



Longitudinal Surveys of
Australian Youth (LSAY)
analysis: literature
review – support
document two
(supplementary report)

Review of Senior
Secondary Pathways

This document was produced as a support document to the report *Longitudinal Surveys of Australian Youth (LSAY) analysis: literature review*, and is an added resource for further information.

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Purpose

The purpose of this supplementary report is to provide more recent data and research to understand the changes in education and employment policy, participation and outcomes that have occurred over the last decade or so. As noted in the Senior Secondary Schools Pathway Review LSAY literature review (Full Report), much of the research was dated and this paper provides additional information for the committee's deliberations.

Background

Note that the data below is intended to show change over the last decade or so but due to different data sources, the period for comparison purposes may vary.

Labour market trends

- The largest growth in employment by major occupational group between 2006 and 2016, were in community and personal services and professionals jobs, which grew by 44.3% and 31.3% respectively.
- Between 2006 and 2016, workers holding higher education qualifications in all major occupational groups increased by 33.5%, and the proportion with VET qualifications increased by 9.5%.
- Over the same period, the youth unemployment rate has been persistently about twice the rate for the overall population. As at January 2020, the official unemployment rate of young people aged 15-24 was 12.1% compared to 5.3% recorded for all persons.
- Young workers aged 15 to 24 years are much more likely have casual jobs compared with older workers. Underemployment affects even more young people than unemployment.

Major policy changes

- In response to the recommendation of the Bradley Review of Australian Higher Education, the government uncapped the number of university places in 2009.
- In January 2010, the National Youth Participation Requirement, agreed by the Council of Australian Governments (COAG) in 2009, came into effect across all States and Territories. This includes a mandatory requirement for all young people to participate in schooling until they complete Year 10 and to participate full time in education, training or employment, or a combination of these activities, until the age of 17.

Trends in education and training participation

- Domestic higher education under-graduate commencements increased from just under 200,000 students to just over 300,000 students between 2008 and 2018.
- Year 10 to Year 12 school retention rates have increased from 79.5% in 2011 to 82% in 2019.
- The number of VET in School students increased from around 230,000 in 2009 to 257,000 in 2015 and has since declined to just over 230 000 in 2018.
- Government funded students aged 15 to 17 enrolled in VET qualifications, and not at school, declined by 29% from just over 74 000 students in 2008 to around 52 000 students in 2017.
- The number of commencing apprentices and trainees aged 15 to 17 years old declined by 29% from around 54 700 to 38 800 between 2009 and 2018.

Outcomes of VET in Schools (unpublished NCVET research)

This research looked at secondary school students who undertook a VET in Schools program in 2011 and investigated whether they are in work and/or further studies five years later (2016), and the extent to which their VETiS studies are linked to these employment and study destinations. The study used an integrated dataset, in which data from the 2011 National VET in Schools Collection are linked to data from the 2016 ABS 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.

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

The key findings included:

- Students who undertook a school-based apprenticeship or traineeship as part of their VETiS 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 VETiS course.
- In terms of the overall match between the intended occupation of VETiS 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 VETiS students with those of non-VETiS students, four to five years after finishing school, reveals that VETiS 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-VETiS students were still studying, mostly at university.
- For students looking for a direct transition from school into an apprenticeship or full-time ongoing employment, choosing the right VET course and pathway can make a substantial difference to achieving their goal.
- When analysing the LSAY data, it became apparent that caution needs to be exercised when looking at the outcomes of VETiS and treating them as a homogenous group. A significant proportion (45.2%) of the VETiS students in the LSAY sample also achieved an ATAR and a preliminary analysis indicated some significant differences between the outcomes of VETiS students who achieved an ATAR and those that did not achieve an ATAR.

To understand the outcomes at this more nuanced level, separate analysis was undertaken that looked at four distinct senior secondary school student cohorts; ATAR students who did VET and those that didn't, and general education students (non-ATAR) that did VET and those that didn't (refer table 1 attached).

Key findings on study and employment outcomes four to five years after leaving school included:

- ATAR students that did VET were significantly more likely than ATAR students who did not do VET to be
 - in full-time work
 - completed an apprenticeship or a post-school VET qualification at Certificate level III or IV
 - not commence a degree.
- General education students that undertook VET were significantly more likely than general education students who did not do VET to be
 - in full-time work
 - completed a VET qualification (particularly at Certificate III and IV level).

These outcomes indicate that some students may be constructing pathways to provide themselves with a choice of post-school options, for example, go to university or into further training or work.

The analysis above was based on the Y09 LSAY cohort. To understand whether there had been any significant changes to outcomes since this time, a similar analysis was undertaken for the Y15 cohort for comparison purposes, noting that the data for both cohorts in this analysis is based on student outcomes at age 19 (as opposed to age 21 and 22 in analysis above).

The comparison of outcomes for the Y15 LSAY cohort compared to the Y09 cohort at age 19 revealed that:

- The composition of the four cohorts in the LSAY sample had changed, with the overall proportion of students (ATAR and non-ATAR) undertaking VET declining from 30% to 24% between Y09 and Y15.
- There was a significant rise in the proportion of general education students who did not do VET that completed Year 12 in the Y15 cohort (57%) compared to the Y09 cohort (44%), and which may be due to the changes in school age participation legislation.

Research summary and policy implications

The following is a synthesis of the information presented in this supplementary report and the LSAY literature review with a view to informing future policy directions. It is structured along major themes, but these are not mutually exclusive.

Overall, it is apparent that the biggest gap in our knowledge of senior secondary school pathways is understanding what the intentions of students are when choosing their pathways. When analysing outcomes, it is difficult to be conclusive about the effectiveness of a particular pathway if we don't know why they chose the pathway and what their intended outcome was. This is explored further under *Future data needs and research*.

Career advice

One of the strongest themes arising from the LSAY literature review was the need for better career advice for students and influencers (particularly parents). Career advice has been identified as an area for improvement for many years although it may be more critical now given the greater range of senior secondary school pathway options and a future that is predicted to result in more fluid career pathways and the need for information on education options and the labour market throughout people's working life.

In terms of secondary school career advice, there is a strong sense that more needs to be done earlier in the student's journey through school. This suggests greater attention be placed on career advice in Year 10 and potentially even Year 9. In a recently released study in the UK by the Centre for Vocational Education Research based on the Longitudinal Study of Young People in England, the authors state that *'as well as GCSE performance at age 16, particularly in Maths and English, we find that attitudes towards HE formed by age 14 and parental advice and aspirations are all important in predicting individuals' pathways through post-compulsory education and into employment'*.

This should not however detract from the need to provide ongoing career advice throughout senior secondary schooling. School data shows that there is attrition over the course of senior secondary schooling, particularly between Years 11 and 12, which suggests there is a need for career advice intervention at that point. It can also be expected that students post-school intentions can change, even if they complete Year 12, and that career advice should be available to Year 12 students as appropriate.

Pathways

Pathways for senior secondary school age students are often viewed as a binary choice between ATAR and non-ATAR pathways. This not only over-simplifies how students create their pathways (as evidenced by the four cohorts identified through the LSAY data analysis), but also highlights the apparent reluctance of students to take up the options of full-time VET or employment that are available through 'earn or learn' policies in all jurisdictions.

Since school age participation legislation and policies were introduced in 2010, there has been a rise in school retention and a decline in participation in non-school VET. This indicates that the behavioural response to the policy changes was that students who might otherwise have left school to get a job or enrol in post-school VET have elected to stay at school.

At one level, the behavioural response to the introduction of the new legislation is a validation of its original intent to have more young people complete year 12, however, it could also be argued that there have been unintended consequences for some students who may be better off leaving school at Year 10 and going directly into full-time VET or employment.

In terms of a direct employment pathway for school age students, one researcher (Dockery) from the literature review argued that early school leaving is a viable option for some students *'especially for less academically inclined'* and that *'policy should not be to increase levels of education per se, but to ensure that pathways are available to meet the varying needs, abilities and preferences of young people and to better provide the information they require to make an informed and optimal decision'*.

An important consideration for students that are seeking to go straight in to work after Year 10 is to ensure that there is a 'way back' to further study.

There are fewer opportunities for young people to enter into full-time employment after Year 10, which is exacerbated by the long term trend of employers engaging apprentices at an older age. To accommodate this, there may be scope to consider whether a viable pathway for this cohort is a combination of part-time employment and part-time school studies or non-school VET, and for this to be recognised for the purposes of a secondary school certificate.

As noted by Karmel, Lu and Oliver from the literature review, *'after five years [of leaving school], about one-third of young people who began in a low-skill job have moved to a high-skill job' and 'that part-time and casual low-skill work can be a viable pathway to full-time or permanent positions'*.

Such a model could potentially also recognise unpaid employment such as volunteering or caring responsibilities as well as social participation activities. This may have an additional benefit of addressing the precarious nature of casual and part-time work by providing continuity of participation in order to meet the requirements of school certification.

In a similar way, many students including those that are academically capable and looking for quicker entry into the labour market, may be better off leaving school after Year 10 and going straight into full-time training. This option exists under state and territory legislation but the data indicates that there has been a significant decline in the number of 15 -17 year old students who access this pathway.

In order to provide students on this pathway with the most flexible options and exit points, consideration could be given to packaging a VET qualification with school curriculum subjects (potentially taught within the training institution) to enable them to achieve a secondary school certificate. An extension of this proposition could be to construct a program that also provides an ATAR or equivalent outcome, based on a Certificate IV or above qualification.

VET in Schools

The research into VET in Schools shows that there are some clear associations between the nature of the VET programs undertaken and employment outcomes four to five years later.

The research identified that the strongest links to full-time employment and the closest match between the occupational area undertaken through VET in schools courses and the eventual job, were for students undertaking a school-based traineeship or courses in trade related areas.

The literature review identified *'that there tends to be a poor alignment between the type of VET studied while at school and the requirements of the workforce (or further study)'*.

This suggests that for those students who are informed of their options and have made a deliberate decision to seek direct entry into an apprenticeship or full-time job, the choice of VET pathway or course is important.

Participation in school-based apprenticeships and traineeships has remained fairly steady over the last ten years (despite the overall decline in the number of commencing apprentices and trainees aged 15 to 19 years old) however, they still only represent around 4% of all senior secondary school students.

Given the employer demand driven nature of apprenticeships and traineeships, policy options could look towards stimulating greater interest and take-up by employers.

The apprenticeship employer incentives program already includes targeted incentives for employers of school based apprentices and trainees with higher incentives available for certificate III programs than for certificate II programs. There may be benefit in evaluating the relative benefits for employers and students for these two groups to see if more financial support is required for Certificate II trainees.

Over and above financial incentives, there is a need to understand what can be done to make school based apprentices and trainees more attractive to employers.

In terms of general VETiS programs, for students seeking a direct pathway to employment post-school there is a potential policy shift for schools to provide more targeted offerings for these students.

This needs to be considered in conjunction with industry concerns about the quality of VETiS, particularly for trade-related pathways. The predominant model for the delivery of VETiS in most jurisdictions is for schools to deliver VET programs in a school setting, under the auspices of a registered training organisation. There have been a number of recent reviews and audits that raised concerns with the quality of these arrangements.

To address this issue, consideration could be given to encourage or incentivise more VET for senior secondary school students to be undertaken through an RTO, external to the school. This may have the added advantage of exposing students to an environment with more structured links to industry.

Future data based evidence and research

The research and data analysis by the NCVET have highlighted a number of gaps in our understanding of senior secondary schooling and their outcomes. In considering improvements to future data and research, the key elements are a mixture of qualitative research to understand students choices and aspirations, their influences as well as the views of industry, and the development of a comprehensive data linkage platform to inform our understanding of the student journey through education and employment over an individual's lifetime.

To this end, the NCVET has developed a research proposal to build upon the existing research into VET in schools, focused on a qualitative study with students and parents to understand their choices and motivations as well as with employers to understand their views on VET in schools and the barriers and opportunities to supporting greater take-up of school based apprentices and trainees.

In terms of data linkage, the VET sector is already gearing up to access an information platform that links multiple data sets through the Multi Agency Data Integration Project (MADIP), under the auspices of the ABS. The total VET activity data set is scheduled to be incorporated into MADIP by the middle of this year, along with existing data sets such as higher education, human services and the ATO.

Notwithstanding MADIP, there would also be great benefit in developing a specific data platform for the three education sectors, linked through the Unique Student Identifier. One of the constraints of MADIP is not having access to unit record file outputs due to privacy considerations. Having a dedicated cross-sectoral linked education data set would be invaluable for all education sectors' research needs. In the context of the Senior Secondary Pathways Review, such a data platform would enable school Boards of Studies data to be integrated with VET in Schools data, as well as allow longitudinal analysis of students through school and the tertiary education sector.

Recent research has also highlighted the value of the Longitudinal Study of Australian Youth (LSAY) and the benefit of ensuring there is a continuous survey on a regular basis. For the literature review alone, the lack of a Y12 cohort demonstrated how important it is to maintain a regular unbroken sequence.

Table 1: ATAR students who did VET and those that didn't, and general education students (non-ATAR) that did VET and those that didn't

	ATAR			Non-ATAR		
	VfSSS Weighted %	non-VfSSS Weighted %	Statistical significance	VfSSS Weighted %	non-VfSSS Weighted %	Statistical significance
	692	3078		652	552	
Derived: XLFS2016 Labour force status						
1 Employed	88.2	84.1		85.4	83.1	
2 Unemployed	4.8	6.6		6.7	6.7	
3 Not in the labour force	7	9.3		8	10.2	
Derived: XFTP2016 Full-time or part-time employment status						
1 Full-time	45.5	35.5	*	60.9	44.7	*
2 Part-time	40.7	43.8		18.7	35	*
3 Not working (unemployed or NILF)	11.8	15.9		14.6	16.9	
99 Working, but working time unknown	2	4.8		5.7	3.5	
Derived: XEMP2016 Permanent or casual employment						
1 Permanent/ongoing	52.6	45.1		57.7	50	
2 Casual	32	35.3		22.2	31.5	
3 Not working (unemployed or NILF)	11.8	15.9		14.6	16.9	
99 Working, but employment status unknown	3.6	3.7		5.6	1.7	
Derived: XOCC2016 Occupation (1 digit ANZSCO First Edition)						
1 Managers	8.4	3.5		10.1	5.2	
2 Professionals	14.5	22.9	*	2.2	9.4	*
3 Technicians and trades workers	9.8	6		24.9	16.4	
4 Community and personal service workers	19.8	17.9		13.3	17.6	
5 Clerical and administrative workers	11.8	10.7		9	8.5	
6 Sales workers	13.9	13.7		7.6	11.8	
7 Machinery operators and drivers	2.3	1.3		3.5	2.7	
8 Labourers	5.4	5.1		11.7	7.9	
9 Unknown or not classifiable	2.3	3		3.1	3.6	
10 Not working (unemployed or NILF)	11.8	15.9		14.6	16.9	
Derived: XHSL2016 Highest school level completed						
1 Completed Year 12	100	100		78.2	68	
2 Did not complete Year 12	.	.		21.8	32	
Derived: X1232016 Completed Year 12 or certificate III or higher						
1 Completed Year 12 or certificate III or higher	100	100		89.7	81.3	
2 Did not complete Year 12 or certificate III or higher	.	.		10.3	18.7	

	ATAR			Non-ATAR		
	VfSSS Weighted %	non- VfSSS Weighted %	Statistical significance	VfSSS Weighted %	non- VfSSS Weighted %	Statistical significance
	692	3078		652	552	
Derived: XATR2016 Status in apprenticeship/traineeship						
1 Currently undertaking	1.2	2.7		5.2	7.4	
2 Completed	11.6	5.2	*	29.4	22.5	
3 Commenced, but did not complete	2.5	1.8		10.6	7.3	
4 Never commenced	84.7	90.3		54.8	62.8	
Derived: XVET2016 Study status in VET						
1 Currently undertaking	2.7	4.4		6.3	8.5	
2 Completed	28.8	19.7	*	63.2	45.1	*
3 Commenced, but did not complete	6.2	4.3		9.6	10.5	
4 Never commenced	62.3	71.6	*	20.9	35.9	*
Derived: XBAC2016 Study status in bachelor degree or higher						
1 Currently undertaking	27.9	31.7		4.7	16.6	*
2 Completed	26.6	31.8		1.6	9.5	*
3 Completed and undertaking further study at bachelor degree or higher	2.8	8.7	*	0.2	3	*
4 Commenced, but did not complete	12.5	9.8		5.3	4.5	
5 Never commenced	30.2	18	*	88.2	66.4	*
Derived: XHEL2016 Highest qualification level completed						
1 Certificate I and II (includes unknown certificate level)	3.7	1.8		13	11.6	
2 Certificate III and IV	16.2	8.1	*	39.2	23.3	*
3 Advanced diploma/diploma (incl. associate degree)	8.2	7.9		10.6	8	
4 Bachelor degree or higher	29.4	40.5	*	1.8	12.5	*
5 Did not complete a qualification	42.5	41.7		35.4	44.6	
All	100	100		100	100	