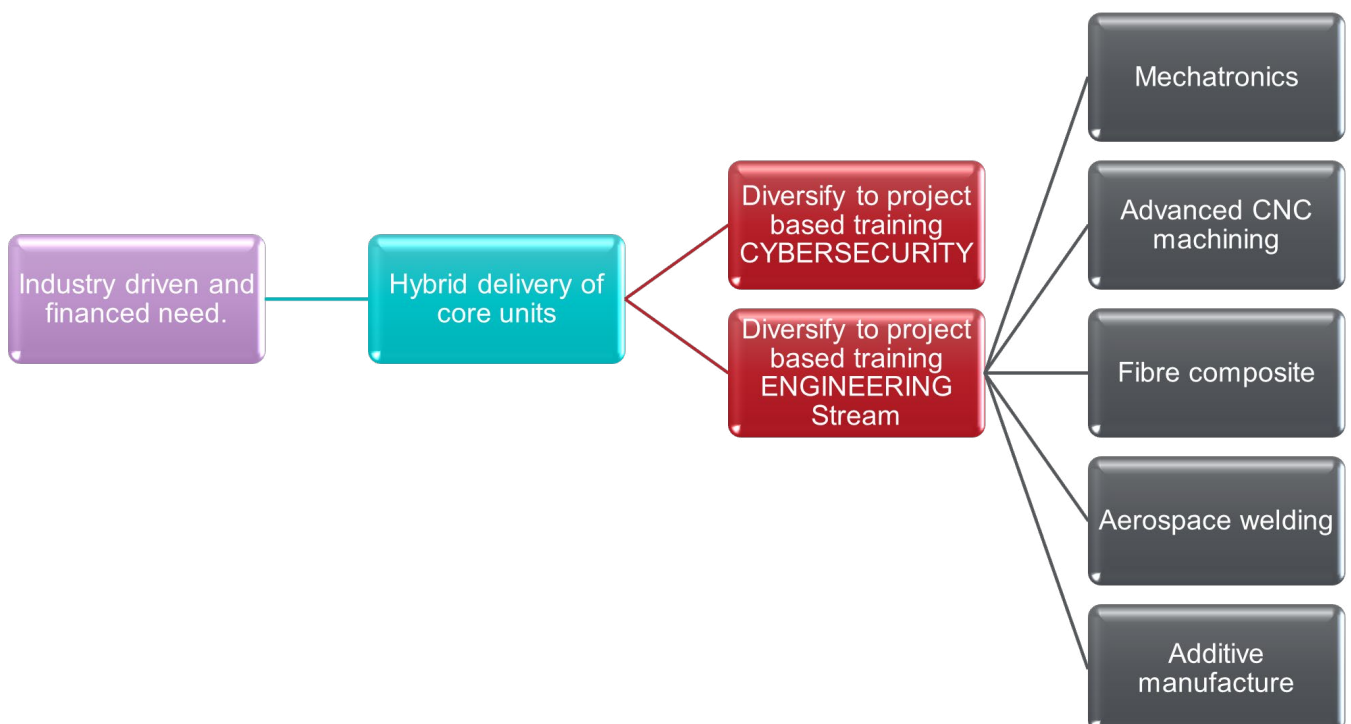




Figure 14. SCCAP Apprenticeship delivery model



Figure 15. Mechatronics apprenticeships lab, Eastern Florida State College

VerA- apprentice mentoring.

The dedicated team at the Senior Experten Service in Bonn are proud of their VerA initiative, a nationwide coaching program of the Senior Expert Service (SES), which is funded by the Federal Ministry of Education and Research (BMBF). The program brings young people who find training difficult together with retired volunteer experts: always according to the 1:1 principle or tandem model. There is no cost to the apprentice and the team were enthusiastic to share the key strengths of their program as it is now being picked up internationally throughout Europe.

Key strengths-

- Motivated, volunteer retired technical executive mentors.
- Available all hours.
- Structured coordination and support of mentors.
- Mentor training and ongoing professional development.
- Mentor stipends to meet out of pocket expenses.
- Mentor support networks.
- Managed meeting process with debriefing.
- Apprentice and mentor must both sign an agreement to meet up.
- One on one, face to face mentoring.
- Matched mentors with apprentice location (within 20kms), training and career pathways.
- Referrals from other apprentice support programs such as the government funded “in school” QuABB program.
- Supports apprentice problems at vocational school, conflict in training, lack of motivation, employer issues and includes direction to additional supports.

Benefits for the apprentice include:

- Free individual coaching and mentoring
- Support in both education and life challenges by a competent and committed senior volunteer
- Life and career guidance
- Improved professional and life skills
- Better integration into the labour market and society
- Enhanced self-confidence in private and professional life

Benefits for the mentor include:

- Use of professional and life experience
- Continued involvement in society
- Interactions with young adults
- Intergenerational understanding

- Widen own skills
- Networking with young adults and fellow volunteers

The VerA initiative is well suited to the German culture of volunteering on retirement and thrives because of this. Australian retirement culture is vastly different. Mentorship of apprentices in Australia would have to be attached to some manner of paid work, closely coordinated with bespoke training and professional development. An opportunity exists here for the Australian government to provide new employment opportunities for Australian retirees for the benefit of our apprentices and future workforce needs.

There is alignment here with both the aims of the Victorian Apprenticeship Taskforce (Allan, 2023) and the new Australian Governments Apprenticeship Support Services (DEWR 2024) with an existing, structured and coordinated mentor program that could easily be adapted to include the employment of technically skilled retirees to support Australian apprenticeship course completions.

10th Annual Apprentice Conference UK- conference updates from the progenitor of the Australian apprentice model.

The 10th City and Guilds Annual Apprenticeship conference was a unique opportunity to obtain an overview of the issues impacting UK apprentices. There were focussed discussions on the challenges facing post Covid 19 learners (anxiety, social issues, mental health and resilience) particularly in the vulnerable 16 to 19-year age group. There was strong correlation with similar issues facing young Victorian apprentices as seen in the Victorian provider staff survey conducted for this study (**Appendices 1 and 2**) and the accompanying apprentice stories (**Appendix 3**).

The UK government, in response to apprentice learning needs, has mandated that all apprentice applications now include additional testing for learning needs support (as of August 2023). Their model uses online testing to expediate the identification of apprentices with learning challenges, immediately making them eligible for learning support without further medical requirements. This

process is highly considered for the benefit of all Australian apprentices, getting help to those who most need it, in a faster and more efficient manner.

The UK educational system is very “neurodivergent” conscious and additional funding for support of neurodiverse apprentices was a key conference agenda item. There was concern about the effect on apprentice mental health and retention (Figure 13), by the overly complex academic burden of mandatory foundation apprenticeship skills and the inconsistency of end point assessments. The Victorian system is not burdened with core foundation skills or endpoint assessments, however, additional funding to support neurodiverse apprentices would be worth consideration.



Figure 16. Conference session on issues affecting apprentice retention

The Australian apprentice training system would also benefit from improvements in vocational teacher training and professional development. The UK is also experiencing a shortage in trade teachers (known as Further Education teachers). There are a variety of pathways to this role including a Learning and Skills Teacher Level 5 higher apprenticeship (GOV.UK, 2024) or with some employers work straight away and complete teaching qualifications on the job. Australia needs a more versatile entry system for trade training teachers if we are to build and maintain the workforce needed, (National careers, 2024).

There were several dynamic discussions about employers having a pivotal role in apprentice retention and success. This study's provider survey, notes that a significant number of apprentices were observed having issues with their employers (15%). Training employers to effectively supervise apprentices is crucial for the success of apprenticeship programs in both the Swiss and German systems.

Specifically, employers and workplace mentors are trained in pedagogical techniques (Hoffman 2015), the structure of the apprenticeship system, legal requirements (Zhang 2024), curriculum and skills standards, assessment and feedback, balancing work and learning (Hoffman 2015), mentoring and socialisation (Besozzi 2023) (Hoffman 2015), safety and workplace regulations. Victorian apprentices need employers who have been educated to understand their responsibilities to apprentices and are happy to work with the VRQA (VRQA 2024), to be accountable in their roles as apprentice employers and supervisors.

The UK conference was reflective of many issues currently being experienced in the Victorian apprenticeship sector and provided some new insights into novel solutions worth considering in a local context.

Key Findings.

A series of bold considerations are presented in the section below.

Finding 1: Improve the understanding and acceptance of vocational careers and learning.

The German dual education model was a common frame of reference for vocational learning throughout each location visited. This education model includes work preparation from primary school age onwards and is a tried system that provides work ready students at a younger age, raising the profile of VET education and career pathways with both students and their families.

Consideration 1: Victoria needs to integrate a planned program of work readiness and experience from primary schooling onwards, to include an understanding of VET education and

career pathways and provide better access to VET educational information for students, parents and career practitioners on a par with information currently available for university education.

Finding 2: Mentors and core skill training to guide and support young adult apprentices to a healthy maturity.

In all contexts the 16-19 year age group of apprentices are the most troubled. They are immature young adults who deserve the protection, guidance and the wisdom of their elders, throughout their training, to become qualified members of the workforce, as well as mature adult members of our community. There are many technically skilled Victorian retirees currently seeking part time employment to supplement their income as the cost of living climbs. This could be a win-win scenario for all if the government is able to support it.

Consideration 2: All apprentices should have access to trained mentors, as well as core skills, as a normal part of their apprenticeship training. These core skills should include (but not be limited to) physical fitness for professional WHS, workplace rights for younger workers, positive relationships in the workplace and learning skills.

Finding 3: Mandatory learning support testing.

A UK style apprentice mandatory learning support test on application, would go a long way towards making sure those who need support receive it as soon as possible. In addition to the LNSUPPORT programs already funded through Skills First Free TAFE in Victoria, this process would allow for unstigmatised detection of undiagnosed issues and access to specific supports to improve apprentice course retention and completion rates.

Consideration 3: Victoria should mandate compulsory online learning support testing for all apprentice applicants. These testing results should be enough to qualify an applicant for support.

Finding 4: Employer training. While the VRQA has been revoking employer access to apprentices (VRQA 2023) and reviewing their processes to ensure employers are aware of their responsibilities, a key tool to improve the situation appears to have been overlooked. Employers have a powerful role

in apprentice retention and course completion rates. Mandatory education of employers to earn the privilege to host an apprentice has been used successfully in both Switzerland and Germany for many years with outstanding results within their systems of VET training.

Consideration 4: Victoria should mandate compulsory employer training to qualify them to host an apprentice. This training needs to be short, to the point and easily complied to, for the protection of apprentices and accountability of employers.

Finding 5: Zero cost to apprentices. The SCCAP consortium model (USA), removes pressure from apprentices by facilitating all processes from application to tuition payments. Financial pressure is seen as a significant issue for 16% of Victorian apprentices (provider survey results) and simplifying some of these processes can assist with their ability to complete their course.

Consideration 5: The Victorian apprenticeship model uses approved ANP's to manage the apprenticeship training process between stakeholders (training contracts between employers, apprentices and training institutions). Managing the financial commitments of this contract between employers and training organisations would make sense and ease the pressure on apprentices.

Finding 6: Improved vocational teacher training. *“The most significant factor for students is the expertise of their teachers and their willingness to reframe how they view their teaching by looking at its impact on their students,”* (Hattie 2003). The impact of trade teachers on their apprentice retention and course completion is often undervalued, yet is a key influencer of apprentice engagement and support (Baxter, 2024). The UK now offers multiple pathways to trade teaching following reviews commenced in 2013 (Hall, 2013) and concluding with their 2030 planning (Wilson, 2024). As Australia attempts to address the housing crisis and head towards a clean economy, we need to maximise our trade training processes with best practice in vocational education. The baseline Certificate IV in training and assessment has only ever been an “entry-level qualification of teachers, trainers and assessors

who are delivering training services to vocational learners and assessment services to candidates.” (TAE40122, 2022).

Consideration 6: For the benefit of apprentice course completion, there is an obligation to continue to professionally develop our trade teacher educators in their learning based craft with a variety of supports that could include workshops, professional online updates, mentoring, professional resource development or further study if they are interested. The support should be planned and progressive, offer career education and guidance and not be burdensome to already heavily loaded trade teachers.

Finding 7: Future apprentice training needs. Victoria needs an industry led, agile and responsive workforce training process to build better qualified apprentices. A shift to a model of capabilities and competencies within broader occupational fields would allow for more lateral movement of workers looking to shift occupations. Add to this a curriculum model that develops a deeper understanding of the “how and why” things are done within a trade, and we have better problem solving trades tradespeople who are ready to meet the technical future.

Consideration 7: Australia needs to adopt a training model that is more similar to the German dual education system, driven by industry and responded to by both education and government, all working together. Training curricula must be adjusted to include a deeper understanding of “how and why” within a trade to improve problem solving skills and build the foundations of technical knowledge needed for future careers.

Finding 8: Centralised access to apprenticeships. Some countries use a centralised model to assign apprenticeships to meet current workforce demands (Switzerland). The UK is using a similar model with their existing UCAS system for centralised apprenticeship offerings. (UCAS, 2024).

Consideration 8: Victoria’s VTAC system can be used in a similar manner to UK’s UCAS system, to centralise Victorian apprenticeship offerings and better meet the state’s workforce needs.

05

Considerations and next steps

Multiple factors contribute to trade apprentices leaving their apprenticeships and all stakeholders must share responsibility. Apprentices need educated and supportive employers who prioritise a safe work environment and fair compensation. Australian employers and vocational education and training institutions often assume apprentices arrive with eleven years of satisfactory education and the maturity to be work-ready, which is clearly not the case.

This study journey has generated insights into apprentice experiences and challenges to their training. Eight considerations have been proposed based on feedback from twelve Victorian providers and interviews and observations made throughout the research journeys taken. Some of these bold proposals require generational planning. However, if we do not act, nothing will change.

Now - As a community, it is time for the adults to step up and support our young apprentices. We need to support their maturity, help them develop responsibility, provide them with skills and listen to their voice. Australian youth deserve strong leadership, role models and adults to rely upon. Our youth have become the collateral damage in a flawed training system, impacted by global pandemics and societal/technological changes, all out of their control. The adults need to lead the way out for them to secure our country's workforce and security.

Are we brave enough to stage their exposure to technology in their education? A low technology upbringing supports employability skills. Are we ready to educate everyone about the benefits and opportunities of vocational education and career pathways? If we don't start now we cannot change the future generations.

Supports – Now is the opportunity to bring in the supports our apprentices need; their success will be our success. Test everyone for learning support requirements. Make it simple and online, straightforward and acceptable to funding bodies. Make sure apprentices have core skills in physical fitness for their trade and assist them to develop life and learning skills to mature into positive members of our community.

Provide mentors and support our retirees. Apprentices deserve one on one support to ease their way through their apprenticeship challenges. Make sure an employer has someone trained to support their apprentice appropriately, professionally and safely.

Support our Certificate IV trade training teachers with continued mentorship, training and professional development. Their classroom skills will benefit everyone including apprentices and in turn, our workforce.

Future - Evolve our training ecosystem into an industry driven one that understands broad foundations and advanced specialisations. Use project based learning that has time to teach the how and why of a skill before seeing its application. Work with industry to provide the most up to date learning in agile and innovative deliveries. There is a place for intensive, hybrid, online, project based, or applied delivery that builds a better apprentice ready for a technologically advanced workforce.

There are many discussions to be had to move these proposals forward and launch them into operation. It will take the expertise of industry, those who can petition for change, those who can teach and those who can best design for student experience. Apprentices should be inspired by their learning, delight in their application at work and face their future with enthusiasm for their career choices.

The author looks forward to discussion on these considerations with each Victorian authority along this journey to see apprentice course completion rates improve.

06

Impacts of fellowship

Personal impacts:

This investigative journey has been a character building experience, with multiple opportunities to build self-confidence in both Fellowship themes and the ability to negotiate solo international travel requiring networking with new individuals. There has also been an opportunity to update personal research skills utilising new tools and practices.

The impact of physical international travel for study has been overwhelming, requiring the evolution of leadership skills for a team in Melbourne to those needed to lead research for Australia. The collegiate welcome received in each country has been delightful and surprising and it is enlightening to understand how far away we are and how out of daily consciousness, Australia really is from the rest of the world. It is a great motivator to keep up to date with global best practice and broaden our Australian perspective.

Professional impacts:

In the course of this study, it has become clear that the issues our apprentices are struggling with are not unique. It is comforting to know we are not alone. There are universal struggles with the 16 to 19 year age group of apprentices that include post Covid 19 disengagement, addictive behaviours (especially with phones) and apathy to learning and their futures. This study has brought home to us some bold interventions that are being implemented in the UK and Germany that are certainly worth trying here in Victoria.

At Swinburne, there is continued exploration into the best way to improve apprentice completion rates with a current focus on bespoke, contextualised learning materials and innovative teaching methods, fondly referred to as Ninja Teaching, (Baxter 2024), to better integrate support educators into the apprenticeship experience.

This fellowship has grown networks with fellow providers throughout Victoria gaining their feedback and sharing all learnings. New domestic (VSA, AVETRA, Apprenticeship Victoria, Research Today, VDC and in the apprenticeship taskforce) as well as international (Switzerland, Germany, the UK and USA) contacts have been added to my professional networks. These are now gateways to new opportunities in supporting Victorian apprentice needs.

The impact of insights derived from the study tour and research findings have been transformative, opening up an unexpected career pathway into Victorian trade apprentice support for the author. The primary objective of this fellowship was to identify best practices in improving apprentice retention and course completion. Going forward, the emphasis will be on working with key groups to bring about the considerations within this report and crafting resources to facilitate these processes.

Sectorial impacts:

This research is highly topical at the moment with pressure on both federal and state governments to meet the workforce demands of the Australian housing crisis along with both current and new future economies. There is a strong appetite for VET reform with the Australian curriculum of training packages no longer fit for purpose. The system focuses on highly prescriptive competency-based training that's too occupation specific, leaving our graduates ill-equipped for current and future workforce requirements.

Moving to a training model that recognises core capabilities and competencies within broader occupational fields would allow for a flexible workforce that could meet more diverse industry occupations. This would provide our industries with a flexible labour force that can be upskilled as required. The German system is an example of a model that is driven by industry with responses from both educators and government all working together. The Australian system needs to be driven by industry for industry incorporating the best practice possible in agile vocational education.

This study has offered eight bold considerations to improve apprentice course retention and completion rates as well as contributing to building a better apprentice. These considerations commence with reform from primary schooling upwards to improve the profile and understanding of vocational education and careers with a move to an industry led model that includes curricula designed to give a deeper understanding of the how/why within each trade, to develop technical and problem solving skills.

There are specific considerations to directly assist apprentices by:

- Continuing to develop the quality of Certificate IV TAE training for apprentices
- Access to trained mentors,
- Access to universal core units of training as a minimum for all apprentices

- The support of understanding and educated employers,
- Zero tuition costs to apprentices,
- Mandated learning support testing, and
- Centralised apprentice application processes for the benefit of all.

The purpose of the fellowship is to create systemic change to improve our apprenticeship completions in Victoria and Australia. Swinburne University of Technology has a vocational education taskforce focused on better pathway articulation from VET qualifications to higher education with multiple exit points to meet industry gaps. Other institutions are exploring their responses to state and national challenges.

This Fellowship has been designed to provoke discussion and improvements in state policy for apprentices. The considerations are worth advocating for and the author will continue to share these results as a once in a lifetime opportunity for VET reform. Dissemination of these results will continue throughout 2024-2025 using every network available. It is hoped that there will be many opportunities to operationalise these considerations and the author has working plans to:

- Design improved curricula for training in partnership with industry,
- Implement professional development for Cert IV TAE trade training teachers,
- Design education programs for the understanding of vocational education and career pathways for students, parents and career practitioners from primary school upwards,
- Design apprentice mentor support training and program based around the VerA program, and
- Explore online apprentice learning testing for Victoria, as studied in the UK.

Implementation of the considerations from this Fellowship will commence with further meetings with interested key Victorian stakeholders intent on working toward change for our apprentices. The author intends to contact:

- The VSA
- Apprenticeship Victoria
- The Apprenticeship Taskforce
- Victorian providers and
- DJSIR

07

Sector engagement (dissemination)

At the time of submission, the findings from this study have been disseminated and will be shared through the following methods:

Publications

- 2024 October AVETRA Conference – Paper- *Bold policies to improve trade apprentice retention and course completion rates for a current and future Victorian workforce*. (International Journal of Training Research), 3-4 October, Sydney.
- International Specialised Skills Institute 2024 Fellowship Report - *Bold policies to improve trade apprentice retention and course completion rates for a current and future Victorian workforce*.
- Joint research paper for Swinburne University of Technology Vocational Education and Training and Higher Education on *Apprentice Stories and Blockers to Success* (semester 2 2024).
- 2024 ACDEVEG Conference paper. “The need for “Ninja” style co-teaching to support VET teacher delivery workloads and improve construction apprenticeship completions. 9-10 December, Queensland.

Conference presentations and public speaking:

1. 2024 October AVETRA Conference – Presentation ISS Fellowship - Bold policies to improve trade apprentice retention and course completion rates for a current and future Victorian workforce. (Abstract has been accepted).
2. Swinburne presentation to Pathways and Engagement Team
Thursday, 21 March 2024 12:00 PM-1:00 PM
3. Victorian Skills Authority (VSA) VCE-ISSI Fellows Forum #3
Tuesday, 28 May 2024 2:00 PM-4:00 PM.
4. Apprenticeships Victoria, Department of Jobs, Skills, Industry and Regions (DSJIR) Forum
Tuesday, August 20 10am – 11am.
5. Sharan Burrows and Rachel Clarke, Victorian Apprenticeship Taskforce. Requested to be booked.
6. VET-VCE Work Group- requested to be booked.
7. Professional development for Swinburne trade specific LLND teachers on supporting apprentices. Swinburne University of Technology (December 2024).

08

Conclusion

In summary, the course retention and completion rates of Victorian trade apprentices currently remain unsatisfactory, meaning both Victoria and Australia cannot meet the needs of our domestic workforce.

Multiple factors contribute to apprentices leaving their jobs and all stakeholders must share in responsibility for this. It is time to intervene and change our Vocational education and training ecosystem. There needs to be direct support for apprentices (including mentors, learning support testing and simpler processes for them), a staggered approach to the introduction of technology, up to the age of 16, to improve employability skills, and generational improvement in vocational education and training (VET) understanding for parents and students with improved access to information.

Apprentices deserve supportive employers who prioritise a safe work environment and fair compensation by requiring employer education for the right to have an apprentice. Future training needs to be industry driven with project based learning to build better apprentices.

This fellowship was aimed at acquiring new and innovative solutions from international best practice that can be shared to improve apprentice learning, educational experiences, and success so that Victoria can meet its workforce skill demands for a new world of work.

09

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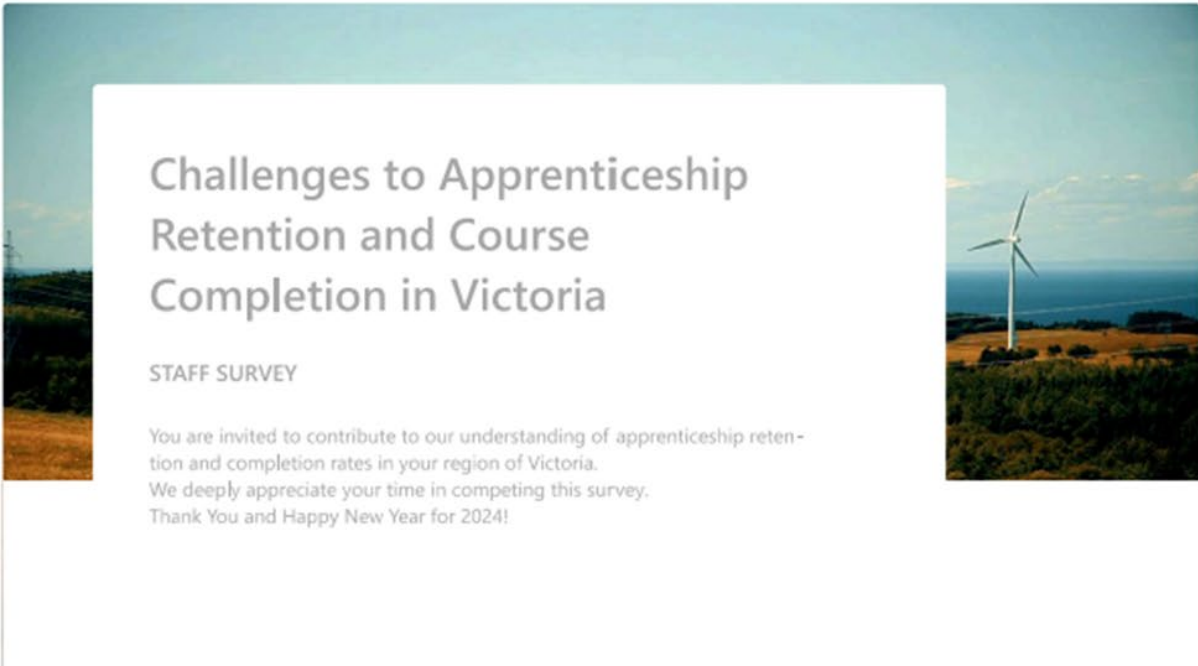
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10

Appendices

APPENDIX 1- PROVIDER SURVEY TOOL



Challenges to Apprenticeship Retention and Course Completion in Victoria

STAFF SURVEY

You are invited to contribute to our understanding of apprenticeship retention and completion rates in your region of Victoria. We deeply appreciate your time in completing this survey. Thank You and Happy New Year for 2024!

* Required

1. Full Name *(if you are happy to share your name)*

2. Training institution name? *

3. Campus location? *

4. Your department within the training institution (eg- electrical, plumbing, carpentry etc)? *

5. Your role at the training institution (eg- trainer, manager, administration etc)? *

6. Learning issues -

Please choose from the list below any issues you know of that are affecting your apprentices learning, retention and course completion?

You can select multiple answers. *

- Dyslexia
- Specific Learning Disorder
- Hearing disorder
- Seeing disorder
- Language disorder
- Covid 19 interrupted learning
- Learning gaps due to poor engagement
- Learning gaps - LLN (literacy, learning and numeracy)
- All of the above
- Other

7. If you selected "other" can you please explain here.

8. Illness Issues -

Please choose from the list below any issues you know of that are affecting your apprentices learning, retention and course completion?

You can select multiple answers. *

- Acute illness
- Chronic illness
- Covid 19 illness
- Sports/Physical related injuries
- All of the above
- Other

9. If you selected "other" can you please explain here.

10. Impairment/Disability Issues -

Please choose from the list below any issues you know of that are affecting your apprentices learning, retention and course completion?

You can select multiple answers. *

- Acquired brain injury
- Autism spectrum disorder
- Back injury/chronic pain
- Crohn's disease
- Chronic fatigue syndrome
- Diabetes
- Epilepsy
- Hand/wrist/arm/shoulder injury
- Hearing disorder
- Muscular dystrophy, cerebral palsy etc
- Motor disorders
- Unexpected pregnancy or early infant care an either partner
- Seeing disorder
- All of the above
- Other

11. If you selected "other" can you please explain here.

12. **Mental Health Issues -**

Please choose from the list below any issues you know of that are affecting your apprentices learning, retention and course completion?

You can select multiple answers. *

- Post Covid 19 disengagement
- Anxiety
- Depression
- Self-harm
- Suicidal ideation
- ADHD
- Conduct disorder (example oppositional defiance disorder ODD)
- All of the above
- Other

13. If you selected "other" can you please explain here.

14. Personal Issues -

Please choose from the list below any issues you know of that are affecting your apprentices learning, retention and course completion?

You can select multiple answers. *

- Family violence
- Homelessness
- Financial
- Employer
- Workplace bullying
- Sexual harassment
- Workplace ageism
- Drug abuse
- Alcohol abuse
- Addictive behaviours (eg: gambling, phones etc)
- Family commitments competing with study/work/financial needs
- All of the above
- Other

15. If you selected "other" can you please explain here.

16. **Regional Perspectives -**

Please choose from the list below any issues you know of that are affecting your apprentices learning, retention and course completion?

You can select multiple answers. *

- Low employment opportunities
- Access to training institute
- Long travel times
- Low socio-economic area
- Local "apprenticeship workplace culture is destructive
- All of the above
- Other

17. If you selected "other" can you please explain here.

18. **Career choice factors -**

Please choose from the list below any factors you know of that are affecting your apprentices career choice and therefore learning, retention and course completion? **You can select multiple answers. ***

- Family tradition
- Peer pressure (family or friends)
- Opportunity presented itself
- Tried it and liked it
- Better money prospects
- Just chose it to give it a try
- Parents made me do it
- All of the above
- Other

19. If you selected "other" can you please explain here.

20. Can you make comment on the ethnic makeup of your region and whether, in your opinion, this impacts apprenticeship retention and completion rates? *

21. Are there any regional specific issues affecting apprentice learning and retention we are not aware of? *

22. With respect to privacy, can you please share with us any apprentice stories you may know that have impacted apprenticeship retention and completion at your institution, that has not been covered by the above questions? *

APPENDIX 2 – PROVIDER SURVEY RESULTS

Victorian provider survey results (January to April 2024). The Survey tool was written and shared via Microsoft Forms. A copy of the survey tool can be found in **Appendix 1**.

Summary of the provider survey results.

Provider Responses - Fifty- eight responses were received from 12 different providers throughout Victoria. Most were received from Swinburne, Chisholm and Holmesglen TAFE's. (Survey questions 2-3).

Table 1- Provider responses.

Provider	Delivery locations	Urban or Rural cohorts	% responses provided
Box Hill TAFE	Box Hill	U	2
Chisholm	Berwick/Dandenong/Frankston/Mornington Peninsula	U/R	21
Federation University	Ballarat	R	3
Gordon TAFE	East Geelong	U/R	2
Holmesglen	Chadstone/Glen Waverley/ Moorabbin/ North Melbourne	U	21
Kangan Institute	Docklands/Broadmeadows/Bendigo/Castlemaine	U/R	5
Melbourne Polytechnic	Heidelberg/Fairfield	U	7
Southwest TAFE	Warrnambool	R	7
SuniTAFE	Mildura	R	2
Swinburne University of Technology (SUT)	Croydon/Wantirna	U	22
TAFE Gippsland	Morwell	R	5
Victoria University	Sunshine	U	3

The provider staff roles held by those who responded to the survey, were mainly trade teachers/assessors/trainers. (Survey question 5). The majority of responses were from trade teachers (known by different titles at different institutions).

Table 2- Provider staff roles.

Provider staff roles who responded.	% of responses
Trade teacher/assessor/trainer	71
Manager level	12
Administrative staff	14
Counsellor/support	3

The departments of provider staff who responded were mostly from plumbing. (Survey question 4).

Table 3- Provider staff departments.

Staff departments who responded to the survey.	% of responses
Electrical	19
Plumbing	40
Automotive	3
Horticulture/conservation/sport turf/landscape	5
Hair & Barbering	2
Construction/joinery/building/trades	14
Apprentice support/enrolment	14
Engineering	3

Learning issues-The most common apprentice learning issues noted by provider staff. Learning gaps (literacy, learning, numeracy and digital skills-LLND) and dyslexia were the dominant learning issues commented on by provider staff.

Table 4a- Learning issues responses tally

#	Learning Issues	% of responses
1	Dyslexia	20%
2	Specific Learning Disorder	9%
3	Hearing Disorder	3%
4	Seeing Disorder	0%
5	Language Disorder	6%
6	Covid 19 interrupted learning	10%
7	Learning gaps due to poor engagement	17%
8	Learning gaps - LLN (literacy, learning and numeracy)	24%
9	All of the above	1%
10	Other	5%

Graph 1-Common learning issues noted.

Most common learning issues noted were LLND learning gaps and dyslexia.

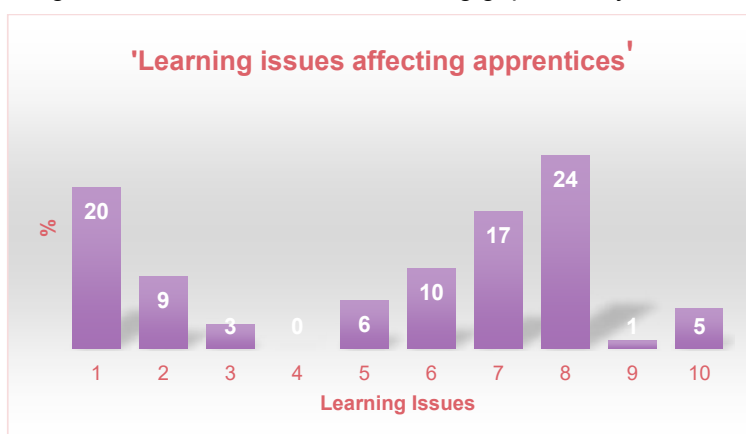


Table 4b-‘Other’ – Additional 10 comments provided

#	Comment
1	<i>“Mobile phones taking over their lives not wanting to engage with other students.”</i>
2	<i>“Attention Deficit Disorder.”</i>
3	<i>“Mental Health issues.”</i>
4	<i>“Employer pressure to work on TAFE days.”</i>
5	<i>“Poor time management & organisational skills.”</i>
6	<i>“Mental health diagnosis including ADD affecting ability to sit tests and work on course material independently.”</i>
7	<i>“Some learners have diagnosed learning issues.”</i>
8	<i>“Anxiety - Family drama - Personal relationship drama – ADHD.”</i>
9	<i>“English as a second Language (Language Disorder was not appropriate).”</i>
10	<i>“Handwriting disability.”</i>

Illness issues- The most dominant health issue affecting apprentices was clearly sports/physical related injuries. Understandable with the general age group of risk taking younger men.

Table 5a- Illness issues responses tally

#	Illness Issues	% of responses
1	Acute illness	17%
2	Chronic illness	7%
3	Covid 19 illness	18%
4	Sports/Physical related injuries	45%
5	All of the above	7%
6	Other	4%

Graph 2-Common illness issues affecting apprentices.

45% of respondents notes sports and physical injuries affecting apprentice performance.

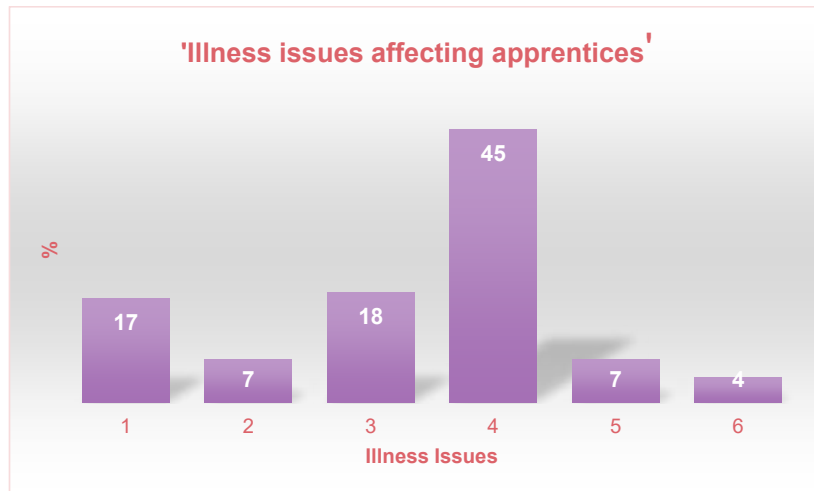


Table 5b - 'Other' – Additional 2 comments provided

#	Comment
1	<i>“Various issues ranging across multiple areas of injuries, most not significant.”</i>
2	<i>“Family issues, social issues.”</i>

Diagnosed Impairment/disability issues. The most common impairment/disabilities noted among apprentices was injury (which aligns with number 5 above, and autism spectrum disorder (ASD).

Table 6a- Impairment/disability issues responses tally

#	Impairment/disability Issues	% of responses
1	Acquired brain injury	1%
2	Autism spectrum disorder	27%
3	Back pain/chronic injury	16%
4	Chrones Disease	0%
5	Chronic Fatigue Syndrome	4%
6	Diabetes	1%
7	Epilepsy	3%
8	Hand/wrist/arm/shoulder injury	28%
9	Hearing disorder	3%
10	Muscular dystrophy, cerebral palsy etc	0%
11	Motor disorders	1%
12	Unexpected pregnancy or early infant care an either partner	3%
13	Seeing disorder	0%
14	All of the above	0%
15	Other	5%

Graph 3-Impairment/disabilities affecting apprentices.

Both Autism and injuries to the wrists/arm/shoulder and back have been particularly noted by provider staff.

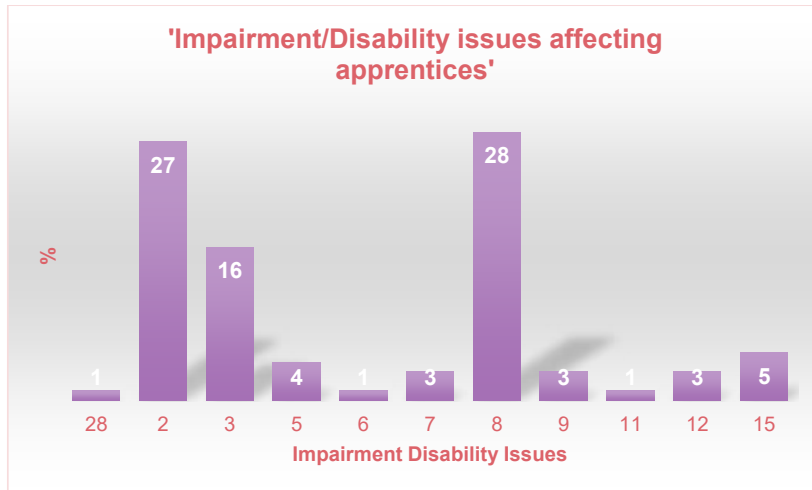


Table 6b - 'Other' - Additional 4 comments provided

#	Comment
1	<i>“Generally, to become a plumber you couldn't have any of the above to start your apprenticeship.”</i>
2	<i>“Occasional not fit for work due to accidents in work and outside of work.”</i>
3	<i>“Work, sport or car accident injuries.”</i>
4	<i>“ADD, Defiance Disorders and Pathological demand avoidance.”</i>

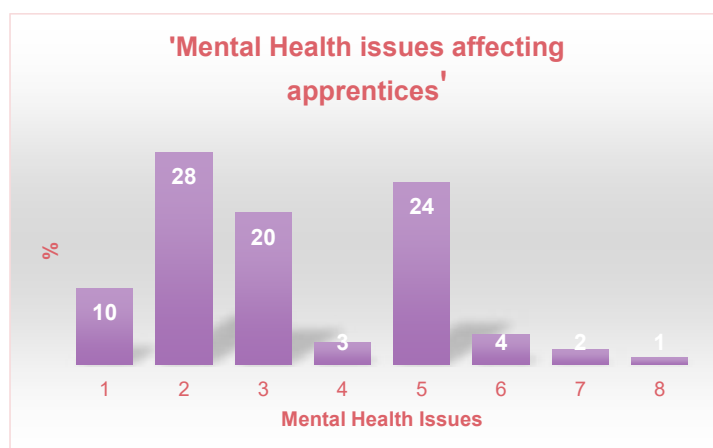
Mental health issues. Mental health issues commonly observed among apprentices included ADHD, anxiety and depression.

Table 7a- Mental health issues responses tally

#	Mental Health Issues	% of responses
1	Post Covid 19 disengagement	10%
2	Anxiety	28%
3	Depression	20%
4	Self-harm	3%
5	ADHD	24%
6	Conduct disorder (example oppositional defiance disorder ODD)	4%
7	All of the above	2%
8	Other	1%

Graph 4 -Common impairment/disabilities affecting apprentices.

Both Autism and injuries to the wrists/arm/shoulder and back have been particularly noted by provider staff.



Life issues. Life issues most noticed by provider staff, were financial pressures and employer issues.

Table 8a- Life issues responses tally

#	Life Issues	% of responses
1	Family violence	6%
2	Homelessness	4%
3	Financial	16%
4	Employer	15%
5	Workplace bullying	8%
6	Sexual harassment	3%
7	Workplace ageism	1%
8	Drug abuse	11%
9	Alcohol abuse	8%
10	Addictive behaviours (e.g. gambling, phones etc)	11%
11	Family commitments competing with study/work/financial needs	9%
12	All of the above	1%
13	Other	0%

Graph 5 -Life issues impacting apprentices.

Both Financial and Employer issues have been particularly noted by provider staff.

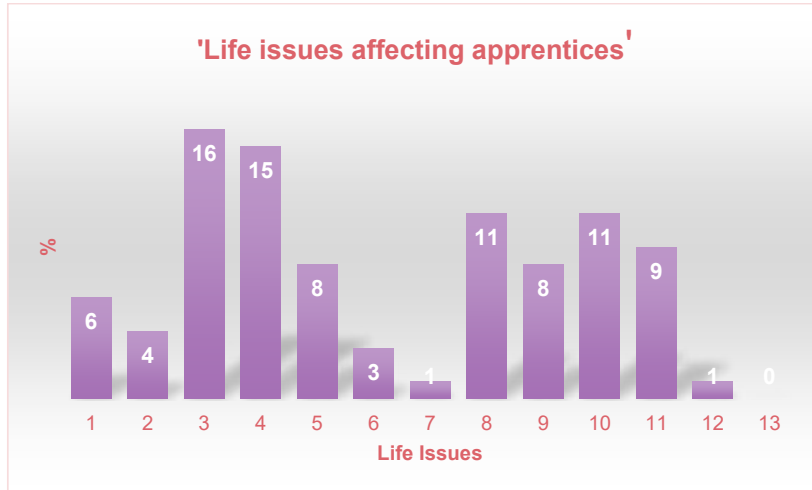


Table 8b - 'Other' - Additional 1 comment provided

#	Comment
1	<i>“Addiction to social media (Facebook, Instagram, TikTok, instant messaging) to the point, that students can’t be separated from their phones for more than several minutes without a compulsive need to check.”</i>

Regional factors. Regional factors noted to be impacting apprentices include long travel times and the repercussions of living in a low socio-economic area.

Table 9a- Regional Factors responses tally

#	Regional Factors	% of responses
1	Low employment opportunities	8%
2	Access to training institute	17%
3	Long travel times	33%
4	Low socio-economic area	20%
5	Local "apprenticeship workplace culture is destructive	13%
6	All of the above	1%
7	Other	5%

Graph 6 -Regional factors impacting apprentices.

Long travel times has been particularly noted by provider staff as affecting their apprentices.

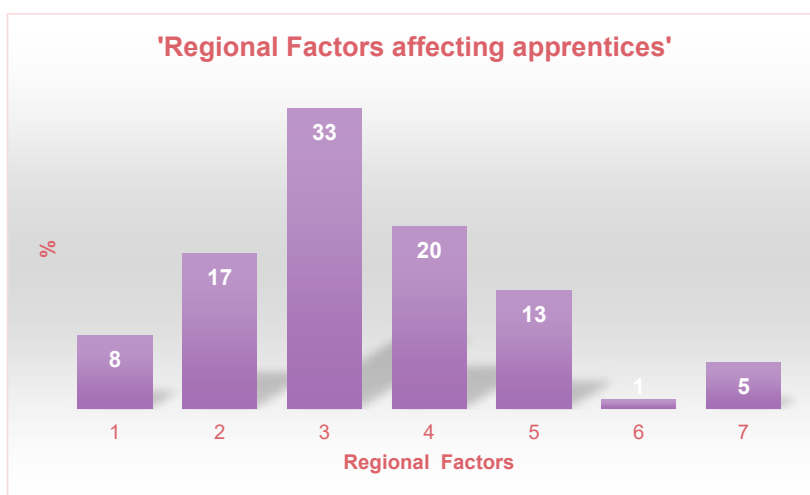


Table 9b - 'Other' - Additional 1 comment provided

#	Comment
1	"Remuneration, Change of Career."

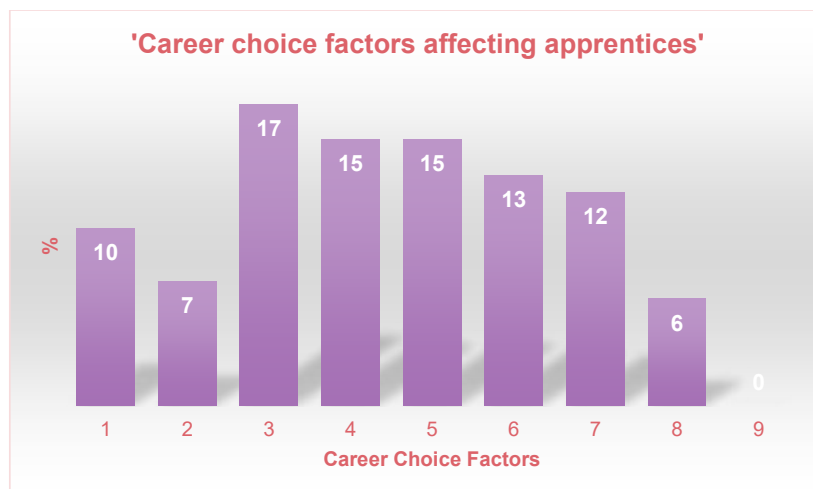
Career choice factors. Provider staff observed apprentices being opportunistic in career choices, with a focus on money and future prospects. Giving it a go is also a strong motivator.

Table 10a- Career choice factors, responses tally

#	Career Choice Factors	% of responses
1	Family tradition	10%
2	Peer pressure (family or friends)	7%
3	Opportunity presented itself	17%
4	Tried it and liked it	15%
5	Better money prospects	15%
6	Just chose it to give it a try	13%
7	Parents made me do it	12%
8	All of the above	6%
9	Other	0%

Graph 7 -Career choice factors affecting apprentices.

Opportunities for apprenticeships is a strong influence on apprentices as noted by provider staff.



APPENDIX 3 – COLLECTED APPRENTICE STORIES

The final question of the survey asked for provider staff to share any apprentice stories they may know of that are relevant to their apprentice experiences.

“With respect to privacy, can you please share with us any apprentice stories you may know that have impacted apprenticeship retention and completion at your institution, that has not been covered by this survey.”

This table summarises those apprentice stories received from throughout Victoria. All identifiers for provider, staff and apprentice have been removed from the collected information.

Only basic grammar and spelling have been adjusted.

Table 1. Summary of apprentice stories.

#	Collected apprentice stories
1.	<i>“I experienced that a few students from Afghani background struggling in completing their apprenticeship program due to their LLN issues.”</i>
2.	<i>“Relationship struggles with partners such as an unplanned pregnancy, break ups, social pressures put on a partnership. Also lack of father/mother to confide in. We’ve had apprentices come to campus and seek out a friendly face as they have no one else to talk to.”</i>
3.	<i>“Apprentices feel that we are running a business for profit and not a place to develop their trade in an educational environment. “</i>
4.	<i>“Apprentices have not had suitable training facilities, training and consistency to remain engaged and interested so they start losing interest. The fact a lot of apprentices do one stream of work with their employers, makes it hard for them to understand units they are not familiar with. Plumbing has a lot of units to learn, and it is hard to make the apprentices understand there is more to plumbing than just what they do at work.”</i>
5.	<i>“I have watched students struggle with the TAFE assessment-focused teaching model, students not getting the opportunity to develop their skills and gain confidence before the assessment.”</i>
6.	<i>“Students that live in small remote towns where lose their job and have not got the opportunity to work with another employer as he is the only employer in the town, therefore cannot continue with training.”</i>
7.	<i>“Home sick from other states, homelessness, injured at work, injured playing sport.”</i>
8.	<i>“Student retention and completions is most greatly impacted by the quality of the staff, training material and the resources that the institute has at its disposal. Having the bulk of the program on an online platform is not an ideal mode of delivery and assessment if you want students to absorb and retain information. Courses should be distilled down to their essential/relevant elements and they key content should then be relayed</i>

	<i>through quality resources and practical examples. Competency should then be assessed through written or drawn worked examples and practical hands-on projects. There is a place for online delivery and assessment, but I would argue that it should not make up more than 10-20 percent of overall delivery.”</i>
9.	<i>“An engineering apprentice was going to withdraw because of LLN issues however we convinced him to stick with it and supported him with 1:1 LLN support and he is now doing really well and progressing through the course.”</i>
10.	<i>“The area I look after has high retention as with key clients I am dealing with are having regimented recruitment processes.”</i>
11.	<i>“The backlog of apprentices, pressure to over enrol and under-deliver have majorly affected our department along with residual effects of covid-19 still filtering through. There has also been a new training package employed throughout the plumbing sector throwing confusion and non-compliance through the ranks of trainers and organisations. The combination of these things has resulted in an awful experience and poor retention of students at name removed”.</i>
12.	<i>“Positive recognition at workplace has always been a common factor in students who have stayed in the industry and completed the apprenticeship program successfully. And the most common reason for leaving the trade I have experienced from the apprentices is the financial side. Most trades pay more than Automotive.”</i>
13.	<i>“Helicopter mothers that don’t understand the importance of self-determination and schoolwork that students must complete and submit as part of their training. Workplaces too busy to release students for Blocks. Student with low LLN seems to be higher, and not resourced with a laptop it’s a massive problem for a lot of students.”</i>
14.	<i>“I have had a number of employers that did not manage their apprentice's mental health well. One apprentice lost his best mate to suicide, and his boss told him he had to come to work in the morning before his funeral, and he expected him back at work the next day.”</i>
15.	<i>“One of the major issues we have is employers making apprentices work when they should be attending training, causing the apprentice to potentially fall behind or drop out.”</i>
16.	<i>“Mismanagement / poor treatment of apprentices by teachers.”</i>
17.	<i>“Employers on multiple occasions have chosen to place apprentices with on-site RTO's, with a negative influence on the level of skill and knowledge. Some have subsequently moved to train with us, and their progress has been negatively affected by the poor quality of the previous RTO's training.”</i>

18.	<p><i>“Unfortunately, in Plumbing there has been a certain way of training that has been provided for a long time. Almost putting the cart before the horse. Students have done a lot of self-directed study, and then expected to complete assessment first go, with no learning tasks or demonstration. This happens at quite a lot of organisations. Not all organisations entire courses are run like this, but a lot are.</i></p> <p><i>This does not give the student the required foundation of knowledge or direction for learning, nor the opportunity to practice before assessment. And with how technical, training is becoming students need structure. The outcome being little to no retention of information. A subpar standard of theoretical and practical components. No direction or path to follow for their training journey. And in quite a few cases training becoming overwhelming, not achievable, and resulting in a career change.”</i></p>
19.	<p><i>“Gambling and drug related issues.”</i></p>
20.	<p><i>“Learning difficulties students won’t admit to for fear of bullying.”</i></p>
21.	<p><i>“The majority of apprentices leave in the second year due to the low pay; they can work less hours for more pay in the majority of retail workplaces.”</i></p>
22.	<p><i>“The majority of retention and completion issues are based around mode of apprenticeship delivery.</i></p> <p><i><u>For example- workplace training.</u> Apprentices don’t get the necessary training or time allocation to complete their studies when on site and therefore cannot meet the training package requirements for assessment. Then when required to complete gap training, are then at a disadvantage due to being kept on site.</i></p> <p><i>The apprentices also miss out on the social networking with other apprentices.”</i></p>
23.	<p><i>“The cost of their training needs to be subsidised more. Some employers have more than 1 apprentice and some employers are still making their apprentice pay and not re-imbursing them.....which is against the award.”</i></p>
24.	<p><i>“Employer sign-off is a bit challenging. Sometimes, the employer holds off on the final sign-off due to financial gains or other reasons.”</i></p>
25.	<p><i>“A reoccurring issue is employers continually not releasing apprentices to attend TAFE blocks. This affects their completion and results in having to extend apprenticeship durations. This in turn can disengage the apprentice and sour their impression of the industry.”</i></p>
26.	<p><i>“Some bosses take on kids for cheap labour, then in their second year off load “em”. You need a license to own a dog, but when it comes to a young guys work journey anyone can take on an apprentice.”</i></p>
27.	<p><i>“The apprentices often do not check their emails and it requires regular follow ups to get them completed. This process can take weeks if the apprentice and employer insist on not cooperating.”</i></p>

28.	<i>"A young apprentice that was going through a gender change. This person was treated poorly by the employer and ended up leaving."</i>
29.	<i>"Workplace bullying existing within companies where the culture allows for verbal and unspoken harassment, including sexual harassment. Female harassment is a leading cause of dropout rates for the apprentices I have worked with. A second issue contributing to completion rates, include the lack of training or awareness of adjustments for diagnosis of students i.e.: Tafe trainers and EM's experience with supporting ADD diagnosis within the Tafe setting."</i>
30.	<i>"Recently an employer refused to send his apprentice to TAFE until he had a "Low Income Health Care Card". The employer refused to pay for the apprentices TAFE unless fees were at the discounted rate. Legislation states that the employer has two options when paying for training: 1. pay when invoiced by TAFE 2. Apprentice pays and employer reimburses the apprentice every 6 months. On average 50% of employers pay and the other 50% either reimburse the apprentice or refuse to reimburse the apprentice."</i>
31.	<i>"Apprenticeship processes can be confusion to some. An employer or apprentice doesn't know/understand why they need an Epsilon (training contract) and the impact of it. Extensions and recommencements take a long time to get processed."</i>
32.	<i>"On numerous occasions a mature aged apprentice will not complete the apprenticeship due to financial pressures."</i>
33.	<i>"Most cite financial constraints and the difficulty of the course."</i>
34.	<i>"Some employers do not pay for the student's school fees upfront, so the student pays the bill, and pays tax, the employer pays the student back but adds it to their wage, the student pays tax on their salary, the student has paid tax twice. (22%tax) Some student employers who operate as a "department" within other companies, don't want attention brought onto them. So, they ask the apprentice, not to send the student fee invoice to the office, so not to bring attention to their workshop. This causes the student to not want to progress as a new unit of study will need a new payment requirement. Some employers ask the students to pay for their own PPE, and pay it off as a before tax, out of their pay. Some smaller employers, allow the apprentice to work alone onsite or in the factory. without supervision. It is common for some employers to sack an apprentice after they complete their apprenticeship."</i>
35.	<i>"As far as I am aware, any students who have been impacted have spoken to our student success coaches."</i>

36.	<i>“Low wages alongside long working hours. Apprentices are struggling to afford daily living expenses on poor wages. Some have young families, and they simply can’t manage the work/life balance.”</i>
37.	<i>“One student asked for assistance in finding another employer, as he had to pay rent and look after a newborn child, but his employer/friend refused to pay him more/enough to live off.”</i>
38.	<i>“Cost of living pressures and more money offered on government jobs for labour.”</i>
39.	<i>“I have a very smart student who showed great problem solving and mathematics skills, yet struggled with handwriting to the extent he became completely disengaged in class. He showed signs of isolation, falling asleep, and distracted in class - turns out this disability cripples his learning ability.”</i>

APPENDIX 4 - TABLE OF ACRONYMS USED IN THIS REPORT.

Acronym	Meaning
ANP	Apprentice network provider
ASD	Autism Spectrum Disorder
ACSF	Australian Core Skills Framework
AV	Apprenticeships Victoria
DJSIR	Department of Jobs, Skills, Industries and Regions
ELVET	Early leaving from vocational education and training (Germany)
ISSI	International Specialised Skills Institute
LLND	Literacy, learning, numeracy and digital skills
NSW	New South Wales (Australia)
QuaBB	Qualifizierte Ausbildungsbegleitung in Betrieb und Berufsschule <i>Capacity building for students, companies and vocational schools involved in apprenticeship-training</i>
SES	Senior Experten Service (Germany)
SCCAP	Space Coast Consortium Apprenticeship Program
SFUVET	Swiss Federal University for Vocational Education and Training
SME	Small to medium enterprises
SpaceTek	SpaceTec Partners Inc.
UCAS	Universities and Colleges Admission Services
UOC	Unit of Competency
VET	Vocational Education and Training

VRQA	Victorian Regulatory and Quality Authority
VSA	Victorian Skills Authority
VTAC	Victorian Tertiary Admissions Centre
WHS	Work, health and safety



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