

# VET for secondary school students: post-school employment and further training destinations

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# About the research

## *VET for secondary school students: post-school employment and further training destinations*

Josie Misko, Emerick Chew and Patrick Korbel, National Centre for Vocational Education Research

This research looks at secondary school students who undertook a VET for Secondary School Students program (hereinafter referred to as VfSSS) in 2011 and investigates whether they are in work and/or further studies five years later (2016), and the extent to which their VfSSS studies are linked to these employment and study destinations. The study uses an integrated dataset, in which data from the 2011 National VET in Schools Collection are linked to data from the 2016 Census of Population and Housing. It follows on from a similar exercise in 2017, whereby 2006 data from the National VET in Schools Collection were linked to the 2011 census. In doing so it enables us to update our earlier research questions with more recent information.

Having both these datasets available has meant that researchers have had access to a large number of observations on the destinations of VfSSS students from various demographic, cultural and educational backgrounds, including their employment and further training destinations and experiences.

Researchers also undertook an exploratory analysis of data from the Longitudinal Surveys of Australian Youth (LSAY 2009 commencing cohort) to enable comparisons between VfSSS and non-VfSSS students, in relation to their employment and educational situations between four and five years after undertaking their secondary school studies.

When analysing the LSAY data, it became apparent that caution needs to be exercised when looking at the outcomes of VfSSS and treating them as a homogenous group. A significant proportion (45.2%) of the VfSSS students in the LSAY sample also achieved an ATAR and a preliminary analysis indicated some significant differences between the outcomes of VfSSS students who achieved an ATAR and those that did not achieve an ATAR. Understanding the respective motivations and the type of training programs undertaken for these groups of students and comparing their outcomes are planned for a future study.

## Key messages

- Evidence from the 2011 and 2006 cohorts indicates that students who undertook a school-based apprenticeship or traineeship as part of their VfSSS program were among the most likely to be employed in a full-time and permanent job five years later. They were also more likely to be employed in an occupation relevant to their VfSSS course than students who did not undertake an apprenticeship or traineeship.
- In terms of the overall match between the intended occupation of VfSSS and the actual job, the strongest links were in trade-related study areas, although strong links were also observed across other occupational groups.
- A comparison between the 2011 and the 2006 cohorts found that at all qualification levels there was an increase in the proportion of students who were engaged in, or had completed, post-school study five years later, with a substantially greater share of Indigenous students, and students who spoke a language other than English in the home, continuing with further study.

- A comparison of the destinations of VfSSS students with those of non-VfSSS students, four to five years after finishing school, reveals that VfSSS students were more likely to report VET certificates and diplomas as their highest level of qualification completed. They were less likely to have completed year 12, and a bachelor's degree or higher. They were also more likely to be in full-time and permanent or ongoing employment, noting that a considerable proportion of non-VfSSS students were still studying, mostly at university.
- Choosing the right VET course and pathway can make a substantial difference to secondary school students looking for a direct transition from school into an apprenticeship or full-time ongoing employment.

Simon Walker  
Managing Director, NCVET

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# Executive summary

The aim of the VET for Secondary School Students program, formerly referred to as VET in Schools program, is potentially to give students an advantage by providing access to training that combines classroom-based learning with experience in actual or simulated workplaces. Importantly, the program also enables them to complete their secondary school studies. The benefits of the VET for Secondary School Students program (hereinafter referred to as VfSSS) can be assessed by the extent to which it prepares students for employment and further training – a measure favoured by industry and to some degree by government – and the extent to which it fulfils the objectives that schools have for their students in relation to this program. These include developing awareness of career options and gaining the skills and knowledge necessary for navigating their life and work journeys. On occasions these two purposes for VfSSS conflict.

This research looks at school students who undertook a VfSSS program in 2011 and investigates whether they are in work and/or further studies four to five years later (2016), as well as exploratory analysis of data from the Longitudinal Surveys of Australian Youth (LSAY 2009 commencing cohort) to enable comparisons between VfSSS and non-VfSSS students.

We look specifically at the employment and further training or education destinations and outcomes of students participating in these programs, including the type and level of training they undertake and the relevance of their VfSSS courses to the type of jobs they were employed in four to five years after leaving school.

## Employment

Employment and training outcomes have remained relatively stable across the two time periods, with only small differences in the level of engagement between the 2006 and 2011 cohorts. In relation to the 2011 cohort:

- 78% were working, comprising 24% who were combining work with studies, and 54% who were working and not studying.
- Another 10% were studying only and 13% were not working and not studying.<sup>1</sup>

The students from both the 2011 and 2006 cohorts who were most successful in finding work were those who had undertaken apprenticeship or traineeship programs at school. The least successful in finding employment for both the 2011 and 2006 cohorts were Indigenous students and those who were predominantly non-English speakers in the home.

Across both time periods just over a fifth of both the 2006 and 2011 cohorts enter the trades. Of the 2011 cohort who entered a trade in 2016, there were five times as many males as females, which is slightly higher than for the 2006 cohort.

In our comparison between VfSSS students and non-VfSSS students we found there were no statistically significant difference between the two groups in getting a job, but there were some clear statistically significant differences in other areas. VfSSS students were more likely to have:

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<sup>1</sup> Numbers do not round up to 100% due to rounding error.



- full-time and permanent ongoing jobs
- jobs as technicians and trade workers (especially construction trades), and hospitality, retail and service managers
- completed an apprenticeship or VET studies.

However, they were less likely than non-VfSSS students to be employed in professional occupations.

## Relevance of VfSSS study to employment occupations

Whether VfSSS study leads to jobs in course-related occupations is an important policy issue. We found that VfSSS studies in training package and non-training package areas led to employment across a range of occupations predominantly in technician and trade jobs, community and personal service work, and sales.

A significantly higher proportion of students undertaking VfSSS in trade-related courses obtained employment in course-relevant occupations following school compared with the general VfSSS population. In terms of the match between the intended occupational outcome of the course studied at school and the actual post-school occupation destination, four of the top six matches were in trade-related areas, ranging from 53% of students studying in the electrotechnology and telecommunication trades to 34% in the food trades. The other two occupational areas with a relatively high match rate were for sales assistants (45%) and carers and aides (33%). The lowest match rates were for creative arts workers (2%).

For most VfSSS studies, however, there is relatively low alignment between the intended occupations of the VfSSS qualification and the destination occupation.

Students from the 2011 cohort who undertook a school-based apprenticeship or traineeship as part of their VfSSS programs were also generally more likely than those who did not to be employed in the same occupation as the intended occupation of their studies. This is especially the case for the trades, but it is also true for those who have undertaken school-based apprenticeships and traineeships in a number of other occupational areas (including carers and aides, engineering, ICT and science technicians, general clerical workers, hospitality workers, other technician and trades workers, and sports and personal service workers).

## Gaining further qualifications

By 2016 the great majority of 2011 VfSSS students, irrespective of their demographic and background characteristics, had completed a Year 12 or higher qualification. This was similar to findings for the 2006 cohort but there was an increase in the proportion of the 2011 cohort who were engaged in, or had completed, post-school study five years later, including:

- an increase in the proportion of students from the 2011 cohort who were subsequently engaged in, or completed an apprenticeship (77%) compared with the 2006 cohort (64%)
- a substantial increase in the share of Indigenous students who were subsequently engaged in or had completed post-school study (58%) compared with the 2006 cohort (39%).

The higher the level of qualification undertaken as a VfSSS program, the more likely it was that students had subsequently completed a post-school qualification<sup>2</sup> or were engaged in further studies five years later.

A sizeable proportion of the 2006 and 2011 cohorts who had completed a post-school qualification had attained a bachelor's degree or higher qualification, which based on preliminary LSAY analysis, predominantly reflects the group of VfSSS students who also achieved an ATAR.

Substantial proportions of those from both the 2011 and 2006 cohorts who continued with further studies often did so in the same broad fields of education, especially those who had studied in the more trade-related courses, such as engineering and related technologies, and architecture and building (in which around half of the VfSSS continued with the studies in the same area following school).

### Participation in VfSSS courses versus non-participation

In our additional analysis using LSAY data, we find that there are statistically significant differences in educational outcomes between the students who undertook VfSSS studies and those who did not. For example, VfSSS students were more likely to have:

- completed as their highest qualification, certificate I, II, III or IV level
- completed an apprenticeship
- completed VET studies.

They were less likely than non-VfSSS students to have completed:

- Year 12
- a bachelor's degree or higher qualifications as their highest qualification.

They were also less likely to be currently undertaking a recognised qualification, or a bachelor's degree or higher qualification.

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2 The ABS identifies non-school qualifications as 'educational attainments other than those of a pre-primary, primary or secondary education level applicable to all persons aged 15 years or over'. For the purposes of this report we will refer to these as post-school qualifications, even though some may have contributed to the completion of a certificate of education.  
<<https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/2900.0main+features100742016>>.



# Introduction, research questions and methods

The aim of this research is to provide greater insight into the destinations of students who undertake vocational education and training (VET) programs in secondary schools (VfSSS). In this study we investigate their destinations five years after the completion of their secondary school studies. The great advantage of this study is that it uses three large datasets, each containing a large number of observations, which enables a fine segmentation of the data.

We created a custom-built dataset, in which 2011 data from the National VET in Schools Collection, held by the NCVET, are linked to the 2016 Census of Population and Housing, held by the Australian Bureau of Statistics (ABS).<sup>3</sup> The dataset allowed us to investigate whether students' VfSSS programs align with or are matched to the qualification pathways and occupations they enter or follow when they leave school, importantly enabling an assessment of the benefits of VET programs delivered to secondary school students. We undertook this matching process by making use of ANZSCO – the Australian and New Zealand Standard Classification of Occupations<sup>4</sup>.

The VET in Schools Collection included all persons aged 15 to 19 years old who were enrolled in a VfSSS module or unit of competency in 2011 (see appendix A). The scope for the linked dataset is any person in the VET in Schools 2011 dataset who also responded to the 2016 census. The research interrogates this dataset to provide some descriptive statistics on the outcomes of different groups and to investigate linkages between VfSSS learning areas and post-school employment and further training destinations.

NCVER undertook a similar study some years earlier (Misko, Korbel & Blomberg 2017), which linked data from the 2006 National VET in Schools Collection and the 2011 Census of Population and Housing. Comparing these two datasets provides insights into how outcomes have changed for VfSSS between 2006 and 2011.

## Research questions

The following research questions are addressed:

- What are the five-year post-school employment and further training destinations for students who in 2011 undertook VfSSS studies?
- What is the match between the intended occupations of qualifications in 2011, when the VfSSS was undertaken, and the actual occupations of employment in 2016?
- How do the VET qualifications undertaken in secondary school relate to the qualifications students undertake post school?

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3 <<https://www.abs.gov.au/ausstats/abs@.nsf/mf/2024.0>>.

4 <<https://www.abs.gov.au/ANZSCO>>.

We include a third analysis to enable a further assessment of VfSSS studies. We do this by comparing the outcomes of VfSSS students and non-VfSSS students, using an applicable cohort from the Longitudinal Surveys of Australian Youth (LSAY), in this instance data items from the 2009 cohort of LSAY (Y09) surveys. We constructed the VfSSS group from those students who were still at school and who at any time between 2009 and 2012 (waves 1, 2, 3, or 4) reported that they had undertaken VET subjects as part of their secondary schooling (including TAFE) or as part of their senior secondary school certificate. Students were, on average, 15 years of age when they commenced the program in 2009. Data on post-school employment and training outcomes were collected from wave 8 (the most recently available data for 2016) when students were, on average, 22 years of age.

These data are used to address the final research question:

- How do VfSSS students compare with non-VfSSS students with respect to employment and qualification outcomes?

## The datasets

The box below highlights the different cohorts described in the study, the years in which they undertook or reported having undertaken VET studies, and the datasets used to measure their outcomes.

	<b>Year that VfSSS studies were undertaken</b>	<b>Dataset used to identify outcomes four to five years later</b>
2006 cohort	2006	Census 2011
2011 cohort	2011	Census 2016
LSAY 2009 cohort	2009–12	LSAY Y09 (wave 8) 2016



# Post-school employment and education and training

The labour force status of students who had undertaken a VfSSS program five years earlier is reported in table 1. The table indicates that five years after their VfSSS studies almost 80% of both the 2011 and 2006 cohorts were in a job, with about one-fifth not employed.

When we look more closely at the employment and training participation of VfSSS students from the 2011 cohort we find that just over a fifth of workers (22%) were in a trade, which is a similar proportion to the 2006 cohort in a trade (23%). Just over half of the 2011 cohort was working and not involved in studies, which is slightly less than for the 2006 cohort (54% and 56% respectively). Similar proportions of the 2011 and 2006 cohorts were both working and studying (24% and 23% respectively). There is also very little difference in the proportions of students from both cohorts not in work, but in education (10% and 9% respectively).

In terms of broad educational attainment, almost all (94%) of the 2011 cohort has attained a Year 12 or higher qualification, substantially up from the 87% of the 2006 cohort. Of the 2011 cohort of students who had gone on to attain a post-school qualification, 57% had attained a certificate III or IV qualification, just up from the proportion of students from the 2006 cohort (54%). Similar proportions from both the 2011 and 2006 cohorts had attained a diploma qualification (18.0% for both) and a bachelor's degree or higher (17% and 18% respectively).

In addition, around a third of the 2011 cohort was studying in 2016, slightly higher than observed for the 2006 cohort five years following their VfSSS studies. They were divided among those who attended university (25% and 21% respectively) and those who attended a VET institution (8% and 9% respectively).

**Table 1 Percentage of 2011 and 2006 cohorts in employment (full- and part-time) and in further training five years after VfSSS studies**

	<b>Outcomes</b>	
	2006 cohort %	2011 cohort %
<b>Employment status</b>		
Employed	79	78
Not employed	21	22
<b>Study and employment status</b>		
Not working and not studying	13	13
Combining work with studies	23	24
Studying only	9	10
Working only	56	54
<b>Occupation (of those currently working)</b>		
Trade	23	22
Non-trade	77	78
<b>Year 12 attainment status</b>		
Lower than Year 12	13	6
Year 12 or higher	87	94
<b>Highest post-school qualification for those with a post-school qualification</b>		
Bachelor's degree or higher	18	17
VET diploma	18	18
Certificate III/IV	54	57
Certificate I/II	10	8
<b>Current institution of studies (for those currently studying)</b>		
University	21	25
VET	9	8
Not in studies	70	67
<b>Total number</b>	<b>170 011</b>	<b>104 742</b>

Note: The 2011 cohort outcomes refer to the five-year post-school outcomes for students who in 2011 had undertaken a VfSSS program; the 2006 cohort outcomes represent the five-year post-school outcomes for students who in 2006 had undertaken a VfSSS program. Percentages may not always add to 100 because of rounding error.

Source: 2011 National VET in Schools Collection and 2016 Census of Population and Housing integrated dataset; 2006 National VET in Schools Collection and 2011 Census of Population and Housing integrated dataset.

Table 1 has presented information for the total group. To determine how these destinations vary for different groups of students we examine the data more closely. We are also interested in identifying how the VfSSS studies undertaken by students relate to their occupations of employment. If we discover a link between areas of study and destinations, then we can conclude at face value that VET studies at school are useful to the jobs people get and the further training and studies they undertake.

# Obtaining a job

A key indicator of success for vocational and academic programs, including those undertaken in secondary school or post-secondary school, is the ability of students to subsequently gain employment. Just under four-fifths of both the male and female students from the 2011 and 2006 cohorts were in a job five years after their VfSSS studies (table 1), with a slightly higher proportion of males than females employed (78% and 77% respectively; table 2).

We note that the unemployment rates in 2016 (when outcomes were analysed for the 2011 cohort) for 20 to 24-year-olds in the general working-age population was 9.9%, while the rate for males was 10.5% and for females 9.1%. These rates were slightly higher than they were in 2011 (when outcomes were analysed for the 2006 cohort), when the rate for 20 to 24-year-olds was at 8.8% for the general population and 10.3% for males and 7.4% for females.

## Background characteristics

Table 2 presents the five-year post-VfSSS employment outcomes for both the 2011 and 2006 cohorts according to gender and other background characteristics:

### *Age*

- Around three-quarters of 15, 16 and 17-year-olds from the 2011 cohort were in work five years after their VfSSS studies, slightly down from those of the same ages of the 2006 cohort.
- For 18-year-olds the proportion was relatively similar for the two groups (75% and 76%).
- The 19-year-olds didn't fare as well in finding employment in both the 2011 and 2006 cohorts (at 62% and 67%, respectively). Further investigation may be warranted. We can speculate that this group may be undertaking learning because of being required to do so either by parents or by education policy to keep people in education if they are not in jobs.

### *VfSSS qualification level*

- Just over three-quarters of the 2011 cohort, irrespective of VfSSS qualification level undertaken, had found a job five years later. This was slightly down on students from the 2006 cohort. For this group it was the diploma and above students who showed higher levels of employment than those who had undertaken lower-level qualifications (table 2).
- Just over four-fifths (84%) of the apprentices and trainees from the 2011 and the 2006 cohorts had found a job five years later (84% and 83% respectively). Some of this group may have stayed with their current employers on completion of their apprenticeships (table 2).

### *Indigenous and NESB status*

- Indigenous students do not fare as well as others in gaining employment in both the 2011 and 2006 cohorts (66% vs 78%, and 62% vs 79% respectively).
- Similarly, for both cohorts, those who do not mainly speak English in the home are less successful in gaining employment than those who mainly speak English in the home (66% vs 79% and 68% vs 81% respectively; table 2).

### *School type*

- Around 80% of Catholic and independent school students from the 2011 cohort were in a job in 2016, slightly higher than the 77% from government schools and those from other government-funded institutions (69%; table 2).<sup>6</sup>

### *Location*

- Just under 80% of students from the 2011 cohort in regional and major city areas were in a job (between 77% and 79% respectively), similar to the 2006 cohort.
- For both 2011 and 2006 cohorts, those from remote and very remote areas are the least successful; nevertheless, we find that around three-quarters of them are also in a job (76% and 74% respectively).

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5 This refers to those who do or do not mainly speak English in the home.

6 Other government providers are government-owned and managed education facilities/organisations, other than TAFE institutes, that deliver VET (for example, agricultural colleges and higher education institutes).



**Table 2 Percentage of students from 2011 and 2006 cohorts in employment (full- and part-time) five years after VfSSS studies by student background characteristics and level of VfSSS studies<sup>1</sup>**

Student characteristics and background	Outcomes	
	2006 cohort %	2011 cohort %
<b>Sex</b>		
Males	80	78
Females	77	77
<b>Age</b>		
15 years	78	75
16 years	79	78
17 years	80	79
18 years	76	75
19 years	67	62
<b>Level of VfSSS study</b>		
Cert. I/II	79	77
Cert. III/IV	80	79
Diploma and above	85	79
<b>Apprenticeship status</b>		
Apprenticeship	83	84
Not apprenticeship	79	77
<b>Language mainly spoken in the home</b>		
English	81	79
Language other than English	68	66
<b>School type</b>		
Government	78	77
Catholic	82	82
Independent	81	80
Other government	69	69
<b>Indigenous status<sup>2</sup></b>		
Non-Indigenous	79	78
Indigenous	62	66
<b>Location</b>		
Major city	79	77
Inner regional	79	79
Outer regional	79	78
Remote and very remote	74	76
<b>Total number</b>	<b>170 011</b>	<b>104 742</b>

Notes: The 2011 cohort outcomes refer to the five-year post-school employment outcomes for students who in 2011 had undertaken a VfSSS program; the 2006 cohort outcomes represent the five-year post-school employment outcomes for students who in 2006 had undertaken a VfSSS program.

1. Weighted data for 2006 cohort.
2. 2006 VfSSS female students from Indigenous backgrounds outperformed males (85.1% and 81.1% respectively).

Source: 2011 National VET in Schools Collection and 2016 Census of Population and Housing integrated dataset;  
2006 National VET in Schools Collection and 2011 Census of Population and Housing integrated dataset.

## How VfSSS students compare with non-VfSSS students in obtaining a job

The data given in table 2 only provide one part of the picture; that is, the VfSSS picture. We cannot tell whether students who had not undertaken VfSSS studies would similarly have obtained employment. Because we cannot use census information to capture those students who did not undertake VfSSS studies to make a suitable comparison, we have to take a different approach. We source our comparison data from LSAY participants from the 2009 cohort, who were 15 years of age when they entered the survey. We track their employment status in 2016, when they are 22 years of age.

Using the LSAY data we find that in 2016 there were just over 1000 individuals aged 22 years who had undertaken VfSSS studies, compared with almost 3000 who had not. Most students from the 2011 cohort in the integrated data set were aged between 20 and 23 years in 2016.

When we compare data on the employment outcomes of students who had undertaken VfSSS programs with those who had not we found no statistically significant differences in being employed, unemployed or not in the labour force. However, we did find that there were some clear differences between the two groups that were confirmed to be statistically significant (reported below and in table 3 and appendix C, table C1 and table C2).

VfSSS students were more likely than non-VfSSS students to have:

- gained full-time and permanent ongoing jobs
- completed an apprenticeship.

However, VfSSS students were less likely than non-VfSSS students to be in part-time or casual work. Later in the report we find that the non-VfSSS students were more likely to be currently studying.

**Table 3 Employment outcomes by VET participation in secondary school, 2016**

	Did not do VfSSS	Did VfSSS	Total	Significance at 95% confidence interval (Denoted by *)	Did not do VfSSS	Did VfSSS			
	%	%	%		<i>n</i>	Upper and Lower bounds of Confidence Interval			
					<i>Lower bound</i>	<i>Upper bound</i>	<i>Lower bound</i>	<i>Upper bound</i>	
<b>Labour force status</b>									
Employed	84.0	86.6	84.9	3344	82.1	86.0	83.1	90.1	
Unemployed	6.6	5.9	6.3	237	5.2	7.9	2.9	8.8	
Not in the labour force	9.4	7.5	8.8	385	7.9	10.9	5.3	9.8	
<b>Full-time and part-time employment status</b>									
Full-time employment	36.9	54.2	42.7	1593	*	34.3	39.5	49.5	58.8
Part-time employment	42.5	28.4	37.8	1596	*	39.7	45.4	24.6	32.3
Not working (unemployed or NILF)	16.0	13.4	15.1	622		14.0	17.9	9.9	16.9
Working, but working time unknown	4.6	4.0	4.4	155		3.1	6.2	2.1	6.0
<b>Employment type and labour force status</b>									
Permanent/ongoing employment	45.8	55.5	49.1	1862	*	43.0	48.6	50.8	60.2
Casual employment	34.8	26.4	32.0	1320	*	32.0	37.6	22.4	30.5
Not working (unemployed or NILF)	16.0	13.4	15.1	622		14.0	17.9	9.9	16.9
Working, but employment status unknown	3.4	4.7	3.8	162		2.7	4.2	2.7	6.7
Total (%)	100	100	100	3966					
Total (n)	2958	1008							

Source: LSAY 2009 cohort (Y09), wave 8 in 2016 (age 22), Australia.

Our findings of the success of VfSSS students in gaining employment are similar to the findings from a recent NCVET study investigating school-to-work pathways (Ranasinghe et al. 2019). Those who have undertaken vocational studies in school are more likely to transition into the 'early entry to full-time work' pathway, which had the highest employment rate, of 97% (amongst other pathways) at age 25 years.

To explore other comparable differences between the two groups, we also used the LSAY data to divide the two groups according to quartiles of achievement in maths and in reading (measured at age 15), reasoning that these could be a good proxy for cognitive ability. However, although we observed differences in the employment outcomes that suggested that one group was more likely to be in employment than another, the differences were not statistically significant.



# Linking VfSSS studies with occupational destinations

## Objectives of VfSSS

VET programs for secondary school students have a number of defining goals, including:

- preparing students for the ‘world of work’
- enabling an alternative pathway for those students not generally interested in or capable of higher academic education
- catering to those who are mainly interested in vocational pathways, including training for the trades.

There are multiple perspectives on the role of VET as a whole that more or less equate to the reasons given above for introducing VET for Secondary School Student Programs (VfSSS):

- For industry, one of the key purposes of VET (including in secondary schools) is ensuring that students develop the generic and industry-specific skills and knowledge required by industry for its potential workforce.
- For students, VET enables them to enter and progress through to employment.
- For schools, labour-market purposes are not the only reasons for supporting VET. Schools are also interested in helping students to develop knowledge and an understanding of the world of work in general, explore a range of career options and to progress through and complete their other educational subjects. They want their students to develop the skills, knowledge and awareness required to successfully navigate their journey through life and work and become well-functioning members of their families, communities and society in general.

Whether VfSSS studies lead to jobs in course-related occupations and/or industry sectors is an important policy issue, especially as one of the key aims of all education and training programs – both vocational and general – is to help students to acquire the requisite skills and knowledge for a job in their preferred occupation or industry. The identification of close relationships between the courses undertaken and subsequent employment occupations indicates the usefulness of the training to the individual and to the labour market. The presence of limited relationships may lead us to question the usefulness of these programs by comparison with other forms of education.

## ANZSCO occupations

We use ANZSCO (the Australian and New Zealand Standard Classification of Occupations) to investigate the post-school occupational outcomes of the 2011 and 2006 cohorts, specifically their relationship to the VfSSS courses undertaken in schools.

In table 4 we observe that the largest single group of students from the 2011 cohort (22%) were employed as technicians and trade workers, with 23% for this group in 2006. For the

2011 cohort, community and personal service workers (19%), sales workers (18%), clerical and administrative workers (12%) and labourers (12%) were next in line. The 2006 cohort followed a similar pattern, but the proportions were almost evenly divided among sales workers, clerical and administrative workers, and community and personal service workers (at 17%, 15% and 16% respectively). If we combine these workers into one group of service occupations for both the 2011 and 2006 cohorts, we find that in both cases they account for almost half (49% and 48% respectively) of the total group. For both the 2011 and 2006 cohorts, labourers accounted for about similar proportions (12% and 10% respectively), as did professionals (7% and 9% respectively). Not unexpectedly, we observe for both cohorts (because of their ages and levels of experience) that the smallest proportions ended up as managers and machinery operators and drivers (about 5%).

**Table 4 ANZSCO major group 3 by five-year post-school occupations of employment outcomes for workers, 2011 and 2006 cohorts**

ANZSCO 3 – Occupations of employment	Outcomes for 2006 cohort	Outcomes for 2011 cohort
	%	%
Managers	5	5
Professionals	9	7
Technician and trades workers	23	22
Community and personal service workers	16	19
Clerical and administrative workers	15	12
Sales workers	17	18
Machinery operators and drivers	5	4
Labourers	10	12
<b>Total number</b>	<b>170 111</b>	<b>104 742</b>

Notes: Outcomes for the 2011 cohort refer to the five-year post-school occupational outcomes for those who in 2011 undertook a VfSSS program. Outcomes for the 2006 cohort refer to the five-year post-school occupational outcomes for those who in 2011 undertook a VfSSS program.

Source: 2011 National VET in Schools Collection and 2016 Census of Population and Housing Integrated Dataset; 2006 National VET in Schools Collection and 2011 Census of Population and Housing Integrated Dataset.

When we compared the occupations of employment of the students who had undertaken VfSSS programs with those of non-VfSSS students – that is, the LSAY cohort – we found statistically significant differences between the two groups, with VfSSS students more likely to enter jobs as managers, and technicians and trades workers. They were less likely than non-VfSSS students to be employed as professionals (table 5).

**Table 5 ANZSCO occupation of employment by participation in VfSSS studies, %**

	Did not do VfSSS	Did VfSSS	Total	n	Significance test at 95% confidence interval (Denoted by *)	95% Confidence intervals			
						Did not do VfSSS		Did VfSSS	
						Confidence Intervals			
						Lower bound	Upper bound	Lower bound	Upper bound
Managers	3.7	9.3	5.6	184	*	2.8	4.6	5.6	13.0
Professionals	20.7	7.6	16.3	768	*	18.6	22.9	5.8	9.5
Technicians and trades workers	7.7	18.1	11.2	368	*	6.0	9.3	14.7	21.5
Community and personal service workers	18.0	16.1	17.3	650		15.4	20.5	12.8	19.4
Clerical and administrative workers	10.4	10.5	10.4	463		8.9	11.9	7.6	13.3
Sales workers	13.5	10.4	12.4	510		11.7	15.2	7.5	13.3
Machinery operators and drivers	1.5	3.0	2.0	68		0.9	2.1	1.5	4.5
Labourers	5.5	8.8	6.6	221		4.2	6.9	6.3	11.3
Unknown or not classifiable	3.1	2.7	3.0	112		2.1	4.2	1.1	4.4
Not working (unemployed or NILF)	16.0	13.4	15.1	622		14.0	17.9	9.9	16.9
<b>Total (%)</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>3966</b>					
<b>Total (n)</b>	<b>2958</b>	<b>1008</b>							

Note: Statistical Significance at 95% Confidence interval is denoted by an asterisk.

Source: Longitudinal Surveys of Australian Youth, 2009 cohort (Y09), wave 8.

## The relevance to employment occupations of VfSSS training package studies

We saw in table 4 that the largest single group of occupations of employment for both of the 2011 and 2006 cohorts is in occupations classified as trades and technician workers. However, students who undertake VfSSS programs are not always preparing to enter such occupations, so we check whether their VfSSS study prepares them for a job that is broadly related to their courses.<sup>7</sup>

We find that VfSSS studies both in training package and non-training package areas led to employment across ANZSCO occupations (at the major group level); however, the uptake of the different occupations was highly variable.

The closest matches between VfSSS program undertaken and destination occupation were observed for the trade-related programs (see appendix B, table B1 and B2). We find that:

- Between 45% and 62% of the 2011 cohort who had undertaken trade-specific training package programs were in a trade and technician job with the exception of hairdressing and beauty (at 30%). For the 2006 cohort the rates were very similar, although slightly higher; between 49% and 63% for trade and technician jobs (with the exception of hairdressing, at 24%).
- For both the 2011 and 2006 cohorts the closest match was obtained by students who had studied the Electro-Technology Training Package, with just under two-thirds ending up in trade and technician jobs (62% and 63% respectively).
- The Automotive Industry Retail, Service and Repair, and the Metal and Engineering training packages had about half of their students from the 2011 cohort moving into technician and trade occupations (56% and 50%, respectively). The 2006 cohort studying courses in the Automotive Industry Retail, Service and Repair Training Package had a lower match rate (at 53%). However, the Metal and Engineering match rate for the 2011 cohort (50%) was lower than it was for the 2006 cohort, perhaps reflecting a reduced availability of these jobs in industries that have been recently restructured.
- The Construction, Plumbing Services and Integrated Framework and the Furnishing training packages had around half of their 2011 cohort (48% and 45% respectively) moving into technician and trade jobs five years after their studies. The match rate for 2006 is comparable.
- Close matches were also at similar rates for students from the 2011 cohort who had studied the Retail Services and Community Services training packages, with 48% of retail services students ending up as sales workers, and 46% of community services students ending up as community and personal service workers. In contrast, the match rates for students from the 2006 cohort who had undertaken studies in retail and community services were considerably lower (22% and 36%). These findings suggest that students move into the more plentiful jobs (so providing opportunities for young people) and in 2016 these are likely to have been growth industries, such as the services sectors.

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<sup>7</sup> To make the process more manageable and meaningful we focus on the 19 training packages with the highest number of students. We also aggregate all students undertaking non-training package courses into one group. We then track the destinations of students in terms of the broad occupational areas in the ANZSCO occupational groupings.



- The match rate was lower for students who had undertaken the Beauty Training Package, with 29% of the 2011 cohort moving into community and personal service worker jobs, and another 35% moving into sales worker jobs. For the 2006 cohort it was generally similar (at 29% and 23% respectively).

For some VfSSS studies it is difficult to determine a close alignment with specific five-year post-school destination occupations as the connections are less obvious. For example, lower levels of close alignment to destination occupations were found for the great majority of other training package programs:

- Around a quarter of the 2011 and 2006 cohorts undertaking studies in the Tourism, Travel and Hospitality Training Package were employed in community and personal service worker jobs (26% and 23% respectively).
- Just over a quarter (28%) of the 2011 cohort undertaking the Agriculture, Horticulture, and Conservation and Land Management Training Package were employed as trade and technician workers, with the same proportion for each (24%) moving into labouring jobs. The match rate for the 2006 cohort was 34% and 20% respectively.
- Students from the 2011 cohort undertaking studies in animal care and management also ended up in a variety of occupations, with a fifth (20%) moving into jobs as technician and trade workers. Around the same proportion moved into jobs as community and personal service workers and sales workers (20% and 21%) respectively.
- Almost a third of the 2011 cohort undertaking studies from the Hairdressing and Beauty Training Package entered jobs as technician and trade workers (30%) or as community and personal service workers (23%). For students from the 2006 cohort it was lower for technician and trade workers (24%) and comparable for community and personal service workers (22%).
- Around a fifth of the students from the 2011 cohort studying courses in information and communications technology ended up in jobs as technician and trade workers or sales workers (20% and 19% respectively). Most of the remainder moved into jobs as community and personal services workers, labourers, and clerical and administrative workers (15%, 14% and 11% respectively). For the 2006 cohort there was a slightly higher proportion ending up in trade and technician jobs (24%), and a slightly smaller proportion in sales jobs (17%). Smaller proportions were observed for community and personal service workers (13%) and labourers (11%).
- Just over a quarter (26%) of those from the 2011 cohort undertaking studies in business services were employed as clerical and administrative workers, with the majority of the remainder in jobs as sales workers, community and personal service workers, and technician and trade workers (18%, 18% and 12% respectively). For the 2006 cohort the highest proportion also went into jobs as clerical and administrative workers (24%), followed by sales workers (18%) and community and personal service workers (16%).
- Almost a quarter (24%) of the 2011 cohort studying sport, fitness and recreation got jobs as technician and trade workers, while just over a fifth (22%) got jobs as community and personal service workers. This is slightly greater than the 20% of the 2006 cohort who ended up as community and personal service workers, and slightly less than the 26% of the cohort who became technician and trades workers.
- Over a third of the 2011 cohort who studied courses in health ended up in community and personal service jobs (34%). These students had the highest proportion ending up

working in the professions. For the 2006 cohort the Health Training Package did not figure among the 20 programs undertaken by VfSSS students.

- There was little alignment between VfSSS studies and the five-year destination occupations for those from both the 2011 and 2006 cohorts who had undertaken studies in the creative areas (including Creative Arts and Culture, Art and Culture, Screen and Media, and Music training packages). They tended to be represented in a wide range of occupations.
- If we take Creative Arts and Culture and Arts and Culture Training Packages as examples, the most predominant occupations for those from the 2011 cohort who studied from the Creative Arts and Culture Training Package, are community and personal service workers (22%), sales workers (21%), trade and technician workers (16%) and clerical and administrative workers (13%). By comparison with the 2006 cohort, there is no change in the proportion (10%) entering labouring occupations. We do observe, however, slightly lower proportions of those from the 2006 cohort entering community and personal service worker jobs (18%), and technician and trade worker jobs (12%). Similar proportions of these 2006 cohort students entered sales assistant jobs.

## Trade-specific linkages

To this point we have provided a broad-brush view of how the VfSSS training courses (in terms of training packages and non-training package courses) undertaken by young people relate to the jobs they achieve five years later. We have done this using both 2011 and 2006 cohort data. Because we are using only the ANZSCO occupations at the major group level, the analysis does not tell us much about the specific types of jobs they acquire.

To fill this gap, we look at the intended occupation of their VfSSS qualifications to determine whether they attain a job in the same specific type of occupation five years after their VfSSS studies. We look at the ANZSCO sub-major group level, which gives us more information about the occupational area involved. We start off by considering only the trades-related occupations, mainly because our original analysis, in table 4, indicates the strong alignment between trades-related programs and subsequent employment. We only conduct this exercise for the 2011 cohort.

We observe in table 6 that just over half (53%) of those who had studied for the electrotechnology and telecommunications trades had found employment in this occupation; around two-fifths of the automotive and engineering trades workers and construction trades workers also ended up in the occupation for which they had trained (42% and 43% respectively), while just over a third (34%) of food trades students ended up in a related occupation. For skilled animal and horticultural workers and other technician and trades workers (among the latter are hairdressers, printers, and wood trade workers, including cabinetmakers), the proportion that ends up in the occupation of their VfSSS studies drops considerably (15% and 7% respectively).

**Table 6 Intended occupation of VfSSS qualification by five-year post-school employment in non-trade, technician and trades and same trade for ANZSCO (sub-major group) occupations, 2011 cohort**

Intended occupation of qualification at ANZSCO 3 sub-major group for technician and trades workers	Employment outcomes for 2011 cohort		
	Employed in non-trades group	Employed in a technician and trades group	Employed in the intended occupation of VfSSS program
	%	%	%
Engineering, ICT and science technicians	74	19	7
Automotive and engineering trades workers	45	13	42
Construction trades	40	17	43
Electrotechnology and telecommunications	31	16	53
Food trades workers	58	8	34
Skilled animal and horticultural workers	79	6	15
Other technicians and trade workers	77	17	7

Note: Employment outcomes for the 2011 cohort refer to the five-year post-school occupations of employment for those students who in 2011 undertook VfSSS studies.

Source: 2011 National VET in Schools Collection and 2016 Census of Population and Housing Integrated Dataset.

Using data for all VfSSS students from the 2011 cohort, we can undertake a similar exercise to determine how well the intended occupation of the VfSSS qualification matched the five-year destination occupations for the non-trade occupational groups (table 7). We find that almost half of those who had studied for jobs as sales assistants and sales persons, and a third of those who studied for jobs as carers and aides, were employed in the same occupations. The great majority of VfSSS students from the other non-trade areas were not employed in the occupations of their VfSSS studies.

**Table 7 Intended occupation of VfSSS qualification by five-year post-school occupational destinations, by ANZSCO 3 (sub-major group) occupations, 2011 cohort, %**

<b>Intended occupation of VfSSS qualification (ANZSCO 3 sub-major group)</b>	<b>Employed in same sub-major group occupation</b>
Electrotechnology and telecommunications trades workers	52.5
Sales assistants and salespersons	45.1
Construction trades workers	42.7
Automotive and engineering trades workers	41.8
Food trades workers	33.7
Carers and aides	32.9
Skilled animal and horticultural workers	15.1
Farmers and farm managers	14.4
Hospitality workers	13.9
Sales representatives and agents	13.2
Farm, forestry and garden workers	10.7
Food preparation assistants	9.8
Construction and mining labourers	9.4
Health and welfare support workers	8.2
General clerical workers	8.0
Numerical clerks	7.4
Sports and personal service workers	7.4
Design, engineering, science and transport professionals	7.0
Engineering, ICT and science technicians	6.9
Other technicians and trades workers	6.5
Inquiry clerks and receptionists	5.1
Other labourers	5.1
Factory process workers	4.2
Other clerical and administrative workers	2.7
Arts and media professionals	2.1

Note: Occupational destinations for the 2011 cohort refer to the five-year post-school occupational destinations of those students who in 2011 undertook VfSSS studies.

Source: 2011 National VET in Schools Collection and 2016 Census of Population and Housing Integrated Dataset.

The availability of jobs as sales assistants and sales workers (and perhaps ease of entry into these jobs) may explain the high match rates for intended occupation of the VfSSS qualification undertaken (in this area) and five-year destination occupations. Similarly, the fact that the match rate for carers and aides appears among the six highest match rates may also signal the increased availability of jobs in early childhood education and care and also aged care.

If we track the five-year destination occupations for the total group and then look back at the VfSSS courses they have undertaken, we find that sales and assistant workers come from a range of VfSSS qualifications. However, the same is not the case for carers and aides, where the majority still continue to come from the VfSSS qualifications that aim to prepare them for these occupations.

We can also use finer levels of discrimination (at the unit group or 4-digit level of ANZSCO) to check for alignment between the intended occupation of the VfSSS qualification and five-year destination occupations. We find that those who end up in exactly the same occupational group as their VfSSS studies were:

- general sales assistants (43%)
- child carers (43%)
- motor mechanics (30%)
- carpenters and joiners (49%)
- plumbers (52%).

While we identified a further group of occupations that are matched at either the sub-major or unit level, we cannot report the specific proportion, due to small numbers in some of the cells, and ABS confidentiality requirements that preclude us from presenting these numbers. The occupations for which this is the case are electricians and sheet-metal trades workers, where we know that 66% and 55% respectively are either matched at the sub-major group level or at the unit level.

We also investigated whether having undertaken a school-based apprenticeship or traineeship would influence the match rate. We found that in comparison with those who had not undertaken an apprenticeship or traineeship, there were stronger links between intended and destination occupations, for students who had undertaken an apprenticeship and traineeship program. These differences were found to be statistically significant in all cases apart from the occupations of construction and mining labourers, farm and forestry workers, and sales assistants and salespersons (table 8). This outcome confirms the success of school-based apprenticeships or traineeships as school-to-work pathways.

**Table 8 Match rate<sup>1</sup> between intended occupation of VfSSS qualification and five-year post-school occupational destinations for apprentices and trainees compared with non-apprentices and trainees, 2011 cohort**

Intended occupation of VfSSS qualification at sub-major group level	Participation in school-based apprenticeship or traineeship	No participation in school-based apprenticeship or traineeship	Sig. difference (.05%) <sup>2</sup>
	Match rate	Match rate	
Electrotechnology and telecommunications trades workers	66.9	45.5	*
Construction trades workers	64.1	37.3	*
Automotive and engineering trades workers	61.8	35.1	*
Food trades workers	45.6	18.1	*
Sales assistants and salespersons	45.6	44.9	No statistical sig. difference
Carers and aides	45.4	31.5	*
Skilled animal and horticultural workers	30.7	13.4	*
Other technicians and trades workers	30.6	4.3	*
Hospitality workers	18.6	13.5	*
Farm, forestry and garden workers	14.2	10.4	No statistical sig. difference
General clerical workers	13.6	7.7	*
Construction and mining labourers	12.5	9.4	No statistical sig. difference
Engineering, ICT and science technicians	11.4	6.4	*
Sports and personal service workers	10.7	7.0	*

Notes: 1. The match rate refers to the percentage of students who in 2011 undertook or did not undertake a school-based apprenticeship or traineeship and in 2016 ended up in the intended occupation of the VfSSS qualification.

2. Denotes statistically significant difference at .05% level; highlighted items denote no statistically significant differences between apprentices and trainees and non-apprentices and trainees.

Source: 2011 National VET in Schools Collection and 2016 Census of Population and Housing Integrated Dataset.

This analysis suggests that if students pursue a structured industry training pathway (like an apprenticeship or traineeship) when they are at school and know that this is the career they want to pursue immediately after school, they are more likely to end up in those occupations five years later if they undertake training that is relevant for these occupations.

### **Exploratory analysis of occupational outcomes by VfSSS and non-VfSSS studies**

Our exploratory analysis using LSAY data on occupational employment outcomes finds some statistically significant differences in occupational outcomes between VfSSS and non-VfSSS students. VfSSS students were more likely to end up in jobs as hospitality, retail and service managers, and construction trades workers, while non-VfSSS students were more likely to be employed in professional jobs (see appendix C, table C2).

## Linking field of education to employment destinations

Here we are interested in linking the field of education in which students studied to their five-year post-school employment outcomes. We are mainly interested in finding out whether they were employed, not employed but looking for work, or not in work and not looking for work.

In 2016, 23% of individuals from the 2011 cohort who were in the labour force were not in work. These included 14% who were not employed but looking for work, and 9% who were not employed, but not looking for work. In this chapter we will look more closely at those not in education, employment or training (NEET) – and leave discussion of those currently studying to the next chapter.

We find that employment outcomes vary by field of education (table 9), with a higher proportion of those who studied in fields that are obviously trade-related (engineering and related technologies, and architecture and building) having the highest proportion in work (tables 10 and 11, 2011 and 2006 cohorts respectively). Close behind are those fields that apply to non-trade jobs but typically have a closer link to industries where jobs are more plentiful, either because of skill shortages or economic growth (education,<sup>8</sup> health, agriculture, environmental and related studies, and society and culture<sup>9</sup>), or are typically populated by young people (food, hospitality and personal services). Despite not belonging to either of these categories, management and commerce has a high employment rate.

The lowest proportions in employment are those who studied in the more academic fields of natural and physical sciences and information technology, and industries with far more limited opportunities for jobs; for example, those in the creative arts and mixed field programmes. The creative arts include the performance arts, the visual arts and crafts, graphic design, photography, jewellery making and florists; the mixed field programmes include literacy and numeracy, job search, employment skills, social skills and the like.

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<sup>8</sup> This includes early childhood education.

<sup>9</sup> This includes children's services and caring for the aged and for disability groups.

**Table 9 Field of education of VfSSS qualifications and five-year post-school employment outcomes, 2011 cohort, %**

	Employed	Not employed but looking for work	Not employed but not looking for work	Total VfSSS students
	%	%	%	%
Natural and physical sciences	71	na	na	100
Information technology	70	12	18	100
Engineering and related technologies	81	8	10	100
Architecture and building	84	7	9	100
Agriculture, environmental and related studies	77	9	14	100
Health	78	8	14	100
Education	75	na	na	100
Management and commerce	77	9	14	100
Society and culture	80	7	13	100
Creative arts	74	11	15	100
Food, hospitality and personal services	78	7	15	100
Mixed field programmes	71	11	18	100
<b>Total</b>	<b>78</b>	<b>14</b>	<b>9</b>	<b>100</b>

Note: Data in cells marked na were not available due to ABS confidentiality restrictions.

Percentages reported refer to the proportion of students who five years after their 2011 VfSSS studies were either employed, not employed but looking for work, or not employed but not looking for work. They are reported to the nearest whole number. Rounding can lead to situations where the number in the body of a given table might not add to a rounded total.

Source: 2011 National VET in Schools Collection and 2016 Census of Population and Housing Integrated Dataset.

Table 10 reports the five-year post-school employment outcomes for the 2006 cohort.



**Table 10 Field of education of VfSSS qualifications and five-year post-school employment outcomes, 2006 cohort, %**

	Employed	Not employed but looking for work	Not employed but not looking for work	Total VfSSS students
	%	%	%	%
Natural and physical sciences	74	na	na	100
Information technology	76	9	15	100
Engineering and related technologies	84	7	9	100
Architecture and building	85	7	9	100
Agriculture, environmental and related studies	78	7	15	100
Health	76	8	15	100
Education	70	7	22	100
Management and commerce	79	7	14	100
Society and culture	80	7	14	100
Creative arts	78	8	14	100
Food, hospitality and personal services	79	6	15	100
Mixed field programmes	73	na	na	100
<b>Total</b>	<b>79</b>	<b>7</b>	<b>14</b>	<b>100</b>

Note: Data in cells marked na were not available due to ABS confidentiality restrictions.

Percentages reported refer to the proportion of students who five years after their 2006 VfSSS studies were either employed, not employed but looking for work, or not employed but not looking for work. They are reported to the nearest whole number. Rounding can lead to situations where the number in the body of a given table might not add to a rounded total.

## Not in employment, education or training (NEET)

Here we look more closely at those from the 2011 cohort who were not in employment, education or training in 2016. Of the total group of those who were not employed but looking for work and not employed but not looking for work we need to remove those that were solely engaged in studies (see table 1). This leaves us with 13% who were not working, not studying and not looking for work. In table 11 we look at the fields of education studies this group had undertaken in their VfSSS programs.

Students from the 2011 cohort who had studied mixed field programmes and information technology had the highest rates of NEETs (both at 16%), followed by those from agriculture, environmental and related studies (15%). Those with the lowest rates had studied in trade-related areas, and society and culture (table 11). These findings are relatively similar to the 2006 cohort.

**Table 11 VfSSS students from 2011 and 2006 cohorts who were not in employment, education and training by field of education of VfSSS course, %**

	2006 cohort	2011 cohort
Natural and physical sciences	na	na
Information technology	12	16
Engineering and related technologies	11	11
Architecture and building	11	10
Agriculture, environmental and related studies	15	15
Health	16	12
Education	na	na
Management and commerce	13	12
Society and culture	12	11
Creative arts	12	12
Food, hospitality and personal services	13	12
Mixed field programmes	18	16

Notes: Data in cells marked na were not available due to ABS confidentiality restrictions.

Percentages reported refer to the proportion of students who five years after their 2006 or 2011 VfSSS studies were not in employment education or training. They are reported to the nearest whole number.

Rounding can lead to situations where the number in the body of a given table might not add to a rounded total.

Source: 2011 National VET in Schools Collection and 2016 Census of Population and Housing integrated dataset; 2006 National VET in Schools Collection and 2011 Census of Population and Housing Integrated Dataset.



## Educational outcomes

By 2016 the great majority of 2011 VfSSS students, irrespective of their demographic and background characteristics, had completed a Year 12 or higher qualification. This was similar to findings for the 2006 cohort, although for each demographic group of interest there had been an increase in this level of attainment. In the case of Indigenous students, and those from remote and very remote areas, the increases are considerable. The findings for the entire cohort indicate that some positive outcomes may be resulting from policies designed to help retain students in school until Year 12 and also to keep them in work or training for longer periods of time (table 12).

**Table 12 Percentage<sup>1</sup> of students from the 2011 and 2006 cohorts attaining a Year 12 or above by student background characteristics, %**

Background characteristic in 2006 or 2011	2006 cohort*	2011 cohort
	%	%
<b>Sex</b>		
Males	85	93
Females	89	95
<b>Age</b>		
15 years	84	94
16 years	86	94
17 years	90	95
18 years	88	95
19 years	84	91
<b>Level of VfSSS studies</b>		
Cert. I/II	86	94
Cert. III/IV	91	96
Diploma and above	88	97
<b>Apprenticeship status</b>		
Apprenticeship	89	96
Not apprenticeship	87	94
<b>Language mainly spoken in the home<sup>2</sup></b>		
English	87	95
Language other than English in the home	88	96
<b>School sector</b>		
Government school	85	93
Catholic school	91	97
Independent school	92	98
Other government sector school <sup>3</sup>	74	89
<b>Indigenous status</b>		
Non-Indigenous	88	95
Indigenous	72	89
<b>Location</b>		
Major city location	88	95
Inner regional location	86	93
Outer regional location	77	93
Remote and very remote location	76	92
<b>Total number</b>	<b>170 011</b>	<b>104 742</b>

Notes: \* Weighted data for 2006 cohort. Non-weighted data for 2011 cohort as these are based only on the medium to high quality links.

1. Percentage refers to the proportion of those students who in 2006 or 2011 undertook VfSSS studies and had attained a Year 12 or higher qualification five years later.

2. For those from the 2006 cohort who had not specified whether they mainly spoke English there were 93 who had attained a year 12 or higher qualification.
3. 'Other' government sector providers are government-owned and managed education facilities/organisations, other than TAFE institutes, that deliver VET (for example, agricultural colleges and higher education institutes).
4. Year 12 and above qualifications include Year 12, cert III & IV, diploma, advanced diploma, and bachelor's degree or higher.

Source: 2011 National VET in Schools Collection and 2016 Census of Population and Housing Integrated Dataset; 2006 National VET in Schools Collection and 2011 Census of Population and Housing Integrated Dataset.

## Linking fields of education studied to educational attainment

Across the fields of study, the great majority (between 92% and 96%) of the 2011 cohort had completed their secondary school qualification (that is, Year 12) or a higher qualification (table 13). For eight of these fields (natural and physical sciences, information technology, health, creative arts, society and culture, management and commerce and food, hospitality and personal services), the proportion is 95% or over; for the remainder (engineering and related technologies; architecture and building; agricultural, environmental and related studies; education and mixed field programmes), it drops slightly, to 93% or 92%.

For every field of education, the proportions for the 2011 cohort completing a secondary school certificate or higher qualification are greater than they were for the 2006 cohort. This indicates a validation of government 'earning or learning policies', which aim to keep students meaningfully engaged with studies or participating in work until the ages of 16, 17 or 18 years (depending on the jurisdiction), to help them make the transition into productive economic or social activity on leaving school.

**Table 13 Field of education of qualification and Year 12 or higher education attainment, for 2011 and 2006 cohorts, %<sup>a</sup>**

	2006 cohort	2011 cohort
Natural and physical sciences	89	96
Information technology	90	96
Engineering and related technologies	83	93
Architecture and building	82	92
Agriculture, environmental and related studies	84	92
Health	83	96
Education	83	92
Management and commerce	88	95
Society and culture	87	95
Creative arts	90	96
Food, hospitality and personal services	88	95
Mixed field programmes	81	93

Notes: (a) Percentages refer to the proportion of students who in 2006 or 2011 undertook VfSSS studies and had attained a Year 12 or above qualification five years later. Here we report the row percentages only. They are reported to the nearest whole number. Rounding can lead to situations where the number in the body of a given table might not add to a rounded total.

Source: 2011 National VET in Schools Collection and 2016 Census of Population and Housing Integrated Dataset; 2006 National VET in Schools Collection and 2011 Census of Population and Housing Integrated Dataset.

## Post-school qualifications and participation

We can further segment the data according to those who had gone on to attain a post-school qualification or were currently studying. Once again, we find that there has been an increase in this activity over time for all 2011 cohort groups by comparison with their 2006 counterparts. Females continue to outperform males, and across the qualification levels those from the 2011 cohort who had undertaken higher-level qualifications were more highly represented than those at the lower levels. For the 2006 cohort those who had undertaken certificate III & IV qualifications in their VfSSS studies were more highly represented than those who had undertaken certificate I & II and diploma and above qualifications. Apprentices were more engaged in this area than non-apprentices, and a greater proportion was observed for those who mainly spoke a language other than English in the home by comparison with those who mainly spoke English in the home. Although Indigenous students in the 2011 cohort continued to have the lowest uptake of all the groups, their percentage had increased by 19 percentage points over that of the 2006 cohort (table 14). This is also a positive result and is evidence of the increased impact on all students, including equity groups, of strategies designed to keep them in school and progressing to complete their secondary school certificates.

**Table 14 Percentage of individuals from the 2006 and 2011 cohorts having attained a post-school qualification or being currently engaged in further studies by background characteristics\***

	2006 cohort	2011 cohort
	%	%
<b>Sex</b>		
Males	59	66
Females	64	75
<b>Age</b>		
15 years	60	69
16 years	61	70
17 years	63	71
18 years	61	71
19 years	62	69
<b>Level of VfSSS study</b>		
Cert. I/II	60	68
Cert. III/IV	68	76
Diploma and above <sup>1</sup>	59	80
<b>Apprenticeship status</b>		
Apprenticeship	64	77
Not apprenticeship	61	70
<b>Language mainly spoken in the home<sup>2</sup></b>		
English	60	69
Language other than English	69	74
<b>School sector</b>		
Government	58	68
Catholic	69	75
Independent	74	79
Other government	59	70
<b>Indigenous status<sup>3</sup></b>		
Non-Indigenous	62	71
Indigenous	39	58
<b>Location</b>		
Major city	63	72
Inner regional	60	69
Outer regional	57	67
Remote and very remote	46	61
<b>Total number</b>	<b>170 111</b>	<b>104 742</b>

Note: \* Weighted data for 2006 cohort. Unweighted data for 2011 cohort, because only medium to high quality links were used.

1. There were only 350 students in the 2006 cohort who were in the diploma and above category so this may account for unusual results with respect to this group.
2. For those from the 2006 cohort who did not specify their main language spoken at home there were 74% that had attained a post-school qualification or were currently engaged in further studies.
3. Female Indigenous students in the 2006 cohort were more likely than males to have a post-school qualification or be engaged in further studies (42.1% and 36.1% respectively).

Source: 2011 National VET in Schools Collection and 2016 Census of Population and Housing Integrated Dataset; 2006 National VET in Schools Collection and 2011 Census of Population and Housing Integrated Dataset.

## Relevance of courses to further education

By 2016 half of those from the 2011 cohort had attained a post-school qualification; another fifth was currently working towards one (49.3% and 21.0% respectively). Just under a third (29%) had no post-school qualification. Of those from the 2011 cohort who had attained a post-school qualification, 57% had undertaken a certificate III or IV qualification, 18% a diploma and 17% a bachelor's degree. A small group (8%) had undertaken a certificate I or II (table 1).

The greatest proportion of students who went on to attain a bachelor's degree or higher had undertaken VET programs in the creative arts (23%), followed by those from management and commerce (22%), information technology (21%), food, hospitality and personal services (20%), health (18%), and society and culture (16%). The lowest proportions were students who had studied courses for the trades (that is, engineering and related technologies [7%] and architecture and building [6%]) and those who had done agriculture, environmental and related studies (8%, table 15).

To understand the relevance of VfSSS studies to further post-school studies we investigated the extent to which students from the 2011 cohort had completed further education in the same field of education (table 16). The most prevalent of these same-field students were those who had undertaken trade-related studies, presumably going on to complete the certificate III qualifications started in school. The highest proportions were from engineering and related technologies, where over half of the students (55%) were taking further education in the same field. This was followed by students from architecture and building (48%), and society and culture (43%). Slightly lower proportions of students from health and information technology (41% and 40% respectively) ended up studying courses related to their VfSSS programs. Around a third did so from the fields of creative arts (34%), agriculture, environmental and related studies (33%), management and commerce (33%), and food, hospitality and personal services (32%). The lowest proportion was for those from the natural and physical sciences (25%).



**Table 15 Field of education of VfSSS qualification by further education and training outcomes, for those who had undertaken a post-school qualification, 2011 and 2006 cohorts, %<sup>1</sup>**

	Percentage of those who had attained a bachelor or higher qualification		Percentage of those who had completed a post-school qualification in the same field	
	2006 cohort	2011 cohort	2006 cohort	2011 cohort
Natural and physical sciences	34	na	na	25
Information technology	24	21	na	40
Engineering and related technologies	5	7	56	55
Architecture and building	6	6	47	48
Agriculture, environmental and related studies	8	8	na	33
Health	9	18	26	41
Education	14	na	na	na
Management and commerce	22	22	40	33
Society and culture	17	16	28	43
Creative arts	25	23	na	34
Food, hospitality and personal services	19	20	29	32
Mixed field programmes	15	14	na	na

Notes: Data in cells marked na were not available due to ABS confidentiality restrictions.

1. Percentages relate to the proportion of students who in 2011 or 2006 had undertaken a VfSSS course and five years later had attained a post-school qualification at a bachelor's degree or higher level, or in the same field as their VfSSS studies.

Source: 2011 National VET in Schools Collection and 2016 Census of Population and Housing Integrated Dataset; 2006 National VET in Schools Collection and 2011 Census of Population and Housing Integrated Dataset.

We further interrogate the linked dataset to understand whether students in VfSSS programs go onto higher qualification levels following their VfSSS studies. We find that substantial proportions of those who completed a post-school qualification had studied at a higher qualification level after school. For example:

- Around 90% of certificate I and II students from the 2011 cohort who completed a post-school qualification did so at certificate III and above level (91% and 90% respectively). This is similar to the findings for the 2006 cohort (91% and 89% respectively).
- The most prevalent qualification for both the 2011 and 2006 cohorts was the certificate III. Nevertheless, just under a fifth of the certificate I and II students went on to attain a diploma (15% and 17% respectively), or a bachelor's degree (16% and 17% respectively).
- Of those from the 2011 cohort who had undertaken a certificate III qualification in school, almost two-thirds (65%) went on to acquire post-school qualifications at higher levels, with 37% evenly divided between diploma and bachelor's degree holders (19% and 18% respectively).

- Of those who had undertaken a certificate IV qualification, 54% went on to do a diploma, 32% a bachelor's degree, and 22% a higher qualification. Students undertaking certificate III and IV qualifications had gone on to gain post-school qualifications at least to the diploma level (42% and 58%) respectively.
- Just over a fifth of diploma students from the 2011 cohort went on to gain a bachelor's degree, representing a higher proportion than those from the 2006 cohort (22% and 14% respectively).

## How non-VfSSS students compare with VfSSS students in highest qualifications completed

From our 2011 and 2006 cohort data on highest level of education completed, we find that, of those VfSSS students who completed a post-school qualification, over half had completed a VET qualification at certificate III and IV level (table 16). Almost equal proportions had completed VET diplomas or a bachelor's degree or higher qualification. Around a tenth had completed a certificate I or II qualification.

**Table 16 Highest qualification for those with a post-school qualification**

	2006 cohort	2011 cohort
Qualification Level	%	%
Bachelor's degree or higher	18	17
VET diploma	18	18
Certificate III/IV	54	57
Certificate I/II	10	8
<b>Total (%)</b>	<b>100</b>	<b>100</b>

Source: 2011 National VET in Schools Collection and 2016 Census of Population and Housing Integrated Dataset; 2006 National VET in Schools Collection and 2011 Census of Population and Housing Integrated Dataset.

These data only give us one part of the picture; that is, the situation applying to students who took VET courses in secondary school. We cannot tell whether students would similarly have achieved this if they had not undertaken VfSSS studies. For this reason, we again use the LSAY data to identify the students who undertook VfSSS studies and those who did not (table 17). We find that in comparison with their non-VfSSS counterparts, VfSSS students were more likely to have:

- completed VET studies
- completed VET qualifications at certificate I, II, III or IV levels
- completed an apprenticeship or further VET studies.

However, they were less likely than their non-VfSSS counterparts to have completed:

- Year 12
- a bachelor's degree or higher qualifications as their highest qualification.

They were also less likely to be currently undertaking a recognised qualification, or a bachelor's degree or higher qualification (table 17).

**Table 17 Education and training outcomes, by participation in VfSSS studies, LSAY 2009 cohort**

	Did not do VfSSS	Did VfSSS	Total	Significance test at 95% Confidence interval (Denoted by *)	Confidence intervals				
					Did not do VfSSS		Did VfSSS		
	%	%	%	<i>n</i>	<i>Lower bound</i>	<i>Upper bound</i>	<i>Lower Bound</i>	<i>Upper Bound</i>	
Completed Year 12	95.1	87.9	92.7	3734	*	93.7	96.4	84.4	91.4
Did not complete Year 12	4.9	12.1	7.3	232	*	3.6	6.3	8.6	15.6
Currently undertaking a recognised qualification	46.6	27.4	40.2	1811	*	43.8	49.4	23.6	31.1
Not currently undertaking a recognised qualification	53.4	72.6	59.8	2155	*	50.6	56.2	68.9	76.4
Currently undertaking an apprenticeship or traineeship	3.4	3.4	3.4	109		2.2	4.7	1.8	5.0
Completed an apprenticeship or traineeship	7.9	21.4	12.4	363	*	6.1	9.7	17.4	25.4
Commenced an apprenticeship or traineeship, but did not complete	2.6	7.0	4.1	105	*	1.7	3.5	3.9	10.0
Never commenced an apprenticeship or traineeship	86.1	68.2	80.1	3389	*	83.9	88.4	63.5	72.8
Currently undertaking studies in VET	5.0	4.7	4.9	210		3.9	6.1	3.0	6.4

Completed studies in VET	23.6	47.8	31.7	938	*	21.0	26.2	43.0	52.6
Commenced, but did not complete studies in VET	5.3	8.0	6.2	197		3.6	6.9	5.6	10.5
Never commenced studies in VET	66.2	39.5	57.2	2621	*	63.3	69.0	35.0	44.0
Currently undertaking bachelor's degree or higher	29.4	15.0	24.6	1144	*	27.0	31.8	12.2	17.8
Completed a bachelor's degree or higher	28.3	12.9	23.2	1053	*	25.8	30.9	10.0	15.9
Completed and undertaking further study at bachelor's degree or higher qualification	7.8	1.4	5.7	310	*	6.6	9.0	0.7	2.0
Commenced but did not complete a bachelor's degree or higher qualification	9.0	8.5	8.8	370		7.6	10.4	5.8	11.2
Never commenced a bachelor's degree or higher qualification	25.4	62.2	37.8	1089	*	22.6	28.2	57.8	66.6
<b>Highest qualification level completed</b>									
Certificate I and II (includes unknown certificate level)	3.3	8.8	5.1	147	*	2.1	4.4	5.8	11.8
Certificate III and IV	10.5	28.9	16.7	492	*	8.5	12.4	24.2	33.6
Advanced diploma/diploma (incl. associate degree)	7.9	9.5	8.4	243		6.2	9.6	6.8	12.2
Bachelor's degree or higher	36.2	14.3	28.8	1363	*	33.5	38.8	11.3	17.3
Did not complete a qualification	42.2	38.5	40.9	1721		39.4	44.9	34.0	43.0
<b>Total (%)</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>3966</b>					
<b>Total (n)</b>	<b>2958</b>	<b>1008</b>							

Note: Differences that are statistically significant at 95% confidence level are denoted by an asterisk.

Source: Longitudinal Surveys of Australian Youth, 2009 cohort, wave 8.

Findings from a recent NCVET study that looked at the school-to-work pathways (Ranasinghe et al. 2019) indicate that undertaking vocational studies in school slightly increased the likelihood of following the 'higher education and VET' pathway, whereby a majority of the students (82.4% combined) had obtained either a certificate III and above or a bachelor's degree and above qualification by the age of 25 years.

We were also interested to see whether there were any statistically significant differences between the two groups when we controlled for maths and reading achievement. Although we divided the two groups according to quartiles of achievement and the observed differences between the two groups, we were unable to confirm statistical significance in the differences that were observed.

## Way forward

The findings of this study tell us what students are doing five years after their VfSSS studies. The study also uses the LSAY collection to make comparisons between the trajectories taken by VfSSS students and those of non-VfSSS students.

In using the LSAY data we were able to identify statistically significant differences between the two groups (that is, students who undertook VfSSS studies and those who did not) in terms of employment and further training outcomes.

In this study we have treated VfSSS students as a homogenous group, but we know from the LSAY data that a significant proportion of these students also studied for an ATAR. In a future study we will analyse destinations according to ATAR achievement and VSSS participation. In this study we will also investigate motivations for ATAR students to undertake VfSSS studies, and the subjects and training programs they undertake.



# References

Misko, J, Korbel, P & Blomberg, D 2017, *VET in Schools students: characteristics and post-school employment and training experiences*, NCVET, Adelaide, viewed June 2019, <[https://www.ncver.edu.au/\\_\\_data/assets/pdf\\_file/0037/887716/VET-in-Schools-students-characteristics-and-post-school-employment-and-training-experiences.pdf](https://www.ncver.edu.au/__data/assets/pdf_file/0037/887716/VET-in-Schools-students-characteristics-and-post-school-employment-and-training-experiences.pdf)>.

Ranasinghe, R, Chew, E, Knight, G & Siekmann, G 2019, *School to work pathways*, NCVET, Adelaide, viewed September 2019, <[https://www.ncver.edu.au/\\_\\_data/assets/pdf\\_file/0029/6547412/School\\_to\\_work\\_pathways.pdf](https://www.ncver.edu.au/__data/assets/pdf_file/0029/6547412/School_to_work_pathways.pdf)>.



# Appendix

## Appendix A: About the national collections

### National VET in Schools Collection

Information on the uptake of VET programs by secondary school students is provided by the NCVET National VET in Schools Collection. This collection provides data on secondary school students who undertake vocational education in schools, which includes practical workplace skills and nationally recognised VET qualifications, mainly at certificate I, II and III levels, in addition to the senior secondary certificate of education. Students may also commence a part-time apprenticeship or traineeship while they are undertaking their senior secondary certificate of education. The data are collected via the senior secondary assessment boards in each state or territory (known as the board of studies) and are reported through state training authorities or directly through the boards of studies to NCVET.

Standardised data files are submitted to NCVET by 31 March each year. Records are submitted for individual students who have participated and contain data on demographics, schooling and prior education, and cultural and language attributes. Records are submitted for enrolments for each unit of competency or module enrolment for a student during the collection period. Individual records contain data on the delivery location for the client, module or unit of competency, start and end date, mode of delivery, outcome, and the number of hours of delivery for students in VET in Schools programs.

Records are submitted for each qualification or course associated with enrolment activity and completed qualifications during the collection period. Records contain data on the level and field of education, expected occupation outcome and national accreditation status of the qualification. Records are also submitted for each module or unit of competency associated with enrolment activity. Individual records contain data on field of education and hours. Records are submitted for training organisations that deliver vocational education and training to school students. Individual records contain data on location and the registered training organisation trading name and national code. Locations associated with the delivery of enrolment activity are also provided.



## National VET Provider Collection, including total VET activity

The National VET Provider Collection collects data on VET activity to a nationally agreed standard and delivered by Australian training providers. It provides information on the number of training providers, students, program enrolments, subject enrolments, hours of delivery, program completions and source of funding.

The collection, which dates back to 1994, has historically reported on *government-funded VET*, which is broadly defined as Commonwealth and state/territory government-funded training delivered by TAFE institutes and other government providers, community education and other registered providers. This is collected and reported quarterly.

In 2014, the scope of the collection was expanded to include total VET activity (TVA). TVA refers to all domestic and overseas VET activity delivered by all types of Australian training providers and reports on students who undertook government-subsidised training and those who undertook training on a fee-for-service basis. This is collected and reported annually.

Data are collected either directly from registered training organisations or via state training authorities.

## Development of linked VfSSS datasets

### Development of linked VfSSS datasets

The linked dataset expands the number of data segmentations we can perform to investigate the relationship between what students do in their VfSSS courses and their post-VfSSS studies and labour market destinations.

The VfSSS 2011 linked dataset was built by officers from the ABS who applied the principles of 'deterministic' linkage to link the two datasets. The core variables were geography (data on postcode, state, Statistical Area Level 2), date of birth, age and sex. Country of birth, language spoken at home, and program ANZSCO ID were used to facilitate the linking.

A staged design was used, starting off with the 'passes' requiring the strongest evidence of linkage and then broadening the linking criteria to find more linkages.

There were 158 841 links for the total dataset; however, not all of these were of all of the same quality. At Stage 1 of the process there were 43 321 high-quality links (27.3%); these matched on exact date of birth and detailed ANZSCO. Stage 2 yielded 62 110 (39.0%) medium-quality links, which matched on mostly geography and broad ANZSCO. The final stage (3) produced 53 410 links, which matched on geography and age in years (33.6%).

In our analysis we only used the links that were in the NCVET Publication Scope; that is, those that appear in the NCVET VET in Schools publication. This gave us a combined medium- and high-quality links total of 104 742, still a substantial number for analysis.

A broadly similar approach was taken for the construction of the VfSSS 2006 dataset, but in this case the data were not categorised according to quality of the linkages. Furthermore, when compared with the original VET in Schools dataset, some groups were under-represented and others over-represented. Under-represented were students in remote areas, Indigenous students and students born outside Australia; over-represented were individuals who primarily spoke English in the home, were born in Australia, resided in a major city, and were enrolled with a New South Wales registered training organisation. Weightings were applied to postcode, sex, age, Indigenous status and country of birth. In the main it served to bring the linked dataset in line with the original dataset.<sup>10</sup>

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<sup>10</sup> More detailed information can be gained from Misko, Korbel & Blomberg (2017).

## Appendix B: Occupations of employment by VfSSS program undertaken

**Table B1 Occupations of employment by VfSSS training package and non-training package program undertaken, 2011 cohort, %**

	Managers	Professionals	Technicians and trades workers	Community and personal service workers	Clerical and administrative workers	Sales workers	Machinery operators and drivers	Labourers
	%	%	%	%	%	%	%	%
Agriculture, Horticulture and Conservation, and Land Management (AGF, AGR, AHC, RTD, RTE, RTF, RUA, RUH)	6	4	28	13	6	13	7	24
Animal Care and Management (ACM,RUV)	na	5	20	20	13	21	na	13
Automotive Industry Retail, Service and Repair (AUR)	3	2	56	6	3	6	8	16
Beauty (SIB, WRB)	na	5	7	29	13	35	na	5
Business Services (BSA, BSB)	5	9	12	18	26	18	3	9
Community Services (CHC)	na	8	5	46	11	18	na	7
Construction, Plumbing and Services Integrated Framework (BCF, BCG, BCP, CPC)	5	3	48	8	3	7	8	19
Creative Arts and Culture (CUA, CUE, CUV)	5	11	16	22	13	21	4	10
Electrotechnology (UEE, UTE, UTL)	2	3	62	6	3	7	4	14

	Managers	Professionals	Technicians and trades workers	Community and personal service workers	Clerical and administrative workers	Sales workers	Machinery operators and drivers	Labourers
	%	%	%	%	%	%	%	%
Furnishing (LMF, MSF)	3	4	45	9	3	10	7	19
Hairdressing and Beauty Services (SHB, SIH, WRH)	na	3	30	23	14	19	na	6
Health (HLT)	4	15	11	34	12	14	2	7
Information and Communications Technology (ICA, ICT)	4	10	20	15	11	19	6	14
Metal and Engineering (MEM)	4	3	50	7	2	8	9	16
Music (CUS)	5	10	19	20	8	19	4	15
Non-training package	5	6	31	15	8	15	6	14
Retail Services (SIR, WRP, WRR)	4	6	8	15	10	48	2	7
Screen and Media (CUF)	4	11	15	18	10	23	4	14
Sport, Fitness and Recreation (SIS, SRC, SRF, SRO, SRS)	5	5	24	22	10	15	6	13
Tourism, Travel and Hospitality (SIT, THH, THT)	5	9	13	26	14	18	3	12

Source: 2011 National VET in Schools Collection and 2016 Census of Population and Housing Integrated Dataset.

**Table B2 Occupations of employment by training packages and non-training package program undertaken, 2006 cohort, %**

	ANZSCO major group							
	Managers	Professionals	Technicians and trades workers	Community and personal service workers	Clerical and administrative workers	Sales workers	Machinery operators and drivers	Labourers
<i>Training Package programs</i>	%	%	%	%	%	%	%	%
Agriculture, Horticulture and Conservation and Land Management (AHC, RTD, RTE, RTF, RUA, RUH)	6	4	34	11	5	11	10	20
Arts and Culture (CUV)	5	13	12	18	17	22	4	10
Automotive Industry Retail, Service and Repair (AUR)	4	3	53	5	4	6	9	16
Beauty (SIB, WRB)	5	6	11	29	21	23	na	na
Business Services (BSA, BSB)	6	10	14	16	24	18	4	8
Community Services (CHC)	5	8	7	36	19	18	2	6
Construction, Plumbing & Services Integrated Framework (BCF, BCG, BCP, CPC)	4	4	50	8	4	7	8	16
Electrotechnology (UEE, UTE, UTL)	na	na	63	6	5	6	6	8
Furnishing (LMF, MSF)	3	3	49	7	3	7	11	18
Hairdressing (SIH, WRH)	3	4	24	22	22	20	2	3
Information and Communications Technology (ICA)	5	12	24	13	13	17	6	11
Live Performance and Entertainment (CUA, CUE)	6	13	17	18	16	19	3	8
Metal and Engineering (MEM)	4	4	53	6	3	6	8	16
Music (CUS)	4	12	19	17	13	20	5	10
Property Services (CPP, PRD, PRM, PRS)	na	9	14	12	23	24	na	9

	ANZSCO major group							
	Managers	Professionals	Technicians and trades workers	Community and personal service workers	Clerical and administrative workers	Sales workers	Machinery operators and drivers	Labourers
<i>Training Package programs</i>	%	%	%	%	%	%	%	%
Retail Services (SIR, WRP, WRR, WRW)	7	10	13	18	19	22	4	7
Screen and Media (CUF)	4	13	20	14	14	20	4	10
Sport, Fitness and Recreation (SIS, SRC, SRF, SRO, SRS)	5	6	26	20	12	14	5	12
Tourism, Travel and Hospitality (SIT, THH, THT)	6	9	15	23	19	18	3	8
Non-training package	5	8	31	12	12	16	5	11

Source: 2006 National VET in Schools Collection and 2011 Census of Population and Housing Integrated Dataset.

## Appendix C: Outcomes for VfSSS and non-VfSSS students

Table C1 Longitudinal Surveys of Australian Youth (Y09), employment and training outcomes at age 22 for students who did and did not do VfSSS studies, %

	Did not do VfSSS	Did VfSSS	Total		Significance test at 95% confidence interval (Denoted by *)	Did not do VfSSS		Did VfSSS	
	%	%	%	n		Lower CI	Upper CI	Lower CI	Upper CI
<b>Labour force status</b>									
Employed	84.0	86.6	84.9	3344		82.1	86.0	83.1	90.1
Unemployed	6.6	5.9	6.3	237		5.2	7.9	2.9	8.8
Not in the labour force	9.4	7.5	8.8	385		7.9	10.9	5.3	9.8
<b>Full-time or part-time employment status</b>									
Full-time	36.9	54.2	42.7	1593	*	34.3	39.5	49.5	58.8
Part-time	42.5	28.4	37.8	1596	*	39.7	45.4	24.6	32.3
Not working (unemployed or NILF)	16.0	13.4	15.1	622		14.0	17.9	9.9	16.9
Working, but working time unknown	4.6	4.0	4.4	155		3.1	6.2	2.1	6.0
<b>Permanent or casual employment</b>									
Permanent/ongoing	45.8	55.5	49.1	1862	*	43.0	48.6	50.8	60.2
Casual	34.8	26.4	32.0	1320	*	32.0	37.6	22.4	30.5
Not working (unemployed or NILF)	16.0	13.4	15.1	622		14.0	17.9	9.9	16.9
Working, but employment status unknown	3.4	4.7	3.8	162		2.7	4.2	2.7	6.7
<b>Occupation (1-digit ANZSCO first edition)</b>									
Managers	3.7	9.3	5.6	184	*	2.8	4.6	5.6	13.0
Professionals	20.7	7.6	16.3	768	*	18.6	22.9	5.8	9.5

	Did not do VfSSS	Did VfSSS	Total	Significance test at 95% confidence interval (Denoted by *)	Did not do VfSSS		Did VfSSS		
	%	%	%		n	CI	Lower CI	Upper CI	Lower CI
Technicians and trades workers	7.7	18.1	11.2	368	*	6.0	9.3	14.7	21.5
Community and personal service workers	18.0	16.1	17.3	650		15.4	20.5	12.8	19.4
Clerical and administrative workers	10.4	10.5	10.4	463		8.9	11.9	7.6	13.3
Sales workers	13.5	10.4	12.4	510		11.7	15.2	7.5	13.3
Machinery operators and drivers	1.5	3.0	2.0	68		0.9	2.1	1.5	4.5
Labourers	5.5	8.8	6.6	221		4.2	6.9	6.3	11.3
Unknown or not classifiable	3.1	2.7	3.0	112		2.1	4.2	1.1	4.4
Not working (unemployed or NILF)	16.0	13.4	15.1	622		14.0	17.9	9.9	16.9
<b>Completed Year 12</b>									
Completed Year 12	95.1	87.9	92.7	3734	*	93.7	96.4	84.4	91.4
Did not complete Year 12	4.9	12.1	7.3	232	*	3.6	6.3	8.6	15.6
<b>Completed Year 12 or certificate III or higher</b>									
Completed Year 12 or certificate III or higher	97.1	94.3	96.2	3848		96.2	98.5	95.3	98.1
Did not complete Year 12 or certificate III or higher	2.9	5.7	3.8	118		1.5	3.8	1.9	4.7
<b>Currently undertaking a qualification</b>									
Currently undertaking a recognised qualification	46.6	27.4	40.2	1811	*	43.8	49.4	23.6	31.1
Not currently undertaking a recognised qualification	53.4	72.6	59.8	2155	*	50.6	56.2	68.9	76.4
<b>Status in apprenticeship/traineeship</b>									
Currently undertaking	3.4	3.4	3.4	109		2.2	4.7	1.8	5.0
Completed	7.9	21.4	12.4	363	*	6.1	9.7	17.4	25.4
Commenced, but did not complete	2.6	7.0	4.1	105	*	1.7	3.5	3.9	10.0



Never commenced	86.1	68.2	80.1	3389	*	83.9	88.4	63.5	72.8
<b>Study status in VET</b>									
Currently undertaking	5.0	4.7	4.9	210		3.9	6.1	3.0	6.4
Completed	23.6	47.8	31.7	938	*	21.0	26.2	43.0	52.6
Commenced, but did not complete	5.3	8.0	6.2	197		3.6	6.9	5.6	10.5
Never commenced	66.2	39.5	57.2	2621	*	63.3	69.0	35.0	44.0
<b>Study status in bachelor's degree or higher</b>									
Currently undertaking	29.4	15.0	24.6	1144	*	27.0	31.8	12.2	17.8
Completed	28.3	12.9	23.2	1053	*	25.8	30.9	10.0	15.9
Completed and undertaking further study at bachelor's degree or higher	7.8	1.4	5.7	310	*	6.6	9.0	0.7	2.0
Commenced, but did not complete	9.0	8.5	8.8	370		7.6	10.4	5.8	11.2
Never commenced	25.4	62.2	37.8	1089	*	22.6	28.2	57.8	66.6
<b>Highest qualification level completed</b>									
Certificate I and II (includes unknown certificate level)	3.3	8.8	5.1	147	*	2.1	4.4	5.8	11.8
Certificate III and IV	10.5	28.9	16.7	492	*	8.5	12.4	24.2	33.6
Advanced diploma/diploma (incl. associate degree)	7.9	9.5	8.4	243		6.2	9.6	6.8	12.2
Bachelor's degree or higher	36.2	14.3	28.8	1363	*	33.5	38.8	11.3	17.3
Did not complete a qualification	42.2	38.5	40.9	1721		39.4	44.9	34.0	43.0
<b>Total (%)</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>3966</b>					
<b>Total (n)</b>	<b>2958</b>	<b>1008</b>							

Note: NILF = not in the labour force.

**Table C2 Occupation by VET in school study status (%), 2009 cohort, wave 8 in 2016 (age 22), Australia**

	Did not do VET subjects at school	Did VET subjects at school	Total		Significance test at 95% confidence interval (Denoted by *)	95% confidence intervals			
						Did not do VET subjects at school		Did VET subjects at school	
						%	%	%	<i>n</i>
<b>1 MANAGERS nfd</b>	0.1	.	0.0	1		0.0	0.2	.	.
11 Chief Executives, General Managers and Legislators	0.2	.	0.1	3		0.0	0.4	.	.
12 Farmers and Farm Managers	0.2	1.5	0.7	6		0.0	0.6	0.0	4.1
13 Specialist Managers	1.1	2.4	1.6	49		0.7	1.6	0.5	4.3
14 Hospitality, Retail and Service Managers	2.8	6.8	4.2	125	*	1.9	3.6	3.7	9.9
<b>2 PROFESSIONALS nfd</b>	0.6	.	0.4	11		0.0	1.2	.	.
21 Arts and Media Professionals	2.0	1.0	1.6	50		0.4	3.5	0.2	1.8
22 Business, Human Resource and Marketing Professionals	5.5	1.9	4.3	167	*	4.4	6.6	0.8	2.9
23 Design, Engineering, Science and Transport Professionals	3.1	1.7	2.6	112		2.3	3.8	0.6	2.8
24 Education Professionals	5.9	1.4	4.3	193	*	4.8	6.9	0.7	2.1
25 Health Professionals	5.6	2.0	4.4	164	*	4.3	6.9	1.0	3.0
26 ICT Professionals	0.9	0.6	0.8	39		0.5	1.2	0.2	1.0
27 Legal, Social and Welfare Professionals	1.2	0.3	0.9	32	*	0.7	1.8	0.0	0.5
<b>3 TECHNICIANS AND TRADES WORKERS nfd</b>									
31 Engineering, ICT and Science Technicians	1.7	1.8	1.7	76		1.1	2.2	0.9	2.8
32 Automotive and Engineering Trades Workers	1.7	4.5	2.6	56		0.3	3.1	2.7	6.2
33 Construction Trades Workers	1.2	6.1	2.9	55	*	0.4	1.9	3.4	8.8
34 Electrotechnology and Telecommunications Trades Workers	2.0	2.5	2.2	68		1.1	2.8	1.3	3.7
35 Food Trades Workers	0.6	2.0	1.1	29		0.2	1.0	0.7	3.3
36 Skilled Animal and Horticultural Workers	0.8	1.5	1.0	35		0.4	1.2	0.3	2.7
39 Other Technicians and Trades Workers	1.2	2.5	1.7	49		0.6	1.9	1.1	3.9
<b>4 COMMUNITY AND PERSONAL SERVICE WORKERS nfd</b>									
41 Health and Welfare Support Workers	0.8	0.8	0.8	27		0.3	1.2	0.1	1.5
42 Carers and Aides	5.9	7.5	6.5	188		4.4	7.4	4.6	10.5

	Did not do VET subjects at school	Did VET subjects at school	Total		Significance test at 95% confidence interval (Denoted by *)	95% confidence intervals			
						Did not do VET subjects at school		Did VET subjects at school	
						%	%	%	<i>n</i>
43 Hospitality Workers	8.7	6.0	7.7	250		6.5	10.8	3.9	8.0
44 Protective Service Workers	1.4	1.6	1.4	44		0.7	2.0	0.6	2.7
45 Sports and Personal Service Workers	4.7	2.7	4.0	141		2.7	6.7	1.5	3.9
<b>5 CLERICAL AND ADMINISTRATIVE WORKERS nfd</b>	0.0	0.1	0.0	2		0.0	0.0	0.0	0.2
51 Office Managers and Program Administrators	1.3	0.4	1.0	32		0.6	2.0	0.0	0.9
52 Personal Assistants and Secretaries	0.4	0.5	0.4	23		0.1	0.7	0.1	0.9
53 General Clerical Workers	2.4	4.3	3.1	107		1.7	3.2	1.7	6.9
54 Inquiry Clerks and Receptionists	2.7	2.9	2.8	110		1.9	3.5	1.4	4.4
55 Numerical Clerks	2.2	1.6	2.0	68		1.4	3.0	0.7	2.4
56 Clerical and Office Support Workers	0.6	0.6	0.6	22		0.2	1.0	0.0	1.2
59 Other Clerical and Administrative Workers	2.7	1.8	2.4	99		2.0	3.4	0.7	2.8
<b>6 SALES WORKERS nfd</b>									
61 Sales Representatives and Agents	1.0	0.1	0.7	24	*	0.4	1.6	0.0	0.3
62 Sales Assistants and Salespersons	14.2	10.4	12.9	455		12.2	16.1	7.7	13.1
63 Sales Support Workers	0.8	1.5	1.1	31		0.5	1.2	0.0	3.6
<b>7 MACHINERY OPERATORS AND DRIVERS nfd</b>									
71 Machine and Stationary Plant Operators	0.3	0.6	0.4	10		0.0	0.5	0.0	1.4
72 Mobile Plant Operators	0.6	0.7	0.7	17		0.2	1.0	0.0	1.4
73 Road and Rail Drivers	0.3	0.6	0.4	18		0.1	0.6	0.0	1.1
74 Storepersons	0.6	1.3	0.8	22		0.1	1.0	0.2	2.4
<b>8 LABOURERS nfd</b>									
81 Cleaners and Laundry Workers	0.4	1.0	0.6	30		0.2	0.7	0.3	1.7
82 Construction and Mining Labourers	1.0	1.1	1.0	29		0.3	1.7	0.3	1.8
83 Factory Process Workers	1.1	2.3	1.5	30		0.1	2.1	0.7	3.8
84 Farm, Forestry and Garden Workers	0.7	0.9	0.8	25		0.3	1.1	0.3	1.5

	Did not do VET subjects at school	Did VET subjects at school	Total	<i>n</i>	Significance test at 95% confidence interval (Denoted by *)	95% confidence intervals			
						Did not do VET subjects at school		Did VET subjects at school	
	%	%	%		<i>CI</i>	<i>Lower CI</i>	<i>Upper CI</i>	<i>Lower CI</i>	<i>Upper CI</i>
85 Food Preparation Assistants	1.3	2.5	1.7	49		0.7	1.9	1.0	4.0
89 Other Labourers	2.0	2.4	2.1	57		1.3	2.8	0.8	4.0
<b>9 UNKNOWN OR NOT CLASSIFIABLE</b>	3.7	3.2	3.5	112		2.5	4.9	1.2	5.1
<b>All</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>3344</b>					

Note: nfd = not further defined





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