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# VET for secondary school students: a research synthesis

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## INTRODUCTION

Vocational education and training (VET) in schools promises a seamless entry into apprenticeships, skilled work and further education options, with many best practice examples of this type of training delivered in schools identified around Australia (Clarke 2015). Concerns about the status or perception of VET more generally, the perceived quality of delivery and assessment of VET in senior secondary education and its legitimacy as a post-school education and training pathway detract from these promises to a degree (Clarke 2014; Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020; Polesel et al. 2019; Zoellner 2020). This synthesis identifies insights emerging from existing research on the delivery of VET to secondary students in Australia, insights that could assist in providing a meaningful consideration of and response to concerns such as those described. Our focus here is on nationally recognised VET qualifications delivered to secondary school students, those that contribute to their Senior Secondary Certificate of Education (SSCE) rather than the more general career education and work experience activities that constitute vocational learning.

## HIGHLIGHTS

- Participation in VET programs in school has remained relatively stable over the last 10 years, ranging from around 233 800 students in 2010 to 241 200 in 2020, with a peak of 257 100 in 2015. Measuring the full extent of participation is made difficult, however, due to the national definition and reporting scope of VET for secondary school students, which excludes VET that does not directly contribute to a Senior Secondary Certificate of Education (SSCE).
- Undertaking a school-based apprenticeship or traineeship has been found to lead to higher rates of apprentice- and traineeships or other types of employment post-school. The proportion of young people undertaking this type of VET program, however, has remained at less than 10% for the last five years.
- The quality of VET programs delivered as part of a SSCE is generally good, but persistent concerns remain about the quality of some programs, particularly those undertaken through third-party or auspicing arrangements. Similar concerns apply to the quality of career advice.
- The short-term outcomes from VET programs delivered in schools are positive, with about 75% of students employed or in further education and training six to 12 months after completing their training, although the effectiveness of these programs in facilitating access to higher-level qualifications post-school is questioned. These positive outcomes continue in the medium-term, with about 80% of those who undertook VET programs at school employed, including working and studying, four to five years post-school completion.
- Limitations in the current data collections, however, make it difficult to measure the full investment in, quality of, and long-term outcomes from, VET programs delivered in schools.

# VET FOR SECONDARY SCHOOL STUDENTS IN AUSTRALIA

## What is VET for secondary school students?

The integration of VET into the secondary schooling environment has been influenced by both education and labour market factors. VET in secondary school provides students with the opportunity to gain job-related skills; it also provides an opportunity for engaging and retaining in education and training the students who would normally have disengaged and left.

The 1999 *Adelaide Declaration on National Goals for Schooling in the 21st Century*[1] referred to the importance of participation and access to VET as part of compulsory secondary schooling (Ministerial Council on Education, Employment, Training and Youth Affairs [MCEETYA] 1999). This led to the development in 2000 by the MCEETYA VET in Schools Task Force of the first national framework to encompass both VET and enterprise and vocational learning (MCEETYA 2001). This framework, which replaced a plethora of state-based 'vocational' courses and credentials delivered through the school system (Polesel et al. 2019), articulated a vision for an integrated system that assisted young people with the school-to-work transition through the opportunity to undertake both nationally recognised VET programs[2] (including school-based apprenticeships and traineeships[3]) and programs that allowed them to complete their Senior Secondary Certificate of Education (Misko et al. 2019).

Historically known as 'VET in Schools' programs, today these programs are also referred to as 'VET for secondary school students', 'VET delivered to secondary students', or variations thereof, signifying that they are treated in the same way as VET programs delivered outside the school environment and operating under the same quality standards (Education Council 2014). Here, we use the term 'VET for secondary school students' or 'VfSSS' in short. The types of programs in scope are usually VET qualifications delivered in Years 11 and 12, these contributing to the SSCE. Alternative VET programs, such as micro-credentials in the form of training package skill sets for VfSSS, have attracted much interest from stakeholders (Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020). Curriculum reviews in a number of different states have already recommended further exploration of micro-credentialling in the senior secondary context (Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020).

The landscape in which young people in Australia complete their secondary schooling is complex, involving differing policy settings, governance arrangements, regulatory environments and resourcing decisions (Clarke 2015; Education Council 2014; Polesel et al. 2019; Zoellner 2020). The offering of VET in schools in particular, the implementation of such programs in secondary schools and the extent to which these programs fulfil their key roles — as a means by which to engage and retain students and as a pathway to the labour market — are heavily influenced by the commitment of the key actors: schools (including school accreditation bodies), education and skills departments, training providers and employers.

Zoellner's (2020) policy-trail analysis of VET's integration into the schooling system suggests that incoherence in the accreditation of vocational skills and the required knowledge for the senior secondary certificate impedes progress. This is illustrated by the divergent outcome of VET qualifications being considered valid in the calculation of senior secondary school certificate scores but not regarded as such by some employers (Joyce 2019; Zoellner 2020).

A recent review of senior secondary pathways into work, further education and training, led by Professor Peter Shergold (the Shergold Review) discerned a 'mood for transformation' for policy-makers to drive change that is, first and foremost, mindful of student pathways, educational jurisdictions and school authorities (Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020, p.6).

1 The Adelaide Declaration was superseded by the Melbourne Declaration in 2008 and more recently by the Alice Springs (Mparntwe) Declaration in 2019 (Education Council 2019). The differences between the declarations are minimal.

2 VET programs leading to nationally recognised qualifications are distinct from vocational learning programs in schools, such as career education (Education Council 2014).

3 School-based apprenticeships and traineeships involve students starting a part-time apprenticeship while still at school and receiving payment for that part of their time spent in the workplace. They were introduced in 1996.

## Governance of VET for secondary school students

The integration of VET into the secondary schooling environment has been influenced by both education and labour market factors. VET in secondary school provides students with the opportunity to gain job-related skills; it also provides an opportunity for engaging and retaining in education and training the students who would normally have disengaged and left.

VET programs undertaken at school in Australia are guided by the Preparing Secondary Students for Work Framework, which centres its vision on quality and integration of VET programs into secondary schooling while preparing young people for the world of work, specifically that:

- All secondary students experience quality vocational learning and have access to quality VET courses.
- Both vocational learning and VET are seamlessly integrated into secondary schooling and valued by students, parents, teachers and employers (Education Council 2014, p.4).

The Australian Government and state/territory governments have a shared role in policy leadership for VET, collaborating with employers and other stakeholders on the development and implementation of VfSSS, including the regulatory framework, training packages and quality standards. State and territory governments determine their own training priorities, resourcing and delivery arrangements, and consult with employers about regional skills needs and training priorities.

At the state or territory level, each school accreditation body [4] decides how much VET can contribute to its senior secondary certificate, and how that VET is recognised. Each accreditation body consults with industry groups in its state or territory about the recognition arrangements between VET and its senior secondary certificate (Education Council 2014). School education departments and accreditation agencies have a key role in advising schools on the different ways by which they can provide their students with access to VET, such as: becoming a registered training organisation (RTO); entering into auspicing arrangements with public, private or school-system RTOs; using purchaser—provider arrangements; or a combination of these (Education Council 2014).

### Reviews and reforms

Focusing simply on VET delivery in schools would, however, miss the larger context in which schools are situated, given that secondary schooling is grappling with broader issues relating to student engagement, literacy and numeracy, and teacher quality (Gonski 2018; Zoellner 2020). Current and future reforms are informed by a number of recent key reviews, for example, the Gonski, Shergold and Joyce (2019) reviews, which highlighted the following key issues:

- Personalised student support and career advice is hampered by curriculum delivery, assessment, work practices and the structural environments in which schools operate (Gonski 2018, Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020).
- There is insufficient employer engagement to support senior secondary students to gain an understanding of the world of work, undertake effective career planning, and access opportunities for employment and training (Joyce 2019, Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020).
- There is a culture that privileges pathways to university, which in turn deprioritises VET in internal resourcing decisions (Gonski 2018; Joyce 2019, Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020)
- The majority of schools are not able to offer both strong academic programs and high-quality vocational pathways (Gonski 2018; Joyce 2019).
- There is a weak integration of VET programs into the school curriculum (Gonski 2018; Joyce 2019, Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020).

4 NSW Education Standards Authority; Victorian Curriculum Assessment Authority; Queensland Curriculum and Assessment Authority; South Australian Certificate of Education Board; School Curriculum and Standards Authority (WA); Office of Tasmanian Assessment, Standards and Certification; ACT Board of Senior Secondary Studies; Northern Territory Board of Studies.

- VET programs are assessed differently (non-graded) from school subjects (graded) (Gonski 2018).
- The degree of regulatory oversight of auspicing/third-party contracts (where a non-RTO school delivers training guided by an RTO) is unclear (Joyce 2019).
- Many employers are not confident that graduates of certificate IIIs and some certificate IIs delivered in schools have the skills and competencies the qualifications denote and are therefore not ready for the workplace (Joyce 2019).
- Funding arrangements, delivery requirements and participation rates vary considerably between different states and territories (Joyce 2019).

With the Heads of Agreement for Skills Reform [5], Skills Ministers have made a fresh commitment to the delivery of VET programs in secondary schools, part of which includes consideration of the development of a new National VET in Schools Strategy. Recommendations from the Gonski, Joyce and Shergold reviews are expected to flow into the development of the new strategy (Australian Department of Education, Skills & Employment 2021b).

Although both the VET and secondary school education sectors have a rich history in policy and reform, they have struggled with policy reform over the past two decades. Concerns are growing that the failure of many reforms is the result of decaying institutions and a non-cooperative environment rather than indifferent or ineffective leadership (Parkinson 2021). Echoing these concerns, the VET sector, and by extension, the reforms of VET delivered to secondary school students, has struggled to decisively and considerably improve conditions enabling students to choose and benefit from a vocational education (Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020).

Box 1 outlines some of the more recent VfSSS reforms implemented by states and territories.

### Box 1 Current reforms in states and territories

Examples of recent reforms implemented by some jurisdictions to improve the quality and outcomes of VfSSS include:

**South Australia** released a new policy, 'VET for school students: repositioning VET within secondary education in South Australia' in 2019 (<https://www.education.sa.gov.au/sites/default/files/vet-for-school-students.pdf>), which includes 'Flexible Industry Pathways' aligned to industry sectors to enable students to incorporate VET into their school studies and to be better prepared for the workforce upon school completion.

**Tasmania**, as part of its current Years 9 to 12 Project, which aims to improve attendance, retention and attainment outcomes for school students (<https://www.education.tas.gov.au/about-us/projects/years-9-12-project/>), developed a 'Vision for vocational learning and VET to 2030'. Consultations on its accompanying draft 'Requirements and Guidelines for the delivery of VET to school students' were undertaken in 2020–21. The key changes proposed for the requirements and guidelines, and to be implemented in 2022 if agreed to, included:

- Mandatory vocational placements for every full VET qualification undertaken by school students in Tasmania.
- Schools do not deliver full VET qualifications to school students prior to Year 11, except in the circumstances where an individual student or class has been granted an exemption from the sector head. This guideline does not include common single unit studies such as the White Card induction unit for the construction industry or the Responsible Service of Alcohol.
- Certificate III qualifications can only be attained before Year 12 completion if an individual or class has been granted exemption by the head of the education sector. This is in response to concerns about the appropriateness of the delivery of certificate III qualifications in a school setting.

5 https://www.dese.gov.au/skills-reform/skills-reform-overview/improving-vet-delivered-secondary-students

**Victoria** has outlined steps to transition to a new integrated senior secondary certificate, one that brings together the Victorian Certificate of Education (VCE) and the VET-focused Victorian Certificate of Applied Learning (VCAL), following the Firth review into vocational and applied learning pathways in senior secondary schooling (<https://www.education.vic.gov.au/about/department/Pages/vcal-pathways-review.aspx>). The first step toward this integration will be a vocational specialisation within the VCE, commencing in 2023.

**New South Wales** launched the Educational Pathways Pilot Program (<https://education.nsw.gov.au/public-schools/career-and-study-pathways/educational-pathways-pilot-program>) following the release of the NSW Education Standards Authority (NESA) review of the NSW curriculum in 2020. The pilot, which runs until 2021, has a focus on enhancing careers education and strengthening post-school pathways, including equally valuing VET and academic subjects.

**Northern Territory's** Department of Education released an updated 'Curriculum, assessment, reporting and certification policy: early childhood to year 12' in early August 2021 (<https://education.nt.gov.au/committees,-regulators-and-advisory-groups/northern-territory-board-of-studies/ntbos-policies-and-guidelines>), which specifies that all learning and assessment activities undertaken by Years 11 and 12 students, including those doing VET, must align with the SA Certificate of Education policy and procedure guidelines.

# CHOOSING AND PARTICIPATING IN VET FOR SECONDARY SCHOOL STUDENTS PROGRAMS

As noted earlier, VET programs are designed to achieve two broad aims (Education Council 2014; Misko et al. 2020; Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020; Polesel et al. 2019):

- to increase engagement and retention of young people in education and training
- to provide transitions to employment including further studies leading to employment.

A less prominent function of higher-level VET programs is their provision of credits towards degree-level study at a higher education provider.

These aims are different but interlinked and are influenced by a number of different stakeholders, including students, parents, schools, RTOs and other education providers and teachers/trainers in these institutions, employers and regulators.

## Aspirations

Students form aspirations for VET-related occupations at a range of ages, with the main reasons given by students for choosing VET-related occupations being: an interest in particular jobs and their benefits; experiences related to a job; a desire to help others; and perceptions of their own suitability for that job (Gore et al. 2017).

The aspirations and motivations that young people, and their parents for that matter, have for participating in VET programs while at school are related to retention, employment post-school, and further studies, including undertaking an apprenticeship or traineeship (Misko, Lees & Chew 2021). A further, more immediate, concern for many is completing secondary school and how VfSSS choices may improve their Senior Secondary Certificate of Education and Australian Tertiary Admission Rank (ATAR) outcomes (Shipley & Stubley 2018; Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020; Polesel et al. 2019). Recent research by Misko, Lees and Chew (2021) found that about 40% of VfSSS were looking to obtain an ATAR, with two-thirds of this group indicating that they had planned to use their VET studies to count towards their ATAR.

The integration of VET programs into the SSCE has increased across Australia; however, there are jurisdictional differences in how VET courses are accommodated within SSCEs, particularly in the type and number of qualifications eligible and the extent to which VET courses, including school-based apprenticeships, may be included in the calculation of a student's ATAR for entry to university (Polesel et al. 2019). These jurisdictional differences are briefly addressed later in this paper.

In their examination of the merits of VfSSS for preparing students for post-school work and further education, Misko, Lees and Chew (2021) found that around 70% of students who participated in their survey made the decision to enrol in the VET course themselves, with almost two-thirds of students undertaking VfSSS to obtain a vocational qualification. Around half (49.8%) reported that it was to help them gain a full-time job post-school, with a similar proportion (52.8%) indicating that they were looking to get a job in the industry related to the VET program being undertaken.

Students, however, need better assistance to make the choice to undertake VfSSS programs (Brown 2017; Gore et al. 2017; Hargreaves & Osborne 2017). This information should be provided throughout the educational experience of students, beginning early in primary school, to enable them to seriously consider VET-related careers and VET pathways as an option to enable personal success (Hargreaves & Osborne 2017).

VET programs need to go hand-in-hand with subject choices. Clarke (2015) points out that a student undertaking allied health, for example, would ideally need to be doing biology and psychology, while a student hoping to continue into an electrical apprenticeship needs to be studying maths and science. How students choose or reject VET programs needs to be seen in a broader setting of subject choices. There is currently a lack of information about how students view VET programs in relation to other subject choices, and how well VET programs and subjects are aligned. In a study by Palmer (2019), Sydney high school students consistently described the subject choice process as two-staged: the first is emotive, with enjoyable subjects chosen and disliked subjects rejected. In the second stage students evaluated subjects on their usefulness for future study or career paths (Palmer 2019). Subjects that are perceived as onerous, hard to pass and narrow in their application are generally rejected unless they are needed for future study, while advice from older peers and general advice from adults were favoured over teacher advice (Palmer 2019).

A concern, however, is that VET is increasingly being seen amongst the broader population as the provider of second-chance education and lower-level qualifications for lower-status occupations (Karmel 2021). This is echoed at schools, where VET pathways are not viewed as equal or complementary to a university one (Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020; Gore et al. 2017). Given the low education standing of VET in the eyes of many students, parents and teachers, even the best-designed VET programs at school will attract little interest.

## Participation

In 2020, there were 241 200 students enrolled in VET programs delivered as part of the SSCE (table 1). The majority of students were enrolled in VET programs that are not delivered as an apprenticeship or traineeship, with only around 7% undertaking a school-based apprenticeship or traineeship (SBAT), a trend that has continued for the last five years (table 1).

**Table 1 Enrolment in VfSSS programs 2016–20**

| | 2016 ('000) | 2017 ('000) | 2018 ('000) | 2019 ('000) | 2020 ('000) | 2019-20 % change | 2016-20 % change |
|---|---|---|---|---|---|---|---|
| School-based apprentices and trainees | 17.1 | 19.8 | 18.0 | 17.1 | 17.8 | 4.3 | 4.2 |
| Other VET in Schools students | 226.2 | 222.3 | 212.7 | 218.5 | 223.3 | 2.2 | -1.3 |
| **Total** | **243.3** | **242.1** | **230.7** | **235.6** | **241.2** | **2.3** | **-0.9** |

Source: NCVER (2021a).

Although SBATs lead to higher rates of apprentice- and traineeships after school and to other forms of employment, Joyce and colleagues suggest that a lack of employer engagement, higher administration costs and external training locations limit their uptake (Joyce 2019). The Hunter Trade College in NSW, the 2021 recipient of the Australian Training Awards 'School Pathways to VET Award' (see box 2), highlighted the difficulties in engaging employers to take on school-based apprentices in its 2020 annual report, as well as the flow-on effect this lack of employer engagement has in relation to students and the college meeting the workplace requirements of the SBAT.

Low SBAT rates alone may hide other dynamics that could make comparing schools across different states and regions difficult. Polesel et al. (2019) pointed out that a low SBAT proportion may correlate with a high rate of school leavers

transitioning to apprenticeships and traineeships. Data from NSW, on the other hand, suggest that students in NSW schools are more reluctant to enter a SBAT pathway while still enrolled at school than their peers in neighbouring states (Polesel et al. 2019).

Table 2 presents the demographic data for the 2020 VfSSS cohort. There are some limitations to the reporting of student demographic data at the national level: data submitters (school accreditation bodies, state training departments) may be bound by legal or other constraints attached to the submission of 'under-age' demographics data to the National VET in Schools Collection,[6] potentially resulting in a large quantum of unknown information. This affects, in particular, information on disability disclosure, country of birth, language spoken at home, Indigenous status and socioeconomic status (table 2). Notwithstanding these limitations, we can describe the 2020 VfSSS cohort as having slightly more males than females, with more students coming from the most disadvantaged backgrounds by comparison with the least disadvantaged backgrounds. This latter finding is not unsurprising, given the socioeconomic status of all VET students tends to be lower than that of non-VET students, and that VET in Australia, and internationally, is considered to cater for young people from lower socioeconomic status backgrounds (Polesel et al. 2019).

Looking at course information, we see that the majority of the 2020 VfSSS cohort were participating in VET programs other than an apprenticeship or traineeship and undertaking training package qualifications. Over half were studying a certificate II qualification, mainly in the fields relating to society and culture, business and commerce, and food, hospitality and personal services. Just over 60% of students undertaking VfSSS programs are enrolled in government schools (table 2).

**Table 2 Demographic, course and school characteristics of the 2020 VfSSS cohort**

| Characteristic | Count | % |
|---|---|---|
| Gender: | | |
| Male | 128 810 | 53.4 |
| Female | 112 060 | 46.5 |
| Unknown and other | 300 | 0.1 |
| Age group: | | |
| 19 years and under | 239 790 | 99.4 |
| 20 years and over | 1 375 | 0.6 |
| Indigenous status: | | |
| Indigenous | 12 480 | 5.2 |
| Non-Indigenous | 183 580 | 76.1 |
| Unknown | 45 105 | 18.7 |
| Disability status: | | |
| With a disability | 5 850 | 2.4 |
| No disability | 92 240 | 38.2 |
| Unknown | 143 075 | 59.3 |
| Relative socioeconomic disadvantage: | | |
| Most disadvantaged | 43 900 | 18.2 |
| Least disadvantaged | 27 275 | 11.3 |
| Unknown | 46 800 | 19.4 |
| Language other than English spoken at home: | | |
| Not English at home | 8 285 | 3.4 |
| English at home | 137 050 | 56.8 |
| Unknown | 95 835 | 39.7 |
| Apprentice/trainee status: | | |
| School-based apprenticeship/traineeship | 17 830 | 7.4 |
| Other VET in Schools students | 223 335 | 92.6 |

6 For more information about the scope of the National VET in Schools Collection, as well as the other data sources available for analysing VfSSS activity and outcomes, refer to the appendix.

| Characteristic | Count | % |
|---|---|---|
| Type of training: | | |
| Training package qualification | 222 270 | 92.2 |
| Accredited qualification | 18 895 | 7.8 |
| Level of education: | | |
| Diploma or higher | 4 090 | 1.7 |
| Certificate IV | 4 620 | 1.9 |
| Certificate III | 88 720 | 36.8 |
| Certificate II | 131 220 | 54.4 |
| Certificate I | 12 520 | 5.2 |
| Top 5 fields of education based on total number of students: | | |
| Society and culture | 44 285 | 18.4 |
| Management and commerce | 42 025 | 17.4 |
| Food, hospitality and personal services | 36 505 | 15.1 |
| Engineering and related technologies | 28 605 | 11.9 |
| Architecture and building | 20 490 | 8.5 |
| Top 5 Training packages[a] | | |
| Tourism, Travel and Hospitality (SIT, THH, THT) | 33 085 | 14.9 |
| Business Services (BSA, BSB) | 29 365 | 13.2 |
| Sport, Fitness and Recreation (SIS, SRC, SRF, SRO, SRS) | 29 015 | 13.1 |
| Creative Arts and Culture (CUA, CUE, CUF, CUS, CUV) | 17 860 | 8.0 |
| Foundation Skills (FSK) | 14 110 | 6.3 |
| Top 5 intended occupational outcomes of programs[b] | | |
| School-based apprenticeship/traineeship (n = 17 830) | | |
| General clerical workers | 3 070 | 17.2 |
| Sales assistants and salespersons | 2 560 | 14.4 |
| Carers and aides | 2 045 | 11.5 |
| Hospitality workers | 1 895 | 10.6 |
| Sports and personal service workers | 1 875 | 10.5 |
| Other VET in Schools programs (n = 223 335) | | |
| General clerical workers | 31 855 | 14.3 |
| Sports and personal service workers | 28 605 | 12.8 |
| Hospitality workers | 17 440 | 7.8 |
| Other technicians and trades workers | 15 310 | 6.9 |
| Construction and mining labourers | 13 325 | 6.0 |
| School sector | | |
| School-based apprenticeship/traineeship (n = 17 830) | | |
| Government | 11 120 | 62.4 |
| Catholic | 2 585 | 14.5 |
| Independent | 2 935 | 16.5 |
| Other[c] | 1 190 | 6.7 |
| Other VET in Schools programs (n = 223 335) | | |
| Government | 141 865 | 63.5 |
| Catholic | 40 855 | 18.3 |
| Independent | 25 935 | 11.6 |
| Other | 14 680 | 6.6 |
| **Total** | **241 200** | |

[a] Base is the total number of students enrolled in training package qualifications, n = 222 270.

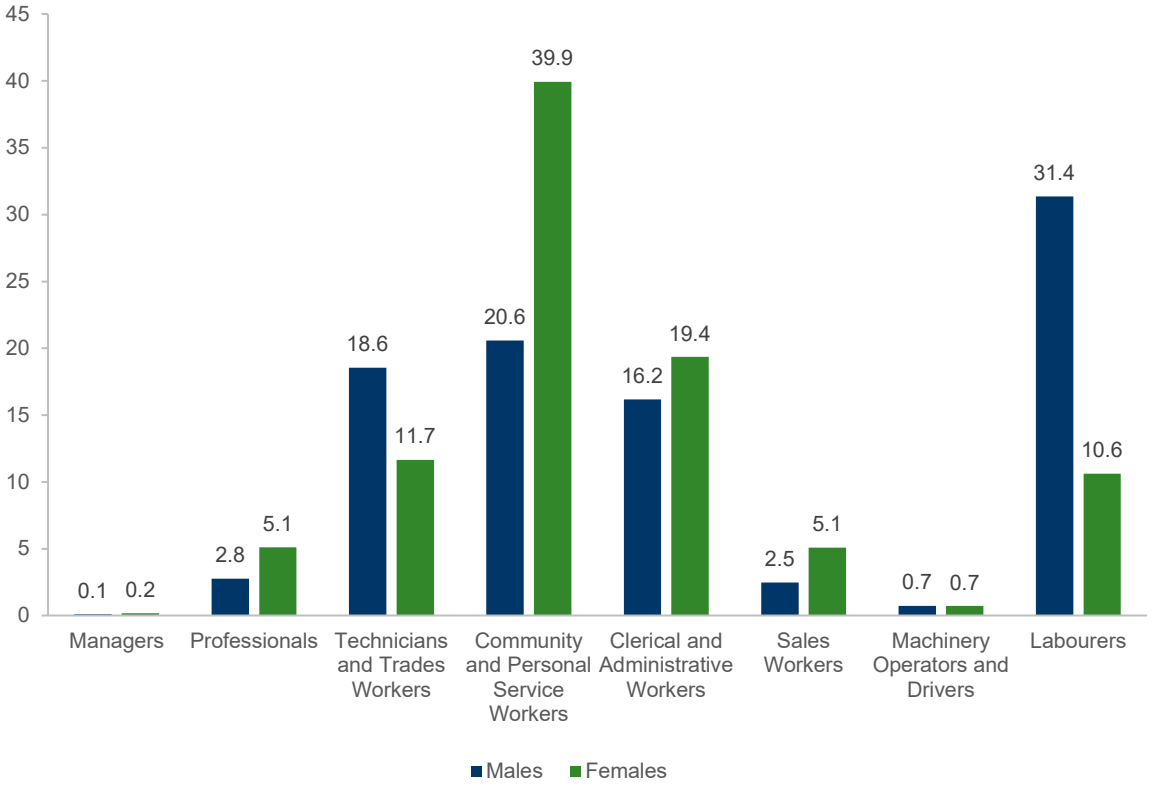
[b] ANZSCO sub-major grouping (2-digit level); excludes the 'not known' category.

[c] Other: TAFE institutes, community education providers, private training providers, home school arrangement, attending more than one school type.

Source: NCVER (2021b).

As can be seen from figure 1, the most popular intended occupational outcomes for females and males were in areas traditionally dominated by each gender: Community and personal service workers for females; and Labourers for males.

**Figure 1 Intended occupational outcomes of the 2020 VfSSS cohort (%)**




Note. The 'not knowns' are included in the totals but not displayed in the figure.

Source: NCVER (2021b).

For students undertaking a school-based apprenticeship or traineeship, the most popular programs in 2020 were the Certificate III in Business, while it was the Certificate II in Hospitality for other VfSSS students (table 3). Similar to the findings reported by Misko et al. (2019), and, similar to the intended occupational outcomes shown in figure 1, the most popular programs for females and males in the 2020 VfSSS cohort were in the occupational and study areas traditionally dominated by each gender: the provision of caring, business, retail, hospitality and beauty services for females; and business, trades, sport, fitness and recreation for males.

**Table 3 Top 5 programs by apprenticeship/traineeship status of the 2020 VfSSS cohort**

| School-based apprentices and trainees | Count | % | Other VET in Schools students | Count | % |
|---|---|---|---|---|---|
| Certificate III in Business | 2 385 | 13.4 | Certificate II in Hospitality | 14 275 | 6.4 |
| Certificate III in Retail | 2 230 | 12.5 | Certificate II in Skills for Work and Vocational Pathways | 13 705 | 6.1 |
| Certificate III in Hospitality | 1 755 | 9.8 | Certificate II in Business | 11 480 | 5.1 |
| Certificate III in Sport and Recreation | 1 075 | 6.0 | Certificate II in Kitchen Operations | 9 880 | 4.4 |
| Certificate III in Early Childhood Education and Care | 1 025 | 5.7 | Certificate II in Construction Pathways | 9 615 | 4.3 |

Source: NCVER (2021b).

## School retention

The link between undertaking VET programs at school and school retention is, however, not clear-cut. One of the few studies investigating the impact of undertaking VET programs at school on retention found only a small positive effect on retention from Year 10 to Year 11, but a negative impact from Year 11 to Year 12 (Anlezark, Karmel & Ong 2006). This 'negative impact' may be partly driven by what Polesel et al. (2019) referred to as a 'pull factor' related to job

opportunities (p.40); that is, the students may be moving from school into an apprenticeship or traineeship, in effect, a positive outcome. A further example of the positive outcome from what poor retention data is reported by Hunter Trade College in New South Wales, (see box 2). In its 2020 annual report,[7] the post-school outcomes of the Year 11 and 12 students who withdrew in 2020 are provided. Of the 97 students who withdrew, 57 (58.6%) moved into a full-time apprenticeship, 10 moved into other full-time employment, with 13 moving into full-time education and training.

From state and territory data, it is difficult to find evidence that VfSSS programs have impacted positively or negatively on retention (Polesel et al. 2019). While growth in school retention nationally from 1985 to the early 1990s seemed to have been largely driven by a sharp recession in the early 1980s and rising youth unemployment, it was raising the minimum school leaving age in 2010 from 15 or 16 to 17 years that had a strong impact on retention, not the offering of VET programs at school per se (Australian Curriculum and Assessment Authority 2012; Polesel et al. 2019). Indeed, the number of students undertaking VET programs at school has not changed much since the school leaving age was raised in 2010. At that time, the number of students enrolled in VfSSS programs were around 233 800 nationally, increasing to a high of 257 100 in 2015, before falling to 241 200 students in 2020 (Misko, Lees & Chew 2021, figure B1).

A further concern with VfSSS is that it is seen solely as a tool for school retention rather than as a pathway to further education or employment (Polesel et al. 2019). Students, teachers and employers reported that VfSSS is too often perceived primarily as a way to keep non-academically minded students engaged in schooling, rather than having intrinsic value (Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020).

# MODELS OF VFSSS DELIVERY

VET delivered to secondary students is nationally recognised; it is the same as VET delivered in non-school settings; and it is held to the same quality standards. Once a student is assessed as competent against the nationally agreed standards — required to perform effectively in the workplace — they are awarded a full or partial VET qualification, issued by a registered training organisation.

There are a number of ways that VfSSS programs can be delivered:

- at school where schools have RTO status
- at schools through a third-party arrangement [8]
- externally at a registered training provider
- or a combination of the above.

These delivery models are shaped by the jurisdictional preferences or policy relating to the selection and endorsement of the VET programs offered (Polesel et al. 2019). For example, options range from programs that run for a couple of hours a week to part-time school-based apprenticeships, where students become trainees and employees (NCVER 2021c). Furthermore, jurisdictional school accreditation bodies have different criteria for endorsing VET programs as eligible for SSCE and ATAR calculation (Polesel et al. 2019).

Due to the nature of their delivery and assessment requirements, VET programs do not always sit neatly within the secondary school system. Most VET programs are designed to be delivered by industry trainers with a dual assessment of competence (competent/not competent) applied. On the one hand, the school curriculum is designed to be delivered by qualified teachers of education, with a grading system applied to assessments (Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020). Klatt, Clarke and Dulfer (2017) noted that the opportunity to develop and apply vocational competencies in a workplace or an industry environment remains limited for many students undertaking VET at secondary school. By using training packages as

7 <https://htc.nsw.edu.au/policies-publications>.

8 A third-party arrangement permits an RTO (the principal RTO) to engage a non-RTO (the third party which is the school) under the National VET Regulator to deliver training and assessment of all or part of a VET course on behalf of the principal RTO, where the principal RTO has the VET course on its scope of registration (Polesel et al. 2019). The engagement must comply with all other requirements relating to third-party arrangements under the Standards for RTOs (Australian Skills Quality Authority 2021b). The principal RTO has responsibility for the quality of the assessment and for issuing qualifications (Joyce 2019).

the foundation for VET delivered in schools, the system relies on curriculum that is an occupational standard for entry to work. This is in direct contrast to the acknowledgment that so-called entry-level qualifications do not in fact enable entry to those occupations (Clarke 2015).

Further issues arise in the lack of oversight of third-party arrangements, with RTOs raising concerns over the degree to which schools which are delivering VfSSS as a third party are complying with the Australian Skills Quality Authority's (ASQA) VET Quality Framework and required regulation (Joyce 2019).

As a consequence, VET programs can be implemented differently and are not always well integrated across schools. In this environment, ongoing tensions remain between the 'education logic' and 'employment logic' of VfSSS (Clarke & Polesel 2013).

A number of secondary schools specialise in the provision of VET education and have highly effective models of delivering VET to secondary students. They are, however, by their nature, limited in their reach. Box 2 illustrates what works well in schools, using, as an exemplar, the award-winning Hunter Trade College. The characteristics this school and the other award finalists in this category[9] had in common were: access to industry-standard infrastructure or trade trading centres; operating as or like an RTO; and connections to the local business community and labour market. Through their case studies of a sample of schools considered to have successful VfSSS programs, Misko, Lees and Chew (2021) found similar elements to those noted above. These were having: a broad range of VET offerings; well-established and positive relationships with employers; and access to purpose-built facilities.

## Box 2 Winner of the 2021 'School Pathways to VET Award': Hunter Trade College Ltd, NSW

Hunter Trade College Ltd, located in Maitland in the Hunter Region of NSW, is an independent specialist senior high school (Years 11 and 12) and a registered training organisation, offering a trade-focused Higher School Certificate (HSC) program. It is governed by a board comprised of both industry and education professionals.

It commenced its operations in January 2007 as the Australian Technical College – Hunter, with the longer-term aim of addressing trade skill shortages in the region through the provision of quality education and training to young people who aspired to become tradespeople. Today the college's scope of registration covers the delivery and assessment of around 20 certificate I/II/III qualifications in the areas of automotive, construction, electrotechnology and metal engineering. These qualifications are all delivered on site, supported by industry-standard workshops and equipment.

A unique component of the HSC program provided by the college has been the extensive amount of work placement made available – up to 10 times the work experience required for an HSC industry framework subject. The college has partnerships with over 400 employers in the Hunter region, enabling this extent of work placement. The onset of the COVID-19 pandemic has impacted on this to a degree, with the college having to implement an alternative, school-based program in the interim.

With the mix of general, vocational and workplace learning, students from Hunter Trade College can graduate with an HSC, an entry-level vocational qualification, a number of first year apprenticeship units of competency and, in more typical circumstances, over 100 days of workplace experience. As a consequence, many of the college's students move directly into apprenticeships at the end of high school. In its 2020 annual report,[10] the college noted that 73 of the 83 students in the 2019 Year 12 cohort participated in a destination survey and, of these, 61 (84%) had been employed as an apprentice by March 2020. Of the 97 Year 11 or 12 students reported as withdrawing before completion of their HSC, 57 had gained an apprenticeship in the areas of automotive, construction, electrotechnology, and fitting/fabrication.

9 St Raphael's Catholic School, NSW; Geelong Industry Trade Training Centre, Victoria; see <https://www.australiantrainingawards.gov.au/finalists> for further details.

10 <https://htc.nsw.edu.au/policies-publications>.

## Jurisdictional differences

Not only is there diversity in the ways by which VfSSS can be delivered, there are also differences between the states and territories in terms of how these programs are recognised within the context of the senior secondary school framework. Polesel et al. (2019), [11] Misko et al. (2019) and later, Misko, Lees and Chew (2021) compared jurisdictional delivery models based on SSCE recognition, ATAR contribution, curriculum and workplace requirements. While all jurisdictions accept VfSSS contributions to the SSCE and specify mandatory training in the workplace for SBATs, significant differences emerge across other characteristics (table 4).

Two jurisdictions stand out: Victoria and Western Australia. Victoria is the only state with two kinds of high school certificates, the Victorian Certificate of Education (VCE) and the VET-oriented Certificate of Applied Learning (VCAL). VCAL's curriculum is focused on VET and work-based learning, along with foundation literacy and numeracy skills. It contributes to a student's SSCE but does not contribute to an ATAR calculation (Polesel et al. 2019). As noted in box 1, a recent review of the Victorian senior secondary schooling pathway (Firth 2020) recommended an integrated senior secondary certificate, with VET embedded in the VCE. Alternative models of senior secondary education, including an alternative SSCE, and expanded access to alternative settings such as trade schools and technical colleges still warrant further exploration (Polesel et al. 2019).

Western Australia is the only state where VfSSS programs do not count towards an ATAR. Although it does so in all other jurisdictions, each differs significantly in how this contribution is calculated (Polesel et al. 2019).

**Table 4 Recognition of VfSSS programs in the senior secondary school framework, by jurisdiction**

| | Recognition in SSCE | | Contributes towards an ATAR | | Specified curriculum framework | Mandatory workplace learning requirement | |
|---|---|---|---|---|---|---|---|
| | VET | SBAT | VET | SBAT | VET | VET | SBAT |
| NSW | ✓ | ✓ | ✓ | ✓ | ✓ | For most courses | ✓ |
| VIC | | | | | | | ✓ |
| VCE | ✓ | ✓ | ✓ | ✓ | ✓ | For some TP units | - |
| VCAL | ✓ | ✓ | × | × | ✓ | × | - |
| Qld | ✓ | ✓ | ✓ | ✓ | ✓ | For some TP units | ✓ |
| SA | ✓ | ✓ | ✓ | ✓ | × | Not for SACE completion purposes | ✓ |
| WA | ✓ | ✓ | × | × | ✓ | For industry specific courses and some TP units | ✓ |
| ACT | ✓ | ✓ | ✓ | ✓ | ✓ | For some TP units | ✓ |
| NT | ✓ | ✓ | ✓ | ✓ | × | Not for NTCET completion purposes | ✓ |
| Tas | ✓ | ✓ | ✓ | - | ✓ | For some TP units | ✓ |

Note: Where information was not available or not provided it is noted as (-). The following acronyms have been used in the table: Victorian Certificate of Education (VCE); Victorian Certificate of Applied Learning (VCAL); Training packages (TP); South Australian Certificate of Education (SACE); Northern Territory Certificate of Education and Training (NTCET); School-based apprenticeships and traineeships (SBAT).

Source: Misko, Lees & Chew (2021).

### Funding

Funding arrangements for VET programs delivered in schools are complex and can be difficult to follow (Burke 2018; Polesel et al. 2019). Each jurisdiction is responsible for determining its own funding policies, including how and where to prioritise funding and funding levels. Some states provide dedicated funding to support schools to deliver VET programs from school budgets, while other schools may have access to funding subsidies or are obliged to charge additional fees to students (Joyce 2019).

11 The reader is encouraged to also refer to table 1 in Polesel et al. (2019) which provides a comprehensive jurisdictional comparison of VfSSS program elements.

The availability of funding for VET has a direct impact on the range of course offerings (Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020). Affordability considerations often determine whether schools deliver the training themselves, or purchase enrolments through an external RTO (Joyce 2019). As a result, schools are often forced either to charge higher student fees, which exacerbates inequalities based on income, or not to offer the course at all (Van Dyke & Jackson 2019). Where costs are passed down to parents and students, these upfront expenses associated with undertaking VET are not equitable and act as a disincentive for students (Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020).

# QUALITY OF DELIVERY OF VET FOR SECONDARY SCHOOL STUDENTS PROGRAMS

As outlined in the previous section, the multifaceted delivery models and funding arrangements of VfSSS programs, along with jurisdictional differences, can at times reduce the quality of delivery of these programs.

In 2019, the national VET regulator, the Australian Skills Quality Authority, identified VfSSS as one of the top issues of concern in relation to the quality and reputation of the VET system. This concern was based on consistent feedback from stakeholders, received through their environmental scanning processes, as well as the identification in recent years of poor practices by a minority of providers delivering VfSSS to a large number of students, practices that required regulatory action. In 2021, ASQA undertook a scoping study to ascertain whether the concerns over the quality and outcomes of VfSSS warranted a regulatory response (ASQA 2021a).

The ASQA scoping study found that the prevalence of non-compliance against the standards for RTOs[12] amongst providers of VfSSS was no higher than that in the VET sector in general. However, ASQA did identify areas of common non-compliance amongst VfSSS providers that increase the risk to the teaching and training quality of VET programs within a school setting. These were:

- assessment and compliance
- amount of training
- ensuring students are properly informed, protected and supported
- adequate oversight of third-party arrangements
- trainer and assessor vocational skills and industry currency (ASQA 2021a, p.2).

Addressing the last area of non-compliance identified by ASQA is imperative, given that a high-quality teaching profession is essential for accelerating student learning growth and helping all students to reach their full potential (Gonski 2018). Common to both school and VET education systems is the requirement that teaching should be a continuous-learning profession and, as such, teachers must be able to access high-quality professional learning (Gonski 2018; Joyce 2019).

The Joyce review (2019) identified the quality of trainers as an issue for the VET sector overall, specifically, the quality of the Certificate IV in Training and Assessment itself and the industry currency of VET teachers. The opportunity for VET teachers to maintain industry currency was also a challenge raised by school representatives participating in the research of Misko, Lees and Chew (2021). More importantly for school students, the pedagogical competency of VET teachers is often questioned, as this skill set is not an explicit part of the certificate IV qualification (Smith, Hodge & Yasukawa 2015). There is ongoing debate on whether VET teachers should hold a university-level qualification, as is required of schoolteachers (Joyce 2019; Smith, Hodge & Yasukawa 2015).

12 Standards for Registered Training Organisations (RTOs) 2015, <https://www.legislation.gov.au/Details/F2019C00503>.

## Quality of pathways and career support

The world beyond school can be difficult to understand. Students undertaking VfSSS programs should not only have access to a variety of pathways during school but also easy access to relevant and necessary information and organisations when deciding on which pathway to choose (Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020). This is particularly important because, for an increasing number of students, post-school pathways to work are no longer linear. Using data from the Longitudinal Surveys of Australian Youth, Ranasinghe et al. (2019) explored the school-to-work transitions of youth aged 16 to 25 years and found that young people experience diverse and individualised school-to-work pathways, with the dominant pathway being school onto higher education and then work. The next most common pathway involves short periods of time in post-school education and training, followed by full-time work; or a combination of training with full-time work, as occurs with apprenticeships.

Many stakeholders responding to the review of Australia's VET system were concerned that students who would otherwise thrive in VET careers are being directed towards higher education options, where they may not succeed (Joyce 2019). There is a significant drop-out rate of certain cohorts of first-year university students, with some ultimately taking up a vocational career after completing a possibly unnecessary university degree (Joyce 2019).

The single biggest issue in the review of senior secondary pathways was the limited availability of high-quality career guidance to students in schools (Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020). In relation to career advice, the 'who' seems to be equally important as the 'what'. Students take advice more often from some groups than others, with teachers not necessarily being the most trusted source of subject choice and career information (Palmer 2019).

The Shergold review noted that, nationally, career advice is generally inadequate across all education sectors (school, VET, university), despite individual examples of best practice (Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020). The review highlighted the common concerns about school-based careers advisers, identified during the consultations with stakeholders that: advisers tended to be more concerned with student subject choice than with labour market opportunities; they tended to have greater knowledge about university pathways and course selections than VET requirements, including apprenticeships; and advisers were often inadequately resourced (Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020). Students interested in vocational careers reported that even structured pathway support at school was often half-heartedly provided and lacking in detail and quality (Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020). Students were also looking for assistance beyond the school gate and want to leave school knowing how to apply for a job, prepare a resume and perform at interview (Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020).

With many traditional employment models and occupations changing, narrow career education at schools could be unnecessarily limiting the employment potential of senior students (PwC 2017). The Shergold Review (Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020) claimed that career advice is most effective if it:

- is industry informed
- identifies emerging skills in demand by sector
- identifies potential areas of job growth.

It should also allow students to consider the full cost of courses, the potential level of debt involved and the availability of government support, as well as starting salaries and career prospects (Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020).

The establishment of the National Careers Institute[13] in July 2019, in response to recommendations in the Joyce review (2019), may go some way to addressing concerns about accessibility to quality careers advice.

13 <https://www.dese.gov.au/nci>.

An example of 'good practice' in the provision of career pathway information for secondary students undertaking VET at school is the Vocational Pathways framework used in New Zealand schools, as highlighted by Joyce (2019). This career pathway framework, which is targeted at young people (and their teachers and carers), clearly and simply connects study options with career opportunities (box 3).

### Box 3 New Zealand's colour-coded Vocational Pathways

Hunter Trade College Ltd, located in Maitland in the Hunter Region of NSW, is an independent specialist senior high school (Years 11 and 12) and a registered training organisation, offering a trade-focused Higher School Certificate (HSC) program. It is governed by a board comprised of both industry and education professionals.

In New Zealand, the Vocational Pathways framework helps senior secondary students to consider their options for further study, training and employment. There are six colour-coded Vocational Pathways: construction and infrastructure; manufacturing and technology; primary industries; service industries; social and community; and creative technologies.

Students interested in a career in trades, technology or industry can use the colour-coded Vocational Pathways to identify and plan study options and develop a path to workplace-relevant vocational qualifications.


Careers advice material for students is built around these six pathways, helping students to navigate their education and career options. Industry involvement in the process ensures that the Vocational Pathways focus on the types of skills and experiences that workplaces care about.

Students who achieve their National Certificate of Educational Achievement (NCEA) level 2 (broadly equivalent to Australia's SSCE), can gain a Vocational Pathways Award. At level 2, students have achieved the standards that align with the knowledge and skills that employers are looking for in the six industries. Level 3 assessment standards, which contribute to university entrance (UE) are also mapped to Vocational Pathways, meaning that students can use the pathways to choose UE subjects.

Source: New Zealand Ministry of Education (<https://youthguarantee.education.govt.nz/initiatives/vocational-pathways/>) in Joyce (2019).

# OUTCOMES FROM VET FOR SECONDARY SCHOOL STUDENTS PROGRAMS

The outcomes of VfSSS programs can be difficult to measure due to confounding factors such as academic ability, parental influence, socioeconomic status and local labour markets, which mask the impact of these programs (Moschion, Polidano & Castillo 2019). In many studies, control groups are missing or difficult to obtain (Misko, Korbel & Blomberg 2017), and there is minimal research examining the long-term outcomes of VfSSS; that is, beyond five years after school completion.

## Short-term outcomes

The recent inclusion of a question in the National Student Outcomes Survey[14] relating to the take-up of VfSSS programs by 15 to 19-year-olds allows, for the first-time, insight into the short-term outcomes of completing VET training at school; that is, 6—12 months post-school completion (NCVER 2021e).

The findings from the 2021 Student Outcomes Survey show that the majority of VfSSS students who completed a VET qualification in 2020 were satisfied with the quality of both their VET training and teaching and that they had achieved their main reason for training. About three-quarters were employed or in further study after they had completed their training, with 60.1% in employment and 43.0% studying (table 5).

Compared with students of the same age not doing the training as part of the SSCE, a lower proportion of VfSSS were undertaking training for employment-related reasons, and fewer were employed in the same intended occupation of the training course after completing the training (table 5). These findings may not be totally unexpected, as Anlezark, Karmel and Ong (2006) found that many students, particularly females, use VET as a 'taster' (that is, 'do I want to do this after finishing school or not?') or for immediate employment outcomes rather than for longer-term post-school VET pathways.

**Table 5 Outcomes of VfSSS qualification completers, 2021 (proportion +/- margin of error/95% confidence interval)**

| | Training was part of senior secondary schooling (of those aged 15 to 19 years) | |
|---|---|---|
| | Yes | No |
| Achieved main reason for doing the training | 84.4 (0.3) | 83.1 (0.9) |
| Main reason for undertaking training: employment-related | 42.8 (0.4) | 62.7 (1.2) |
| Main reason for undertaking training: further study | 33.3 (0.4) | 16.1 (0.9) |
| Satisfied with the training overall | 90.8 (0.3) | 88.6 (0.8) |
| Satisfied with teaching | 88.8 (0.3) | 86.2 (0.9) |
| Employed or in further study after training | 76.0 (0.4) | 76.9 (1.1) |
| Employed after training | 60.1 (0.4) | 63.2 (1.2) |
| Employed in same occupation as training course | 8.0 (0.2) | 17.0 (0.9) |
| Employed in different occupation to training course and training is relevant | 21.8 (0.4) | 21.7 (1.1) |
| Enrolled in further study after training | 43.0 (0.4) | 38.3 (1.2) |
| Enrolled in further study at a higher level after training | 30.9 (0.4) | 27.1 (1.1) |

Note: Grey shading indicates a statistically significant difference between the two groups at the 95% significance level.

Source: NCVER (2021c).

## Medium-term outcomes, quality of jobs and pathways

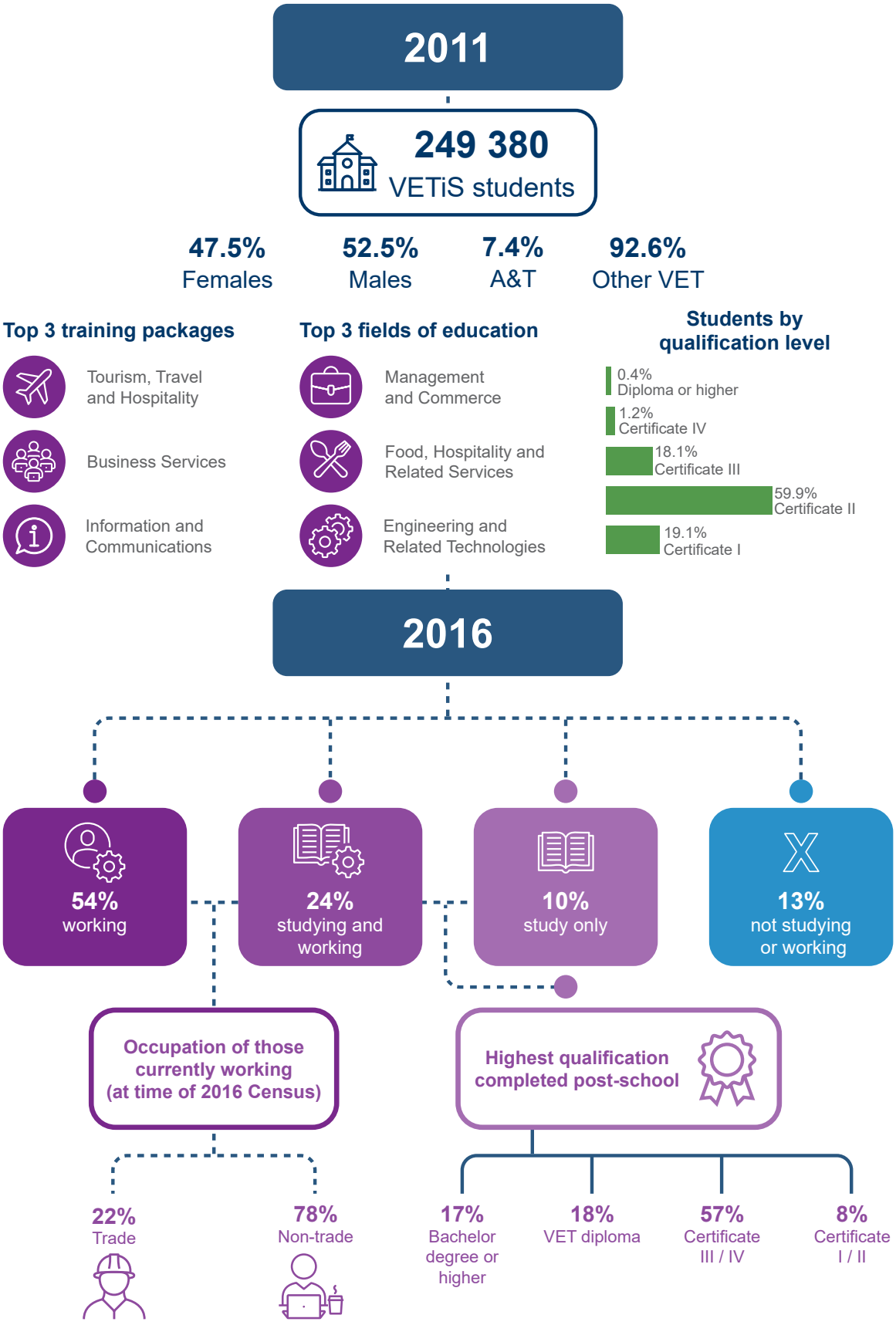
One of the most recent studies of the medium-term post-school destinations of VfSSS students; that is, four to five years post-school, was undertaken by Misko, Chew and Korbel (2020). Using an integrated dataset, which linked data from the 2011 National VET in Schools Collection with data from the 2016 Census of Population and Housing, this research investigated whether students who undertook a VfSSS program in 2011 were in work and/or further studies five years later (2016), and the extent to which their VfSSS studies were linked to these employment and study destinations. This research was a follow-up to a similar study, undertaken earlier by Misko and colleagues, using a linked dataset from the 2006 National VET in Schools Collection and the 2011 Census (Misko, Korbel & Blomberg 2017).

In 2011, there were about 250 000 students undertaking VET programs at school, with the majority undertaking certificate II qualifications (figure 2). It is interesting to note that, 10 years later, student numbers and their training characteristics have not changed greatly (table 2).

14 The Student Outcomes Survey (SOS) VfSSS scope differs from the National VET in Schools Collection in that it covers a larger age and school year range, and self-identification of VET being part of the SSCE. As this survey was carried out during 2020, the first year of the COVID pandemic, responses need to be interpreted in an environment of labour market uncertainty.

Misko, Chew and Korbel (2020) found that, five years after completing secondary schooling, most of the former VET school students were in work or study: about half were working only; 10% studying only; and a further quarter doing both (figure 2). They also found that 84% of those who had undertaken a school-based apprenticeship or traineeship in 2011 had found a job five years later, compared with 77% of those who had undertaken other VET programs (Misko, Chew & Korbel 2020, p.17).

**Figure 2 VfSSS – pathway to post-school employment and training, 2011–16**




Source: 2011 National VET in Schools Collection and 2016 ABS Census of Population and Housing integrated data set.

Misko and colleagues (2020) reported that just over a fifth (22%) of students from the 2011 cohort were working as 'technicians and trade workers' five years later, referred to in figure 2 as a 'trade' occupation. They further found that the trades with the strongest match between intended occupation of the VET program and actual job were the electrotechnology and telecommunications trades, with 53% of those who had trained in this occupational area while at school finding a job in this occupation. Around two-fifths of students who had trained in the construction or automotive and engineering trades also ended up in the occupation for which they had trained (43% and 42% respectively), while 34% of food trades students ended up in a related occupation (Misko, Chew & Korbel 2020, p.26).

The work of Misko and colleagues (Misko, Chew & Korbel 2020; Misko, Lees & Chew 2021) is also important as it attempts to control for the 'VET factor', by comparing the post-school employment and further study outcomes of VfSSS and non-VfSSS groups. In the 2021 research, Misko and colleagues add a further dimension by disaggregating the groups by ATAR attainment. Misko and colleagues (2021) found that, at age 22 years, a higher proportion of the VfSSS cohort who had not attained an ATAR were more likely to be in full-time and permanent employment compared with their non-VfSSS counterparts (with or without an ATAR) and with the VfSSS group with an ATAR. They noted that this may be the case because a substantial proportion of the VfSSS-no ATAR group were undertaking or had completed an apprenticeship upon leaving school.

However, Misko et al. (2021) reported that, by the age of 25, the labour market status is almost reversed: the VfSSS-no ATAR group were less likely to be permanently employed and more likely to be not working compared with their VfSSS-with an ATAR counterparts and the non-VfSSS (ATAR/no ATAR) groups. In terms of further education and training outcomes, by age 25, by comparison with the VfSSS-with an ATAR group, the VfSSS-no ATAR had achieved improved training outcomes at the certificate III and above level, but all other groups, including the VfSSS-with an ATAR, were more likely to have attained a bachelor's degree or higher.

While we know that, at around four to five years post-school, almost 80% of VfSSS participants are in employment, including working and studying (figure 2), we know little about the types of jobs they are doing and the level of income earned at this time. It is important to understand more about these issues, as the job market for young people is typically dominated by part-time or casual, and low-paid work, often at a low skill level (Polesel et al. 2019). How well VfSSS facilitates participants getting a 'good job', in terms of the type of job and income earned, is important to know.

Moschion, Polidano and Castillo (2019) used data from the Longitudinal Surveys of Australian Youth to track the outcomes of students who participated in VET subjects in Years 11 and/or 12[15] up to seven years after they had left secondary school. They found that students who participated in VfSSS programs, particularly those with a workplace learning component, had a higher chance of finding full-time and satisfying work in the first year after leaving school. In addition, Moshion and colleagues found that having this early start in the labour market over the first seven years post-school is estimated to provide senior secondary VET participants with extra earnings that are equivalent to receiving a one-off payment at the time of leaving school of up to $60 000 for apprentice- and traineeships (Moschion, Polidano & Castillo 2019, p.3). After seven years, however, those who had undertaken VfSSS programs have little or no advantage over their non-VfSSS counterparts in the labour market.

Evidence from earlier research, however, that tracked the destinations of school completers in Victoria (Rothman et al. 2011, cited in Clarke 2015) and Queensland (Queensland Department of Education and Training 2011) indicates that VfSSS plays a limited role in supporting entry to work (Clarke 2015). For those students making a direct entry into the labour market, the occupations accessed by VfSSS and non-VfSSS are remarkably similar in the short term: the two main areas of work are community and personal service jobs and sales work (Misko et al. 2019; Polesel et al. 2019). In this context, a transition to full-time work, while clearly preferable to unemployment or under-employment, cannot necessarily be considered a strong outcome due to the generally low-skilled and low-income nature of these types of jobs (Polesel et al. 2019).

15 Note, this study combined the 2003, 2006 and 2009 LSAY cohorts to undertake the analysis. For these cohorts, whether the school-based VET program undertaken counted toward a student's SSCE is not explicitly asked. The scope of this study therefore likely extends the narrow scope of the National VET in Schools Collection.

# GAPS AND FURTHER RESEARCH

VET programs for secondary school students do provide positive employment and further study outcomes for participants in the short-and medium-term post-school. Recent government initiatives such as the establishment of the National Careers Institute may help address the concerns highlighted in this synthesis about the accessibility and quality of careers advice for secondary school students. Further, having as a priority area in the new National Skills Agreement, the need to improve the quality and vocational relevance of VfSSS programs may go some way to tackle concerns about delivery and assessment practices, as well as help to better engage employers.

However, gaps in our knowledge about the efficacy of VET programs for secondary school students in fully achieving their intended aims remain. Areas that still require further consideration are outlined briefly below.

## VET as a pathway into higher post-school qualifications

In response to the variable success of VfSSS programs in facilitating direct entry to the labour market, there is a view that vocational education programs in schools should be promoted as a pathway to higher-level post-school study — VET or university — rather than as a direct pathway to jobs without further training (Clarke 2015; Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020; Polesel et al. 2019). Clarke (2014) has suggested that VET should focus on providing students with a clear pathway to post-school vocational training (including apprenticeships) rather than giving direction to students to enter the workforce straight after secondary school completion. This is because the lower Australian Qualifications Framework (AQF) level of the VET qualifications offered in schools, often incomplete and at or below certificate III, does not necessarily provide preparation for entry to skilled work (Clarke 2012).

In the context that VfSSS should be promoted as a pathway to higher-level post-school VET qualifications, we need to consider the extent to which VfSSS provides credit towards degree studies at universities and other higher education (Clarke 2015; Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020). However, there is little evidence to suggest that VfSSS is effective in facilitating school completers' access to higher-level qualifications, with post-school tracking surveys in Victoria, New South Wales and Queensland revealing that VfSSS is playing a limited role in widening participation in higher VET qualifications or university degrees (Clarke 2015; Polesel et al. 2019).

Policies that enhance opportunities for VET as a pathway to higher education in particular and which increase opportunities for achieving degrees through VET study may be important in developing student interest and participation in the VET sector. Alongside this, further research to better understand what secondary students expect to gain from doing VET programs at school is warranted, as this may promote the development of strategies to help broaden the appeal of VET and to facilitate take-up.

## Data collection

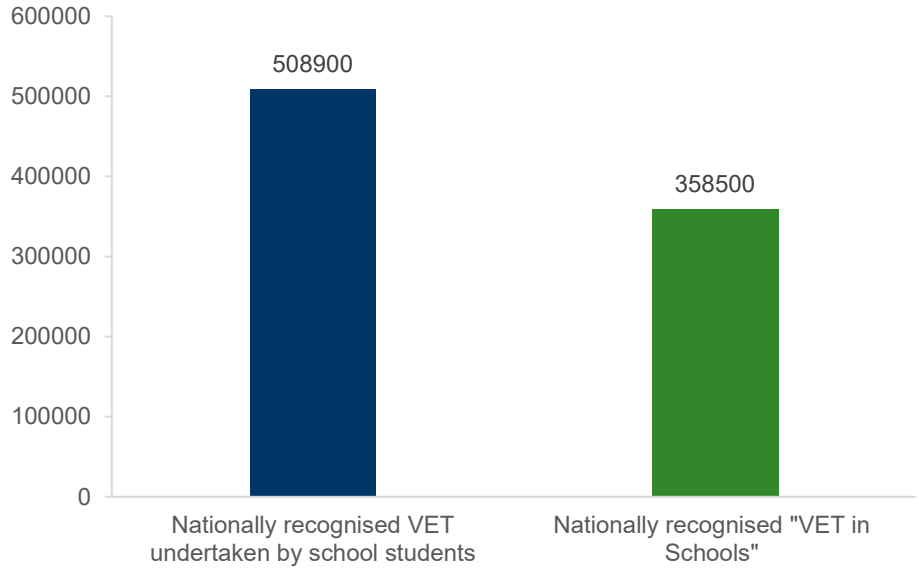
Both the Shergold and the Joyce reviews raised concerns about the limitations of current data collections, which make it difficult to measure the full investment in, the quality of, and outcomes from, VET programs undertaken by secondary school students, as well as to develop evidence-based policy to achieve the best outcomes.

For example, a key limitation of the current National VET in Schools Collection national data collection is that it does not cover all VET delivered to secondary students. The scope of this collection, which NCVER has administered since 1996, is all activity encompassed by the definition developed by the former Ministerial Council for Education, Early Childhood Development and Youth Affairs (MCEECDYA). MCEECDYA's definition covers programs undertaken as part of a student's SSCE that provide credit towards a nationally recognised VET qualification. But we do know that students can undertake VET at school that is not counted towards their senior secondary certificate, and students can also be doing VET outside school that may be connected to a part-time job (for example, in retail or hospitality). So, VET for secondary school students is broader than that captured in the National VET in Schools Collection.

To demonstrate this, consider figure 3. In 2020, there were approximately 508 900 program enrolments in nationally recognised VET being undertaken by students who were attending school, including VfSSS activity. They may have

done this training at school or outside school. Although not directly comparable (due to the way the data are processed), we can see that there were around 358 500 program enrolments captured in the National VET in Schools Collection in the same year.

**Figure 3 Intended occupational outcomes of the 2020 VfSSS cohort (%)**




Source: NCVER (2021d, e).

Another data gap relates to reliable post-school labour market and further education and training data. Having these destination data is critical for assessing the effectiveness of VfSSS activity in the short, medium and long terms, and, as Moschion, Polidano and Castillo (2019) noted, to help 'inform [future] program design and funding decisions' (p.2).

Although not specifically focusing on VfSSS, the Shergold review recommended the integration of data from the school, VET and higher education sectors with labour market data as a way to gain a better understanding of the employment and further education and training paths school leavers take. Insights from such data integration will bring clarity to the decision-making processes of students and consequently are likely to assist in the development of more targeted education policy and programs (Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020, p.141).

Related to gaining a longer-term view of the paths school leavers take is the concept of a unique student identifier (USI) for school students. The Australian Government and state and territory governments acknowledge the importance of extending such an initiative, which is already well established in the VET sector, to other education sectors. All governments, through the National School Reform Agreement, have committed to the implementation of a national USI for school students by 2023 (Panel for the Education Council Review of Senior Secondary Pathways into Work, Further Education and Training 2020, p.144-145).

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# APPENDIX

## VFSSS data sources

A number of data sources are available for analysing VfSSS activity and outcomes. These include:

- National VET in Schools Collection (NCVER)
- Longitudinal Surveys of Australian Youth (NCVER)
- National Report on Schooling (ACARA)
- National Schools Statistics Collection (ABS)
- National Register on VET in Australia: Training.gov.au (Department of Education, Skills and Employment)
- state-based tracking data, such as that collected through the 'On track' surveys in Victoria or 'Next step' in Queensland.

As with many diverse data collections on a special subject such as VfSSS, users need to pay close attention to the differing scopes and origins of unit-record data.

The data we mostly drew on for this synthesis come from the National VET in Schools Collection. The scope for this collection is limited to VET programs delivered as part of the Senior Secondary Certificate of Education in Years 11 and 12. The types of VET programs include AQF qualifications and/or units of competency counting towards an AQF qualification. As this scope excludes all enrolments in VET subjects and programs not part of the SSCE, student counts are considerably lower than the total number of students undertaking VET while at school. VET data are collected via the school accreditation bodies in each state or territory and are reported through state training authorities or directly through the accreditation bodies to NCVER.

The NCVER total VET activity (TVA) scope, based on the National VET Provider Collection, should not be used for VfSSS data analysis. Although data users can interrogate the VET activity data of nationally recognised training using school flags and age selections for students, the output may be less reliable than the National VET in Schools Collection as the data have not been validated by the school accreditation bodies.

## VFSSS – Pathway to post-school employment and further training, 2011–16

**Table A.1 VfSSS – pathway to post-school employment and training, 2011–16**

| Characteristic | Count | % |
|---|---|---|
| ***NCVER VfSSS Students in 2011 = 249 380*** | | |
| Gender: | | |
| Females | 118 530 | 47.5 |
| Males | 130 810 | 52.5 |
| Apprentice/trainee status: | | |
| School-based apprenticeship/traineeship | 18 485 | 7.4 |
| Other VET in Schools | 230 895 | 92.6 |
| Qualification: | | |
| Diploma or higher | 1 110 | 0.4 |
| Certificate IV | 2 900 | 1.2 |
| Certificate III | 45 015 | 18.1 |
| Certificate II | 149 450 | 59.9 |
| Certificate I | 47 730 | 19.1 |
| Top 3 Fields of education: | | |
| Management & commerce | 75 270 | 30.2 |
| Food, Hosp., Pers. serv. | 43 010 | 17.2 |
| Engineering & related technologies | 25 500 | 10.2 |

| Characteristic | Count | % |
|---|---|---|
| Top 3 training packages: | | |
| Tourism, Travel & Hosp. | 41 550 | 19.5 |
| Business Services | 30 290 | 14.2 |
| Information and Communications | 25 450 | 12 |
| | | |
| ***ABS Census Outcomes 2016*** | | *%* |
| Work or study: | | |
| Working only | | 54 |
| Studying and working | | 24 |
| Study only | | 10 |
| Not working or studying | | 13 |
| Occupation (of those who are working): | | |
| Trade (Technician and trade workers) | | 22 |
| Non-trade | | 78 |
| Proportion employed by type of VfSSS program: | | |
| School-based apprenticeship/traineeship | | 84 |
| Other VET program | | 77 |
| Highest qualification completed post-school: | | |
| Bachelor degree | | 17 |
| VET diploma | | 18 |
| Certificate III/IV | | 57 |
| Certificate I/II | | 8 |

Source: 2011 National VET in Schools Collection and 2016 ABS Census of Population and Housing integrated data set.



This document should be attributed as Circelli M and Siekmann G 2022, *VET for secondary school students: a research synthesis*, NCVER, Adelaide.

This work has been produced by NCVER on behalf of the Australian Government and state and territory governments, with funding provided through the Australian Government Department of Education, Skills and Employment.

The views and opinions expressed in this document are those of the author/project team and do not necessarily reflect the views of the Australian Government, or state and territory governments.

IMAGES: GETTY IMAGES

ISBN 978-1-925717-97-6

TD/TNC 147.06

Published by NCVER ABN 87 007 967 311

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