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A report for the NSW Department of Education on Vocational Education and Training Delivered to Secondary Students

Final Report

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GLOSSARY

ABS	Australian Bureau of Statistics
ACACA	Australasian Curriculum, Assessment and Certification Authorities
ACER	Australian Council for Educational Research
AQF	Australian Qualifications Framework
ASQA	Australian Skills Quality Authority
ATAR	Australian Tertiary Admission Rank
BOSTES	Board of Studies, Teaching and Educational Standards, NSW
CBT	Competency-based training
CESE	Centre for Education Statistics and Evaluation, NSW Department of Education
DET	NSW Department of Education and Training
DOI	NSW Department of Industry
DPC	NSW Department of Premier and Cabinet
ETF	European Training Foundation
HSC	Higher School Certificate
NCVER	National Centre for Vocational Education Research, Adelaide
NESA	NSW Education Standards Authority
RoSA	Record of Student Achievement
RTO	Registered Training Organisation
SBAT	School Based Apprenticeships and Traineeships
SEIFA	Socio-Economic Indexes for Areas
SES	Socio-economic Status
SSCE	Senior Secondary Certificate of Education
STEM	Science, Technology, Engineering and Mathematics
SWL	Structured Workplace Learning
TAFE	Technical and Further Education, NSW
VCAL	Victorian Certificate of Applied Learning
VCE	Victorian Certificate of Education
VET	Vocational Education and Training
WPSP	Work Placement Service Providers

EXECUTIVE SUMMARY

Research aims

This report presents the findings of an external review and analysis of relevant recent practices, research and data on the delivery of Vocational Education and Training (VET) to secondary students. The review and analysis were commissioned by the New South Wales (NSW) Department of Education and were conducted by the Centre for Vocational and Educational Policy at the University of Melbourne to identify best possible practices and make recommendations for future practice.

Research questions

- What do the VET programs offered in Australian schools look like?
- Who participates in these VET programs and why?
- What are useful measures of VET program effectiveness?
- What are the strengths and weaknesses of the current VET programs in NSW government schools?
- What recommendations are made for improving VET programs in NSW government schools?

What do the VET programs offered in Australian schools look like?

- VET delivered to secondary students in Australia is principally delivered within Senior Secondary Certificates of Education (SSCEs). VET includes School Based Apprenticeships or Traineeships (SBATs).
- In all jurisdictions, all VET for school students involves the delivery of nationally recognised qualifications under the Australian Qualifications Framework (AQF) by Registered Training Organisations (RTOs).
- All VET curriculum comes from nationally endorsed industry Training Packages.
- Most VET courses contribute towards SSCE completion, but each jurisdiction differs significantly in the level of recognition of VET in their senior certificates. In the majority of jurisdictions, VET can contribute to the calculation of an Australian Tertiary Admissions Rank (ATAR). However, again, each differs significantly in how this contribution is calculated.
- All VET programs have a component related to workplace learning but mandatory work placements are not common.
- Delivery of VET to Australian school students is typically done in schools that have RTO status, through a third party[1] arrangement, or externally delivered, assessed and credentialled by a Technical and Further Education (TAFE) institute or private RTO.

[1] Section 116 of the National VET Regulator (NVR) Act permits an RTO (the principal RTO) to engage a non-RTO (the third party) to deliver training and assessment of all or part of a VET course on behalf of the principal RTO where the principal RTO has the VET course on its scope of registration. The engagement must be in writing and comply with all other requirements as to third party arrangements under the Standards for RTOs. The principal RTO has responsibility for the quality of the assessment and for issuing qualifications.

Who participates in VET programs in schools and why?

- The number of VET students in Australian schools has increased from 60,000 in 1996 to over 230,000 students in 2018 (National Centre for Vocational Education Research (NCVER) 2019). However, there has been no growth since 2013 and, as a proportion of the senior secondary cohort, VET students have declined nationally as well as in most states and territories, including NSW.
- In Australia, males are more likely than females to participate in VET and the gap has grown slightly over the period 2006–2015, caused by greater declines for female students (Misko et al. 2017).
- The mean socio-economic status (SES) of VET students tends to be lower than that of non-VET students in Australia and internationally.
- Students in provincial, remote and very remote areas are more likely to enrol in VET than those in metropolitan areas.
- Across Australian schools, most VET students in 2018 were enrolled in programs at Certificate levels II and III, with the majority in Certificate II (NCVER 2019).
- School Based Apprenticeships or Traineeships form a minority (8.6%) of VET enrolments across Australia (NCVER 2019).
- VET programs are designed to achieve two broad aims: 1) to increase engagement and improve retention, and 2) to provide transitions to employment.
- The aspirations and motivations young people have for participating in VET programs are related to these broad aims. They are seeking programs that (1) are interesting and engaging, and (2) support transitions into employment (Gore et al. 2017). Nationally, the available school leaver tracking studies show that VET students are more likely than non-VET students to enter the labour market directly after completing school, but that both groups access similar low skilled and mainly part-time and casual jobs (Victoria Department of Education and Training 2017; Queensland Department of Education and Training 2017; Social Research Centre 2017).

What are useful measures of VET program effectiveness? – Best practice indicators

The literature review identified three major areas of focus when reviewing the effectiveness of VET undertaken by secondary school students:

- Access and participation
- Industry relevance
- Quality.

For each of these focus areas, best practice indicators were developed by drawing on the literature relating to VET delivered to secondary students. These indicators allow a clear assessment of the extent to which a system is achieving best practice and, as such, can be used as measures of program effectiveness.

1. **Access and participation**

VET is delivered to secondary students in Australia in the context of the relevant SSCEs. It is crucial that this occurs in a coordinated and effective manner that provides students with the opportunity to enrol in accredited VET programs with no negative impact on their SSCE, and that it supports

post-school transitions to employment and further study. There is strong evidence that effective provision of VET within the SSCE requires support at all levels – policy, school and external providers.

The best practice indicators for this focus area are:

1.1 **That there is seamless integration of nationally recognised VET qualifications into the SSCE so that they make a meaningful contribution to the SSCE.**

1.2 **That there are no barriers to post-school pathways of the student's choice.**

1.3 **That VET is attractive to a broad range of senior secondary students.**

2. **Industry relevance**

VET courses undertaken by SSCE students must meet the needs of the labour market. Employers value the work experience of applicants and VET programs with strong links to work through structured workplace learning, and apprenticeships and traineeships are shown to be the most effective in achieving strong transitions to work.

The best practice indicators are:

2.1 That VET meets the needs of the labour market.

2.2 That there is a strong element of structured workplace learning.

2.3 That there are strong links between schools, VET providers, employers and any other key stakeholders at the local level.

3. **Quality**

All students have a right to access to quality VET courses that are reviewed regularly to ensure their quality and relevance. Research emphasises the importance of quality provision and partnerships and emphasises the importance of quality programs that meet industry and regulatory standards.

The best practice indicator is:

3.1 That all senior secondary students have access to quality VET courses.

What are the strengths and weaknesses of the current VET programs in NSW government schools?

1. Access and participation

1.1 **That there is seamless integration of nationally recognised VET qualifications into the SSCE so that they make a meaningful contribution to the SSCE.**

Strengths

- VET is included in the HSC and can contribute to the ATAR.

Weaknesses

- Assessment of students' performances in VET courses to contribute to the ATAR is limited to their performance on externally developed and scored paper-based examinations. Other jurisdictions allow for scored competency-based assessment.
- Some schools do not offer VET, offer very limited VET or manifest cultural barriers (including very narrow interpretations of the HSC and its regulations) that prevent effective implementation of VET programs, mainly through timetabling and curricular inflexibility.

1.2 **That there are no barriers to post-school pathways of the student's choice.**

Strengths

- The NSW HSC provides a comprehensive offering of VET for school students.
- SBATs are valued by many employers and provide effective pathways to work and higher-level VET studies, providing better linkages between offerings and areas of skills shortages.
- The NSW Department of Education and the NSW Education Standards Authority (NESA) provide strong support to schools to implement VET in NSW government schools.
- Students from the most disadvantaged quintile of Socio-Economic Indexes for Areas (SEIFA) are the most likely group to enrol in VET in secondary schools, and VET plays a strong role in engagement.
- Students in rural and remote areas are more likely to enrol in VET in NSW and nationally.
- Post-school VET destinations, including apprenticeships and traineeships, are significantly higher for VET participants, compared to non-VET students.

Weaknesses

- Employers in some industries such as building are reluctant to employ students who have completed VET while enrolled at school (including SBATs) as apprentices because the students are perceived as lacking industry experience and a view they will need to commence as second or third year apprentices (which is not accurate).
- Students undertaking VET tend to complete competencies from lower level VET qualifications that provide limited support for transitions to employment or further study.
- SBATs form a minority of VET enrolments across Australia and participation in NSW is below the national average.
- Approximately one quarter of VET and non-VET students enter the labour market with no further education or training, although VET graduates have higher rates of transition to post-school VET.

1.3 **That VET is attractive to a broad range of senior secondary students.**

Strengths

- More than one in five students in NSW complete some VET.
- Nationally, enrolment in VET tends to be gendered, with more male students overall. However, overall, NSW has approximately equal proportions of male and female students.

Weaknesses

- VET is more likely to attract the most disadvantaged students, which may impact its status.

- After an initial period of growth, participation in VET in most of Australia, including NSW, has declined.

2. Industry relevance

2.1 That VET meets the needs of the labour market.

Strengths

- VET courses offered to secondary students as part of the HSC are based on nationally recognised qualifications and nationally endorsed industry Training Packages.

Weaknesses

- For those students making a direct entry into the labour market, the occupations accessed by VET and non-VET students are remarkably similar.
- Current VET qualifications may not prepare young people for a changing labour market.
- It is difficult to align VET courses with specific real-time industry needs.

2.2 That there is a strong element of structured workplace learning.

Strengths

- NSW mandates structured workplace learning in VET courses, supported by NESA guidelines. This is important and valued by stakeholders, as it develops specific industry and occupational skills and knowledge, employability skills and an understanding of work and industry that can support career choices.
- There is a clear distinction between structured workplace learning and work experience and NESA provides detailed advice on how to maximise the value of workplace learning.
- SBATs are supported by the Industry-Based Learning HSC unit.
- Work Placement Service Providers (WPSPs) broker structured workplace learning placements and play an important and valued role in structured workplace learning.
- Students are well prepared for structured workplace learning.

Weaknesses

- Employers may not fully understand the process and their obligations in structured workplace learning and SBATs.
- There are still difficulties in obtaining accessible structured workplace learning placements in regional and rural areas.
- There are administrative issues and complexities associated with SBATs.
- Attaining an ATAR as well as undertaking an SBAT has workload implications for the student and this may negatively affect the student's decision to proceed.

2.3 That there are strong links between schools, VET providers, employers and any other key stakeholders at the local level.

Strengths

- Partnerships enable structured workplace learning and SBATs and can help support post-school employment.

- The links between schools and employers will be supported by the new appointment of Regional Industry Education Partnership (RIEP) officers.
- The WPSPs facilitate and support the links between schools and employers.

Weaknesses

- There tend to be a more limited number and range of partner organisations in some communities, particularly in rural and regional NSW.

3. Quality

3.1 **That all senior secondary students have access to quality VET courses.**

Strengths

- VET programs are seen as of high quality and valuable by most stakeholders.
- Quality is enhanced when there are strong school–employer/industry partnerships.

Weaknesses

- The lower quality of some courses may affect employers' acceptance and recognition of VET delivered to school students.
- Some school leaders do not support VET.

What recommendations are made for improving VET programs?

VET delivered to secondary students in NSW plays an important role in engaging and retaining students and in preparing them for a labour market that has a strong demand for skilled workers. These aims are interlinked and cannot and should not be separated. Both are important, and neither should be prioritised, contrary to the views of some stakeholders.

However, this report finds that in NSW both of these roles are constrained. The engagement and retention role of VET for secondary students is limited by the constraints placed on its delivery because of the difficulties integrating VET curriculum and delivery into the HSC, by the way in which the HSC is conceptualised in schools, by school culture and by the prioritisation of academic courses and university entry pathways.

Secondly, the labour market aims are constrained by limited resources and commitment to support industry linkages by the NSW Department of Education and by a lack of engagement and poor understanding of VET delivered to secondary students by many industry partners. These problems are not limited to NSW, but reflect the difficulties of integrating VET in secondary school systems that have strong links to higher education and weaker links to the labour market, as is the case across Australia and in similar international systems.

Access and participation

Recommendation 1: That the NSW DoE works with other key agencies, including government departments and employer organisations, to strengthen the acceptance of

undertaking the HSC with a non-ATAR eligible pattern of study among students, parents, school leaders and employers.

Recommendation 2: That the NSW DoE documents and promotes pathways that emphasise longer-term career trajectories as well as immediate post-school transitions.

Recommendation 3: That the NSW DoE works with other key agencies, including government departments and employer organisations, to develop more resources to support careers advice and pathways planning.

Recommendation 4: That the NSW DoE works in partnership with schools, employer organisations and employers to promote VET and the pathways it can create into employment and further education and training.

Recommendation 5: That the NSW DoE explores alternative models of senior secondary education, including an alternative SSCE, and expand access to alternative settings such as trade schools and technical colleges.

Recommendation 6: That the NSW DoE supports the development and sustainability of partnerships by documenting and promoting partnership models.

Recommendation 7: That the NSW DoE works with employer organisations, employers and TAFE NSW to dispel misunderstandings on employing school graduates who have completed all or part of a VET qualification, including through SBATs.

Industry relevance

Recommendation 8: That the NSW DoE, in consultation with NESA, employer groups and employers, offers a greater range of Certificate III programs to secondary school students where this better meets the needs of industry.

Recommendation 9: That the NSW DoE increases funding for WPSPs to expand the role they play in supporting employers and young people in NSW.

Recommendation 10: That the NSW DoE works with other key agencies, including government departments and employer organisations, to promote the use of part-time work in the delivery of VET and SBATs.

Recommendation 11: That the NSW DoE, in consultation with WPSPs, employer groups and employers, reviews options for providing structured workplace learning, particularly in rural and regional NSW.

Recommendation 12: That the NSW DoE works with other key stakeholders, including representatives from government and employer organisations, to increase industry involvement across all stages of VET course development and delivery, including better incentives for industry to participate in SBATs.

Recommendation 13: That the NSW DoE works with other key agencies, including government departments and employer organisations, to simplify administrative processes associated with SBATs to reduce the complexity of the process and time to sign up students and to boost participation.

Recommendation 14: That the NSW DoE recognises and funds dedicated staff in schools to manage partnerships with TAFEs and other RTOs, WPSPs and employers.

Quality

Recommendation 15: That the NSW DoE works with other key agencies, including government departments and employer organisations, to introduce graded competency-based assessment of VET delivered to secondary students by TAFE and RTOs and introduce TAFE and RTO assessment in the calculation of the ATAR.

Recommendation 16: That the NSW DoE broadens official and unofficial measures of school performance to minimise barriers to effective VET provision.

Recommendation 17: That the NSW DoE continues to strengthen provision of careers advice within schools and examine models to provide independent high-quality careers advice for young people once they have left school.

Recommendation 18: That the NSW DoE works with other key agencies, including NESA, to develop a more nuanced definition of what constitutes a 'VET student' to improve data collection and analysis and comparisons.

CHAPTER 1 INTRODUCTION

1.1 Context

This report presents the findings of an external review and analysis of relevant recent practices, research and data on the delivery of VET to secondary students. The review and analysis were commissioned by the NSW Department of Education and were conducted by the Centre for Vocational and Educational Policy at the University of Melbourne to identify best possible practices and make recommendations for future practice.

The aims of this review were to gain an accurate and independent understanding of the strengths and any weaknesses of the current VET programs (previously known as Vocational Education and Training in Schools, VETiS) and offerings across NSW government schools, to map those offerings against programs delivered elsewhere in Australia and internationally (taking local context into account), and to develop recommendations for improving, where necessary, the current VET programs and offerings across NSW government schools to demonstrably align them with "best possible practice".

The aims of VET delivered to secondary students are contested. The aims are of two main types: 1) engagement and retention, and 2) providing pathways to employment and meeting labour market needs. The emphasis placed on each depends on the stakeholder's view. For example, the school and department perspectives provided in this report focused principally on the first aim, while the TAFE and employer respondents placed emphasis on the second aim. This report considers the evidence for the achievement of both. The aims are different but interlinked. We consider achieving both is of the utmost importance.

VET programs were introduced to provide a relevant curriculum that addresses the career aspirations and learning needs of students in senior high school. In 2000, VET programs became part of the new HSC. In NSW, currently about one in three senior secondary students in Years 11 and 12 is undertaking a VET course as part of their HSC (NSW DoE 2016). VET is now delivered through school-based courses and externally delivered VET courses (EVET) and School Based Apprenticeships or Traineeships Those courses include: Board-endorsed courses[2] (which count towards an HSC but are not ATAR eligible); Board-developed[3] Industry Curriculum Framework courses (which count towards an ATAR if a student submits to examination); and SBATs (which must be aligned with either a Board-developed or Board-endorsed course).

The integration of VET within the secondary schooling environment has been influenced by both education and labour market factors. The Adelaide Declaration on National Goals for Schooling referred to the importance of participation and access to VET as part of compulsory secondary schooling (Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) 1999) and led to the development of the first national framework for VET in schools (MCEETYA 2000). This framework articulated a vision for an integrated system that assists young people with the school-to-work transition. It initiated the provision of appropriately accredited industry-specific training based on national qualifications in secondary school education that may also count towards

[2] A School Developed Board Endorsed Course (SDBEC) is any course not developed by the NSW Education Standards Authority (NESA) that is submitted to NESA for endorsement in Stage 5 for RoSA or in Stage 6 as Year 11 or Year 12 units (NESA 2019a).

[3] Board Developed Courses are courses developed by NESA. A syllabus is available for each of these courses (NESA 2019a).

senior secondary certification. A period of significant expansion in VET programs in secondary schools followed, with an approximate 50 per cent growth in participation from 2000 to 2010 (NCVER 2014). Subsequent policy changes have influenced the delivery of VET programs for secondary students in Australia, including the raising of the minimum school leaving age in 2010. In the first two years following the 2010 introduction of the increased minimum school leaving age in NSW, the number of government schools accessing VET courses increased (Audit Office of New South Wales 2012).

In a statement of purpose for VET programs for secondary students, the department describes programs that work to develop pathways to post-school careers, with an emphasis on transferable skills and key competencies and personal attributes important to employers (NSW DoE 2016). In addition to the emphasis on enhanced employability, this statement reaffirms the vision that VET programs for secondary students will support young people in choosing from a 'broad range of post-school options' (NSW DoE 2016). Consistent with national frameworks, the NSW approach distinguishes between vocational learning programs in schools, such as career education and the School to Work program, and VET courses leading to nationally recognised qualifications offered to secondary students at school, TAFE or other registered training providers (NSW DoE 2016).

VET programs for secondary students are delivered in a variety of ways in Australia, and differ in the location of delivery and level of integration with the SSCE, as well as access to workplace learning. In Australia, school-enrolled students are able to access VET programs through a school-based registered training organisation, TAFE or private training organisation, as well as collaborative partnerships including a combination of school and TAFE or private training organisation staff and facilities (Misko et al. 2019). The integration of VET programs and senior secondary certification has increased across Australia; but there are jurisdictional differences in how VET courses are accommodated within SSCEs, particularly in the type and number of qualifications eligible, and the extent to which VET courses may be included in the calculation of a student's ATAR for application to university.

In NSW, the term used to describe a unit of VET study or subject is 'course'. All VET courses for secondary students are either developed or endorsed by NESA for inclusion in a student's Record of School Achievement (RoSA) or HSC. They also contribute towards a nationally recognised VET qualification. 'Board-developed' courses are outlined in Industry Curriculum Frameworks that reflect industry-recognised skills in various areas, include mandatory workplace learning and at least one 240 hour course with an optional HSC examination that enables the course to be included in the calculation of a student's tertiary entrance rank or ATAR. 'Board-endorsed' VET courses that are not included in the Industry Curriculum Frameworks contribute to the RoSA and HSC but not to a student's ATAR. They also play a role in the delivery of SBATs and a broader role in the engagement of students whose needs are not met by Board-developed courses (NESA 2019b). Acronyms used in this report may be found in the Glossary and terms are defined as follows:

a. VET provides opportunities for students to develop workplace competencies that have been defined by industry through nationally endorsed Training Packages, and can lead to the issuing of nationally recognised qualifications and/or statements of attainment.

b. A VET course is the basic unit of study or subject.

c. VET in schools (VETiS) was a term used to describe the VET provided to school students that contributed to SSCEs (or equivalent). VETiS is now encompassed by the term VET delivered to secondary students, which includes:

i. Board-endorsed courses, which count towards an HSC but are not ATAR eligible
ii. Board-developed courses, which count towards an ATAR if the student undertakes an externally set examination
iii. SBATs, which must be aligned with either a Board-developed or Board-endorsed course.

d. Vocational learning helps secondary students explore the world of work, identify career options and pathways, and build career-development skills. Vocational learning is delivered within the broader curriculum and includes career education and general work-related activities that help secondary students explore the world of work.

1.2 Aims

This report presents the findings of an external review and analysis of relevant recent practices, research and data on the delivery of VET to secondary students. The review and analysis were commissioned by the department to identify best possible practices and make recommendations for future practice.

The review was designed to identify evidence-based options for future directions for VET programs using existing research, existing data collections and a targeted series of interviews and focus groups. The review included, where data allowed:

a. a comprehensive description of VET programs currently offered across schools in Australia, both government and non-government, and comparable schools internationally, including the types of courses offered, numbers of programs within single jurisdictions, program objectives, how they are offered, and by whom
b. a comprehensive review of participation rates, educational and demographic profiles of participants, and their motivations and aspirations
c. the most useful measures of program effectiveness, including measures of outcomes for students, and an assessment of current VET offerings against those measures to identify best possible practice
d. the most useful measures of program effectiveness for employers, the profiles of employers, and an assessment of current outcomes against those measures to identify best possible practice
e. recommendations on how NSW government schools can improve their VET programs and offerings to demonstrably align them with best possible practice, including recommendations for any additional data collection and analysis that can inform changes to and development of VET models into the future
f. a comprehensive list of relevant references and all relevant data (and the sources of those data).

1.3 Outline of the report

The structure of this report largely follows the themes arising from the research questions determined by the department.

Chapter 1 This chapter introduces the terms of the review and definitions of main concepts and outlines the research aims and the structure of the report.

Chapter 2	This chapter describes the role and structure of VET programs offered in Australian schools, including their location within the structures of the SSCEs, before focusing more specifically on VET in NSW schools.
Chapter 3	This chapter examines the students who participate in VET programs, providing an overview of their demographic characteristics, participation rates, educational profiles and motivations and aspirations, nationally and in NSW.
Chapter 4	This chapter focuses on three main areas arising from the literature – access and participation, industry relevance and quality – and proposes best practice indicators to use as measures of program effectiveness for each.
Chapter 5	This chapter identifies and examines the strengths and weaknesses of the current VET programs in NSW government schools against the best practice indicators used in the previous chapter.
Chapter 6	This chapter makes recommendations for improving programs based on the analysis in the previous chapter.
Appendix A	This section summarises the data sources used to inform the findings of this study and presents the focus group questions and prompts.
Appendix B	This section contains the review of literature and previous research underlying the analyses.
Appendix C	This section summarises the findings of the consultations conducted with the stakeholders.
Appendix D	This section lists the references used in the literature review and analyses.

CHAPTER 2 WHAT DO THE VET PROGRAMS OFFERED IN AUSTRALIAN SCHOOLS LOOK LIKE?

Summary

VET programs offered in schools in Australia include VET delivered to secondary students in the SSCEs and SBATs. In all jurisdictions, all VET delivery to school students involves the delivery of nationally recognised qualifications under the AQF by RTOs.

Most of the VET courses contribute towards SSCE completion, but each jurisdiction differs significantly in the level of recognition of VET in their senior certificates. In the majority of jurisdictions, VET can contribute to the calculation of an ATAR. However, again, each differs significantly in how this contribution is calculated. The relationship between ATAR and VET courses is complex.

All VET courses have a component related to workplace learning but mandatory work placements are not common. Some jurisdictions provide a strong recommendation for workplace learning or recognise part-time work as part of the structured workplace learning.

In Australia, delivery of VET to school students is typically done in schools which have RTO status, through a third-party arrangement, or externally by TAFE or a private RTO. The most common AQF level undertaken is Certificate II. All VET curriculum comes from nationally endorsed industry-developed Training Packages. This was a basic tenet for the introduction of VET in the early 1990s to replace the plethora of school system designed 'vocational' courses and credentials.

With respect to NSW specifically:

- NSW provides a comprehensive offering of VET courses with about 80 per cent of enrolments in the 13 Industry Curriculum Frameworks and the remainder in a wide range of Board-endorsed VET courses. The system, through the department and NESA, provides strong support to schools for their implementation.
- In NSW, delivery is either through TAFE, private RTOs or school system RTOs with direct responsibility and accountability for compliance with the VET Quality Framework but schools are not RTOs.
- NSW (and Victoria) provide the most significant recognition of VET in the calculation of the ATAR by measuring student performance in approved VET courses by conducting assessment, on the content of the course, derived from the appropriate units of competence.
- The most obvious strength of the NSW (and Victorian) approaches is that it rewards achievement in the approved VET course directly by providing a score.
- The NSW requirement that all VET courses include a compulsory structured workplace learning component is a strength which adds to the value of the course in providing experiential learning related to the industry area. NESA provides detailed advice on how to maximise the value of the workplace learning.

2.1 Discussion and evidence

This chapter provides an overview of VET programs delivered to secondary students in Australia. It focuses on how they are located within the senior certificates, representing an interface between curriculum derived from nationally endorsed industry-developed Training Packages and their status as senior certificate courses or subjects.

The integration of VET within secondary schooling has been influenced by both education and labour market factors. VET became part of the NSW HSC in 2000, and currently about one in three senior secondary students in Years 11 and 12 is undertaking a VET course as part of their HSC (NSW DoE 2016). VET is delivered through school-based courses and externally delivered VET courses (EVET) and SBATs. These include: Board-endorsed courses, which count towards the HSC but are not ATAR eligible; Board-developed courses, which count towards an ATAR if the student undertakes an externally set and scored, paper-based examination; and SBATs, which must be aligned with either a Board-developed or Board-endorsed course.

VET in Australia has typically been delivered in both adult sector institutions, such as TAFE, private providers, enterprise-based providers and adult community education providers, and in schools. The "re-introduction" of vocational curricula into secondary schools in the mid-1990s took place through state-based arrangements to offer accredited VET subjects, originally known as Dual Recognition or VET in Schools units, through SSCEs. These VET in Schools subjects, now known as VET delivered to secondary students, varied considerably in the role they played in the senior certificates. Some had an external assessment component to generate a study score (allowing them to contribute to the ATAR) and some included mandatory work placements (as is the case in NSW). One state has introduced an alternative SSCE, the Victorian Certificate of Applied Learning, integrating accredited vocational learning, mandatory workplace learning and foundation subjects in literacy and numeracy. The studies associated with this alternative certificate do not generate an ATAR and currently enrol approximately one in seven of the students in the senior secondary years in Victoria (see Appendix B for more details).

2.1.1 Types of VET programs currently delivered in Australia to secondary school students

A detailed comparison of a range of systems requires considerable political, historical and economic perspectives to provide context. More detailed analysis is provided in Appendix B. Within Australia, each jurisdiction takes diverse approaches to VET delivery, with differences in the way in which VET is incorporated into the SSCEs, although in all jurisdictions VET for school students involves nationally recognised qualifications under the AQF delivered by RTOs. This means provision of VET is tied to senior secondary units of study and tends to be unavailable to the junior years, except where students are permitted or encouraged to take senior certificate subjects before Year 11. Table 1 below compares the program elements in almost all jurisdictions that may illustrate the differences across measures signifying effectiveness and standards of VET programs. These measures include: 1) Ensuring strong pathways and recognition of learning; 2) Development of industry skills; and 3) Ensuring quality courses (curriculum and delivery).

Table 1 Comparison of the program elements in almost all jurisdictions

Measures		**Strong Pathways and Recognition**		**Industry Skills**	**Quality Courses**	
	Program	**SSCE contribution**	**ATAR contribution**	**Structured Workplace Learning (SWL)**	**Curriculum**	**Delivery**
NSW	**VET**	Contributes towards the HSC and nationally recognised VET qualifications under the AQF. Units of competency and qualifications are 'packaged' into HSC VET courses.	Students who have completed the 240-hour course in the Framework are eligible to sit for the HSC exam. For an ATAR, students must complete exams in 10 units of Board-developed courses, which must include 2 units of English.	Mandated work placement. Minimum 70 hours (for a 240 indicative hour course).	Currently there are 13 Industry Curriculum Frameworks and a range of Board-endorsed courses (which count towards an HSC but are not ATAR eligible).	Most delivery in NSW schools is through school system RTOs with direct responsibility and accountability for compliance with VET Quality Framework but schools are not RTOs. Remainder is delivered externally by RTOs.
	SBATs	An SBAT undertaken during the HSC will lead to a recognised VET qualification and counts towards the HSC. Students who do not complete the HSC get a RoSA certifying achievement.	Some apprenticeships and traineeships can contribute towards the ATAR.	Requirements are met through on-the-job component of the apprenticeship or traineeship. For many trades min. requirement of paid employment in first year is 100 days but for some (e.g. electrical, electronics trades) may be as high as 180 days.	School-based apprentices are usually enrolled in the relevant trade course, generally at Certificate III level, from the beginning of their apprenticeship. School-based trainees are enrolled in relevant qualifications at a Certificate II or III level.	Based on a Training Plan which sets out the proposed combination of school, work and formal training. May commence in Year 10.
ACT	**VET**	Credit for VET based on specific program undertaken by student, up to maximum of eight standard units from any one industry or course area. The allocation of credits towards ACT Senior Secondary Certificate is based on hours of training and assessment. Board of Senior Secondary Studies (BSSS) accredited vocational programs developed in consultation with the Canberra Institute of Technology and local industry advisers to ensure they	VET competencies may be embedded in A (approved Y 11/12), T (ATAR approved) or M (mild disability) courses, allowing them to be study score assessed and counted towards the ATAR. Currently there are five BSSS accredited vocational programs with a T classification.	Flexible. Part-time work undertaken during the VET program recognised as SWL.	Currently there are 23 BSSS accredited vocational programs and 37 Courses registered with the BSSS delivered through RTOs lead to a nationally recognised VET qualification. Vocational programs range from minor courses (minimum of 110 hours) to double major courses (minimum of 385 hours).	Delivered through college RTOs or external RTOs. Industry is consulted in the VET course writing process. Course redevelopment occurs every 5 years. Industry endorsement is a mandatory requirement for all courses.

Measures		Strong Pathways and Recognition		Industry Skills	Quality Courses	
	Program	**SSCE contribution**	**ATAR contribution**	**Structured Workplace Learning (SWL)**	**Curriculum**	**Delivery**
		assist student transitions to work or further education.				
	SBATs	The on and off-the-job components of SBATs are recognised on Senior Secondary Certificate, up to a maximum of eight standard units as an E course in relevant industry area.	A Tertiary Entrance Statement (TES) can include SBATs, as E courses. These comprise the minors allowable within accrued TES. A maximum of 3 minors can be used towards a TES. TES reports information used in calculation of ATAR.	A minimum of 8 hours (equivalent to one day) in the workplace and a minimum of 3 hours of on-the-job training per week.	SBATs are usually enrolled in the relevant trade course, generally at Certificate III level, from the beginning of their apprenticeship.	The same as for VET (above).
VIC	**Victorian Certificate of Applied Learning (VCAL)**	An alternative to the Victorian Certificate of Education (VCE) to accredit senior school achievements.	Does not meet the requirements of subjects designed to generate grades for use in calculating an ATAR.	SWL is strongly recommended. Where assessment within the unit of competency is required in an employment context a period of SWL is mandated.	A curriculum focused on VET and work-based learning, in addition to foundation literacy and numeracy skills. To be awarded a Foundation, Intermediate or Senior VCAL, students must complete a learning program, with a minimum of 10 credits. One credit is awarded on successful completion of 90–100 nominal hours of accredited curriculum.	The VET qualifications delivered in schools where the school is the RTO generally tend to be from those industries which are less resource intensive. TAFEs provide a broad range of VCE VET and other VET courses to students.
	VET	The study score is calculated based on the student's performance on the school-assessed coursework and the subject examination set by the VCAA.	The VET study score can contribute to the calculation of the ATAR, as for other VCE units.	SWL is strongly recommended.	VCE VET courses are typically in the VCE Unit 1–4 structure. This normally equates to 360–400 hours. VCE VET courses normally see completion of at least a Certificate II. The VCAA develops, approves and manages 23 VCE VET courses (comprising 35 individual VET certificates).	The VET qualifications delivered in schools where the school is the RTO generally tend to be from those industries which are less resource intensive. TAFEs provide a broad range of VCE VET and VET courses to students.
	SBATs	Can contribute to VCAL or VCE. The VCAA will determine VCE credit; typically, successful completion of 360 hours in an	Normally, SBATs do not undertake scored assessment in their SBAT qualification. If a Unit 3 and 4 sequence is	Students must complete a minimum of 13 hours per week incorporating:	SBAT students have a Training Plan which must be endorsed and submitted to the relevant Australian Apprenticeship	The VET qualifications delivered in schools where the school is the RTO generally tend to be from those

Measures		Strong Pathways and Recognition		Industry Skills	Quality Courses	
	Program	**SSCE contribution**	**ATAR contribution**	**Structured Workplace Learning (SWL)**	**Curriculum**	**Delivery**
		SBAT will receive 1–4 units towards VCE. All other Certificate II qualifications and above provide 1 VCE unit for each 90 hours of completed units of competency. VCAL students receive 1 credit for each 90 hours of completed units of competency – students with 450 units receive a maximum of 5 VCAL credits.	awarded through credit recognition for students undertaking standalone VET in schools, this may in turn be recognised as a contribution to the student's ATAR (as a 10%, 5th or 6th study addition). This application process is separate to enrolment in an SBAT.	• at least 6 hours of training to be undertaken during the regular school week; and • at least 7 hours of employment, averaged over 3 periods of 4 months in each year of the program.	Centre and signed by the school representative.	industries which are less resource intensive. TAFEs provide a broad range of VCE VET and VET courses to students.
QLD	**VET**	In the new Queensland Certificate of Education (QCE), VET courses gain credit toward QCE results, if they meet all other QCE requirements. Certificates in the core category of learning (II, III, IV) may obtain QCE credit at increments of 25%, 50%, 75% and completion.	In 2020, the ATAR will be introduced in Qld and the achievement of a VET Certificate III or above will contribute to the calculation of a student's ATAR.	Workplace learning is strongly recommended, but is not a mandatory component of VET studies.	VET quality performance indicators are used as below: 1. Learner engagement 2. Employer satisfaction 3. Competency completion.	Approximately 77% of VET is through schools which are also RTOs while 23% of VET is through non-school RTOs. Approximately 340 Queensland schools are RTOs.
	SBATs	Students undertaking an SBAT may have their on-the-job training recognised for the QCE.	A small number of QCE subjects with embedded VET contribute to the calculation of an OP (overall position – the Qld equivalent of an ATAR). These are relevant mainly to SBATs in hospitality, tourism and IT.	Students enter a training contract with employer. Employers provide a minimum 375 hours (50 days) of paid employment for each 12 months from the date of commencement of the SBAT. In the electrotechnology industry, the minimum is 600 hours (80 days). Over each three-month period, the student must work an average of 7.5 hours per week (min).	Students continue to attend school as usual, however, some of their paid employment and/or training will become part of their school timetable. SBAT students have a Training Plan which outlines training needs, how and when the training will take place, who will provide the training, and how the training will be assessed.	Queensland continues to recognise the difference between a traineeship and an apprenticeship. The latter leads to trade qualification.
SA	**VET**	VET qualifications can contribute towards South Australian Certificate of Education (SACE)	"Recognised studies" may contribute to the ATAR. For completed VET qualifications to	Work placement is encouraged as an	Curriculum aims to:	The large majority of the VET undertaken by school students is delivered by public and

Measures		Strong Pathways and Recognition		Industry Skills	Quality Courses	
	Program	**SSCE contribution**	**ATAR contribution**	**Structured Workplace Learning (SWL)**	**Curriculum**	**Delivery**
		completion. Certificates I and II are usually equivalent to Stage 1 subjects. Certificate III and above are equal to Stage 2 subjects. VET qualifications are categorised as recognised studies if they are Certificate III or higher and recognised in SACE Stage 2 for at least 10 credits.	count as Recognised Studies, they must be: Certificate III level (or higher) in the AQF or recognised in the SACE at Stage 2 for at least 10 credits.	opportunity to reinforce the learning. A work placement is not mandated.	1. Develop skills for the workforce 2. Develop an understanding of the workplace 3. Get training in industry specific skills.	private RTOs (or third-party arrangements). In the main, schools are not RTOs. The SACE Board of SA has compiled a VET Recognition Register which schools refer to when selecting a provider.
	SBAT	Students earn 5 SACE credits for the successful completion of 35 hours of VET, and 10 credits for 70 hours. These are awarded at Stages 1 or 2, according to the VET Recognition Register. Up to 180 points of the 200 required for SACE can be completed in VET.		SBATs are required to work a minimum of eight hours a week, which may be averaged over a 26 week period, twice a year. Apprentices and trainees receive the industry award rate for time spent in the workplace.	All accredited VET is recognised by the SACE Board, and can be completed as an SBAT. The employer, student and parent/guardian are all signatories to the Contract of Training with the chosen RTO and the Australian Apprenticeship Centre nominated on the contract.	
TAS	**VET**	It can provide credit points towards attainment of the Tasmanian Certificate of Education (TCE).	TCE VET courses cannot be scaled like other courses to produce an ATAR score. Notional scores are assigned and used to determine an equivalent entrance rank which is capped at 65. Some recognition for Certificate III courses.	Generally between 120 and 240 hours per year long course. Students must not be paid or given any in-kind remuneration unless the student is already under a contract of employment with the employer.	Certificate I and II programs mostly.	TasTAFE is Tasmania's largest public sector provider of VET; some non-government schools are RTOs. VET courses are delivered by RTOs or third-party arrangements.
	SBAT	Can contribute to achievement of the TCE.		The paid employment component to be completed is a minimum of 7.5 hours per week and maximum of 15 hours per week during school terms. The total hours worked under an SBAT	SBATs are usually enrolled in the relevant trade course, generally at Certificate III level, from the beginning of their apprenticeship.	The student must undertake a minimum total of 600 hours and no more than 800 hours annually of combined off-the-job education and training.

Measures		Strong Pathways and Recognition		Industry Skills	Quality Courses	
	Program	**SSCE contribution**	**ATAR contribution**	**Structured Workplace Learning (SWL)**	**Curriculum**	**Delivery**
				in a year must be between 390 min and 900 max.		
WA	**VET**	Western Australian Certificate of Education (WACE) eligibility requires students to complete a Certificate II qualification.	Unlike most other states, senior secondary education students in WA cannot use their VET studies to contribute to the calculation of an ATAR.	For each VET industry specific course, full qualifications are 'packaged' with mandated time in industry related SWL. Evidence for recording SWL includes Logbook and Skills Journal. One unit equivalent for each 55 hours completed in workplace to max. of four units (220 hours).	The VET industry specific courses have explicit requirements for student achievement in the associated course units.	Schools rely heavily on partnership arrangements with RTOs for information on content, delivery requirements of VET program. VET delivery is typically by third-party arrangement with an RTO. School teachers deliver 70% of VET.
	SBAT	SBATs contribute to WACE through unit equivalence of AQF level for VET qualifications completed, based on hours of units of competency completed and learning endorsed program units based on employment hours in training contract. School Curriculum and Standards Authority (SCSA) endorses additional SWL in areas not covered by courses eligible for VET credit transfer.	SBAT WACE contributions are awarded as credit transfer. These will not contribute to an ATAR, as the ATAR requires students to complete end of year exams for Stage 2 or Stage 3 courses.	SBAT students spend one or two days a week completing training at the workplace, TAFE or private training provider.	SBATs are usually enrolled in the relevant trade course, generally at Certificate III level, from the beginning of their apprenticeship.	The classroom learning component of a traineeship or apprenticeship may be delivered by a private RTO or by TAFE. TAFE delivers the majority of the VET units for SBATs.

2.1.2 How do these programs compare?

2.1.2.1 Strong pathways and recognition

Most VET programs offered in Australia to secondary school students contribute towards SSCE completion, although each jurisdiction differs significantly in the level of recognition of VET in their senior certificates. All states and territories except Western Australia provide some recognition of VET in the calculation of the ATAR. NSW and Victoria provide the most significant and direct contribution by measuring student performance in approved VET courses by conducting assessment on the content of the course, derived from the appropriate units of competence. NSW does this for the 13 Industry Curriculum Frameworks and Victoria does it for 23 approved Victorian Certificate of Education VET courses. In NSW, one such VET course can contribute directly to the ATAR, and in Victoria two such courses can. In Queensland, from 2020, completion of an approved Certificate III in VET will count towards the ATAR. South Australia has a similar process now. The Australian Capital Territory embeds VET units of competencies in five ATAR-eligible Year 11 and 12 courses. Tasmania recognises completion of Certificate III for inclusion in the ATAR. Western Australia does not count VET at all although some universities will consider VET achievement, particularly Certificate III, for non-ATAR selection.

The most obvious strength in the NSW and Victorian approaches is that it rewards achievement in the approved VET course directly by providing a score. In Victoria, this is through a combination of RTO and school-based scored assessment and external examination. In NSW, this is achieved through an administration of an external paper-based examination of students' knowledge and understanding. Other jurisdictions provide some recognition via a proxy score which is not related to actual achievement in the course and is restricted generally to completed Certificate III courses, which most VET students do not achieve. The NSW approach recognises the value of the learning in the VET course in its own right. By controlling the number and range of industry areas, NESA can maintain appropriate quality assurance. Counting results towards the ATAR enhances the value of these courses for students who may wish to go to university but are able to include an applied learning course with work placement which has its own value beyond simply being a pathway to higher level VET. This directly supports the multiple purposes of VET. Many students do not have a clear idea about their pathways post-HSC when they begin and providing a direct contribution to the ATAR makes these practical, hands-on courses attractive to a higher proportion of the cohort. This strengthens the role of VET in the overall offering without requiring all students who undertake VET to use these arrangements.

2.1.2.2 Industry skills

Industry skills are typically developed through structured workplace learning in industry. School students value industry-based experiences which give them real experience of the workplace. However, in most jurisdictions, work placement is not mandated. Only NSW and Western Australia mandate structured workplace learning, while other jurisdictions strongly recommend it. In Victoria, most students enrolled in VET and Victorian Certificate of Applied Learning and who are at least 15 years old participate in structured workplace learning but it is not mandatory.

The number of hours expected or recommended for each student to be 'on the job' varies across jurisdictions. Our review suggests the policy goal should be on ensuring in-depth workplace learning and broadening participation. It is important to not only specify a required number of on-the-job training hours but also ensure they take place in a real workplace rather than within the school. It is also important that structured workplace learning is spread across the duration of the training program rather than in short blocks during school holidays. The effectiveness of industry training

therefore depends on time spent in a 'real' workplace, regular and continuous participation in workplace training, and the quality of learning.

The NSW requirement that all VET include a compulsory structured workplace learning component is a strength which adds to the value of the course in providing experiential learning related to the industry area. NESA provides detailed advice on how to maximise the value of the workplace learning. The biggest constraints in this area are the logistics for the school in helping students to find willing and suitable workplaces, timetabling and scheduling, particularly for any workplace assessment, and ensuring that the experience is genuinely work-based rather than observational. Taking advantage of any part-time work that a student is undertaking (including through SBATs) is an effective strategy but most of these opportunities will be in restricted industry areas. The extent of workplace learning required by Training Packages varies considerably. Some do not require any at all at Certificate II or III level, so the NSW requirement could be seen to be adding value to this means of delivery.

It may be possible for school–industry partnerships to be strengthened at an organisational level to help enhance the delivery of this component. For example, the School Industry Partnership operating in Western Sydney and other work placement providers appear to offer a strong model of matching schools and employers to provide the authentic work placement required for the Industry Curriculum Frameworks. Similarly, Training Services NSW has a network of regionally based officers for Regional Industry Education Partnerships who are working to support these placements. Delivering effective workplace learning is difficult for schools to manage by themselves but it is highly valued and is an important strength of the NSW approach compared to other jurisdictions.

2.1.2.3 Curriculum and delivery

VET curriculum comes from nationally endorsed industry-developed Training Packages. It was a basic aim for the introduction of VET in the early 1990s to replace the plethora of school system designed 'vocational' courses and credentials. As a whole, the school versions lacked credibility with all key stakeholders – they had few industry related references or standards, they were delivered almost entirely by and within schools, they earned no credit in the training or higher education systems and were seen as watered-down versions of the general curriculum.

Adopting the content, standards, quality assurance and qualifications of the VET system itself was seen to be the best way of providing authentic vocational education and training in the broader senses of those words and stronger pathways into further training and employment. This is still true, but it has been constrained by a number of factors including changes in the labour market, problems with the quality and coherence of the VET product at the pre-entry and entry level, suspicion from non-school stakeholders about the capacity of the school system to genuinely deliver according to industry standards, community perceptions about the value of VET in a time of rapid expansion, promotion of university provision and lack of policy clarity about the potential multiple purposes of VET.

It is arguable that the relatively narrow occupational focus of Training Packages at the lower levels predominantly used in VET limits their value and attractiveness for students wishing to establish a pathway but not necessarily committed at age 16 to a particular industry or occupation. All students need enhanced literacy and numeracy together with ICT capabilities and broader competencies for the workforce in all industry areas. Incorporating general capabilities while retaining an applied learning and workplace focus would strengthen the value of VET for many students, including those undertaking a general program which may take them to university and those more likely to enter training or employment with an embedded training component.

About 80 per cent of VET in NSW schools is delivered by four school cluster-based RTOs, with the remainder generally delivered in partnership with TAFE NSW or a local private provider. The centralised approach to registration, which involves a tender and procurement process that establishes a panel of approved providers, provides some assurance that registration standards are being met and maintained. An ongoing reputational issue for VET nationally has been that the name of 'VET in schools' has somehow implied that the delivery of VET has been in the hands of school teachers who lack the requisite industry qualifications and experience. This continues to be a risk for the third-party and embedded approaches still used in some circumstances, even though they must meet the normal requirements of registration.

Under third-party arrangements, predominant in Western Australia and South Australia, school teachers deliver VET in close collaboration with external providers. Such an arrangement is favoured by schools because it gives them control over timetabling and the learning environment. Third-party provision is also cheaper, usually costing only a few hundred dollars per student (Education and Health Standing Committee 2017). However, the challenges of such arrangements include finding appropriately qualified staff to deliver training and assessment services, meaning schools need to employ and train the appropriate teachers to deliver VET to satisfy third-party requirements. It creates greater risks of quality assurance and non-compliance than other modes of delivery (Office of the Auditor General (OAG) 2016). In NSW, the Department of Education has RTO status on behalf of schools which gives some of the advantages of the flexibility of third-party arrangements but ensures that schools take significant responsibility for quality assurance and assessment.

The transformation of work as explained in detail in Appendix B raises questions about the purpose and nature of all forms of education including VET. There is an ongoing debate about the extent to which education should develop broader skills, knowledge and attributes, as opposed to narrow occupationally-specific skills (e.g. Muller & Young 2019; Young & Muller 2014). Others argue for a continued emphasis on skills (e.g. Lamb et al. 2017) including 21st century skills or employability skills.

Wheelahan (2015a, 2015b) argues that, given the changing labour market, a narrow focus on specific workplace tasks or job roles can limit the value of VET qualifications. She proposes that qualifications should be designed to develop 'adaptive capacity', which describes the capacities people need to respond effectively in conditions of uncertainty. This includes skills, knowledge and attributes required for work in related occupations. The importance of preparing young people for employment in occupational groups rather than for specific occupations was also raised in a report prepared for the Foundation for Young Australians (AlphaBeta 2016). VET needs to deliver strong generic competencies and knowledge, as well as occupationally specific skills.

2.2 Conclusion

In Australia, approximately a quarter of secondary school students leave school before finishing Year 12 and without any formal qualifications. Of those who stay to complete their SSCE, large numbers of students will undertake some VET studies in school, although these vocational programs will generally not constitute a complete Certificate and tend to be at lower levels (e.g. Certificate I or II) (Clarke 2014). Half of all high school graduates will enter a university degree, with a further quarter enrolling in a post-secondary vocational program (including apprenticeships and traineeships). Higher level VET can play a critical role for these people, especially young adults with low socio-economic status. VET can offer a pathway into skilled work or lead into higher education. Leahy et al.'s (2016) study confirms an SSCE is not sufficient for sustainable employment. There is some evidence that lower level VET can provide a stepping stone for those wishing to enter

apprenticeships (Brown et al. 2012), but it has weaker outcomes for early school leavers, suggesting that the foundational nature of Certificate I and II programs may be inappropriate for Year 12 completers. Apprenticeships and higher-level qualifications at Certificate IV or above provide stronger pathways into secure employment. This all suggests the need for effective subject and careers advice, as selecting a post-school vocational pathway (field, qualification, provider type, funding) is a complex process requiring a good understanding of the education system.

It also suggests the quality of the VET product at Certificate I to III in Training Packages is limiting the ways in which VET could be building the foundational literacy, numeracy and digital knowledge and understanding that students will need in the labour market. Reforms to these products as proposed by Wheelahan (2015a) for example are vital. The school system has traditionally had very little impact on debates in the VET sector on these matters, despite the large numbers of senior secondary students who are its clients.

The Industry Curriculum Frameworks provide a valuable component of general education for many students whose primary aspiration is to enter university. They provide a different learning experience and a link to the workplace. For those students not going to university, apart from apprenticeships, there is no clear narrative about the purpose of different combinations of HSC subjects and VET courses. This is a longstanding challenge for senior secondary education. Identifying some overarching program groupings, which might be in broad industry categories and spelling out the set of knowledge, skills and capabilities that will be required in those areas, might be helpful in designing more coherent programs of study. It might prompt some curriculum thinking in reviewing HSC courses which are not ATAR eligible and some creative packaging of VET offerings. At the same time, reform of the lower AQF level qualifications in Training Packages should remain a priority.

CHAPTER 3 WHO PARTICIPATES IN VET PROGRAMS AND WHY?

Summary

The number of VET students in Australian schools has increased from 60,000 in 1996 to over 230,000 students in 2018 (NCVER 2019). However, there has been no growth in participation since 2013. This chapter examines participation and outcomes in these programs, by the main demographic factors known to affect educational outcomes – gender, Indigeneity, location, school sector and achievement.

Gender: In Australia, males are more likely than females to participate in VET and the gap has grown slightly over the period 2006 to 2015, caused by greater declines for female students (Misko et al. 2017). However, female enrolments as a share of all enrolments are higher in NSW than in other states. Currently, the proportions of VET and non-VET students are approximately equal. (Centre for Education Statistics and Evaluation 2019).

Socio-economic status: The socio-economic status of VET students in NSW tends to be lower than that of non-VET students (Centre for Education Statistics and Evaluation 2019), as is the case elsewhere in Australia and internationally.

The proportion of VET students with Indigenous status in NSW schools was similar to the proportion at the national level (approximately 6.0%), with Indigenous students more likely than non-Indigenous students to participate.

Location: Students in provincial, remote and very remote areas are more likely to enrol in VET than students in metropolitan areas.

Level: Across Australian schools, most VET students in 2018 were enrolled in programs at Certificate levels II and III, with the majority in Certificate II (NCVER 2019). In NSW in 2018, 67.5 per cent were enrolled in Certificate II, 30.1 per cent in Certificate III, 2.3 per cent in Certificate I, and only 15 students enrolled in Certificate IV.

SBATs form a minority (8.6%) of VET enrolments across Australia (NCVER 2019). Participation in NSW is a little below the national average, with 5 per cent of VET students in SBATs, with no differences in the rate between male and female students.

This chapter also considers the motivations of students for enrolling in VET – engagement and employment – and measures these against actual retention and transitions.

There are clear differences in the transitions from school of VET and non-VET students, with a significantly higher proportion of VET students entering post-school VET, including apprenticeships and traineeships (33.9%, compared with 12.4% for non-VET students). A higher proportion of non-VET students move into university after completing school (64.7% compared with 26.8% of VET students). For those students making a direct entry into the labour market, the occupations accessed by VET and non-VET students are remarkably similar in the short term. The two main areas of work are community and personal service jobs and sales work.

3.1 Introduction

This chapter provides a comprehensive review of the demographic characteristics of students in VET programs nationally and in NSW, including participation rates, and educational and demographic profiles of students. It considers the level and field of study of their programs, and also reports evidence on the motivations and aspirations of students participating in these programs. Where the data is available, it reports participation and outcomes in these programs by the main demographic factors known to affect educational outcomes – gender, socio-economic status, Indigeneity, location, achievement and (in Australia) school sector.

The demographic data in this section mostly refers to the NCVER data. However, NCVER defines VET in School students as those undertaking nationally recognised VET in Australia with a unique student identifier (USI), regardless of how much VET they undertake or complete. Therefore, a student undertaking a single unit of competency outside school is in the same category as students who undertake several VET courses as part of their SSCE. There are also gaps in the student demographic data, for instance, regarding the SSCE completion rate of students who have undertaken a significant amount of VET studies as part of their senior certificate, compared with those for whom VET may be a minor component, as well as the proportion of students who successfully completed the structured workplace learning component of their VET courses. In this chapter, the comparisons between VET and non-VET students may be affected because the VET category includes both students with significant proportions of VET study and those who may have undertaken a small number of units of competency toward a VET qualification.

3.2 Access and participation

3.2.1 Levels of participation in VET in NSW schools

Since the introduction of VET programs in the 1990s, there has been considerable growth in enrolments in VET programs among NSW school students, as in the rest of Australia. The number of VET students in Australian schools has increased from 60,000 in 1996 to over 230,000 students in 2018 (NCVER 2019), although the last six years show little growth. In 2018, Queensland had the largest number of participants, with 74,665, followed by Victoria with 50,725 and New South Wales with 47,895, Western Australia with 36,975, South Australia with 11,690, Tasmania with 3,400, the Australian Capital Territory with 2,815 and the Northern Territory with 2,555 students (NCVER 2019).

Since 2013, as a proportion of the Year 11/12 cohort, VET enrolments have declined nationally from 51.3 per cent to 47.2 per cent. They have declined in New South Wales (41.4% to 32.7%), Queensland (83.0% to 77.5%), South Australia (30.5% to 28.8%), Tasmania (45.3% to 31.8%), the Australian Capital Territory (49.7% to 28.4%) and marginally in Victoria (40.8% to 40.1%), and increased in Western Australia (56.6% to 68.4%) and the Northern Territory (41.8% to 61.6%) (Figure 1 below).

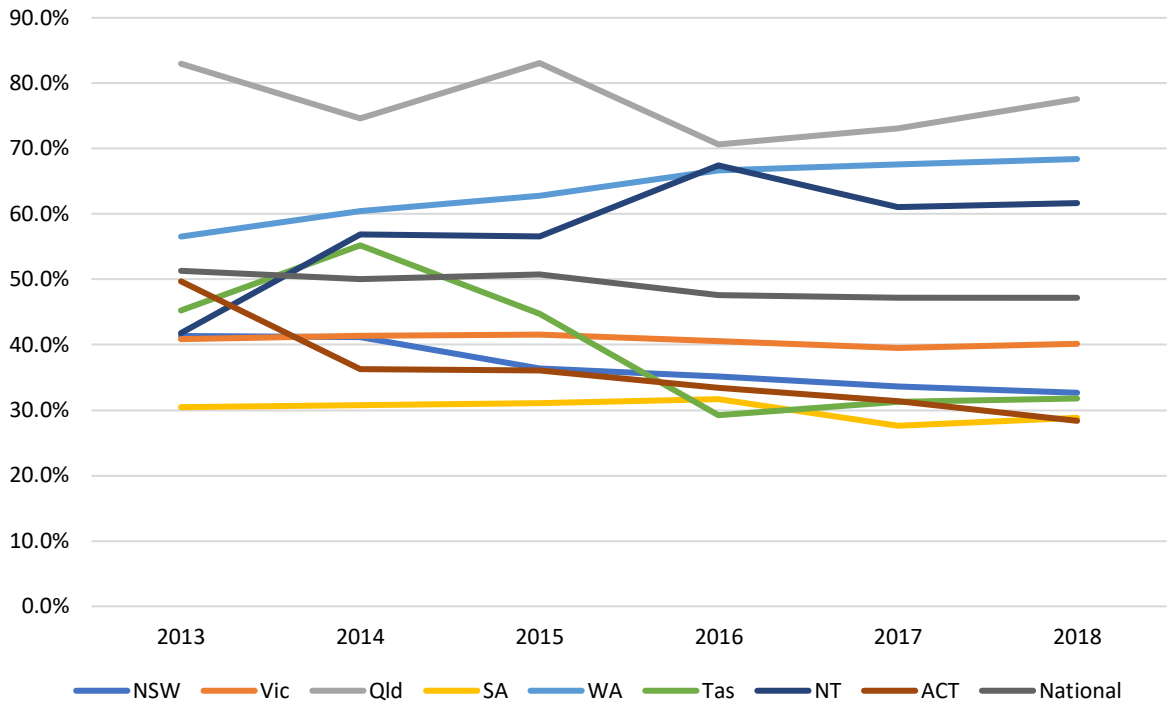

Figure 1 Proportion of VET students in Australian schools as proportion of Year 11/12 cohort 2013–2018

Sources: NCVER (2019) VET in Schools data slicer, retrieved 10 September 2019 from https://www.voced.edu.au/content/ngv%3A84263

ACARA (2019) retrieved 29 August 2019 from https://acara.edu.au/reporting/national-report-on-schooling-in-australia/national-report-on-schooling-in-australia-data-portal/student-numbers.

The following sections summarise participation by key demographic variables and are principally based on data reported in the Centre for Education Statistics and Evaluation research report on participation in VET delivered to secondary students in NSW (2019)[4].

3.2.2 Participation by gender

At the national level, Misko et al. (2017), using data from the national VET in Schools collection, present evidence that males are more likely than females to participate in VET and that the gap has grown slightly over the period 2006–2015, caused by greater declines for female students over that period. Over that period, female enrolments as a share of all enrolments have been higher in NSW than in the other states. Currently, the proportions are approximately equal, with VET students no more likely to be male than non-VET students (Centre for Education Statistics and Evaluation 2019).

3.2.3 Participation by Indigenous status

In 2017, the proportion of VET students with Indigenous status in NSW schools (6.2%) was similar to the proportion at the national level (6.0%) (NCVER 2019). Focusing on NSW, students participating in

[4] The data used here is from the Centre for Education Statistics and Evaluation (2019) research report – *Investigating Vocational Education and Training programs delivered to Secondary Students: a comparative analysis* – and is included in this report with the permission of the NSW Department of Education.

VET are more than twice as likely to have an Indigenous background as those not participating in VET (Centre for Education Statistics and Evaluation 2019).

3.2.4 Participation by school sector

Student participation rates vary substantially by sector of school. In NSW, VET students are more likely than non-VET students to attend government schools, less likely to attend Catholic schools, and much less likely to attend Independent schools (Centre for Education Statistics and Evaluation 2019).

3.2.5 Participation by socio-economic status

VET is known internationally and in Australia for catering for young people from lower socio-economic status backgrounds (Appendix B). For VET delivered to secondary students, the situation is similar and there is considerable evidence in the Australian context that the socio-economic status of students affects their likelihood of enrolling in VET (e.g. Polesel 2008), with lower socio-economic status students more likely to enrol than higher socio-economic status students. The Centre for Education Statistics and Evaluation (2019) report confirms these patterns, with evidence that the mean socio-economic status and Index of Community Socio-educational Advantage (ICSEA) values of VET students tend to be lower than those of non-VET students.

3.2.6 Participation by achievement

Participation in VET must also be considered in the context of the characteristics of the VET cohort. Figure 2 and Figure 3 below report the proportions of VET and non-VET students in each of three broad bands of achievement in Reading and Numeracy for Year 9 NAPLAN – Below expectations (Band 5), Meeting minimum expectations (Band 6) and Above expectations (Bands 7, 8, 9, 10). The NSW Destinations and Expectations data shows clearly that VET school completers are more likely to occupy the lower bands of achievement. Figure 2 shows that VET school completers represent nearly eight in ten of all students not meeting the minimum expectations for Reading at Year 9 level, but only three in ten of those above expectations. Similarly, for Year 9 Numeracy (Figure 3), VET students represent seven in ten of those below expectations and three in ten of those above expectations on this measure.

Overall, this indicates that the achievement profile of VET participants is lower than that of non-VET participants.

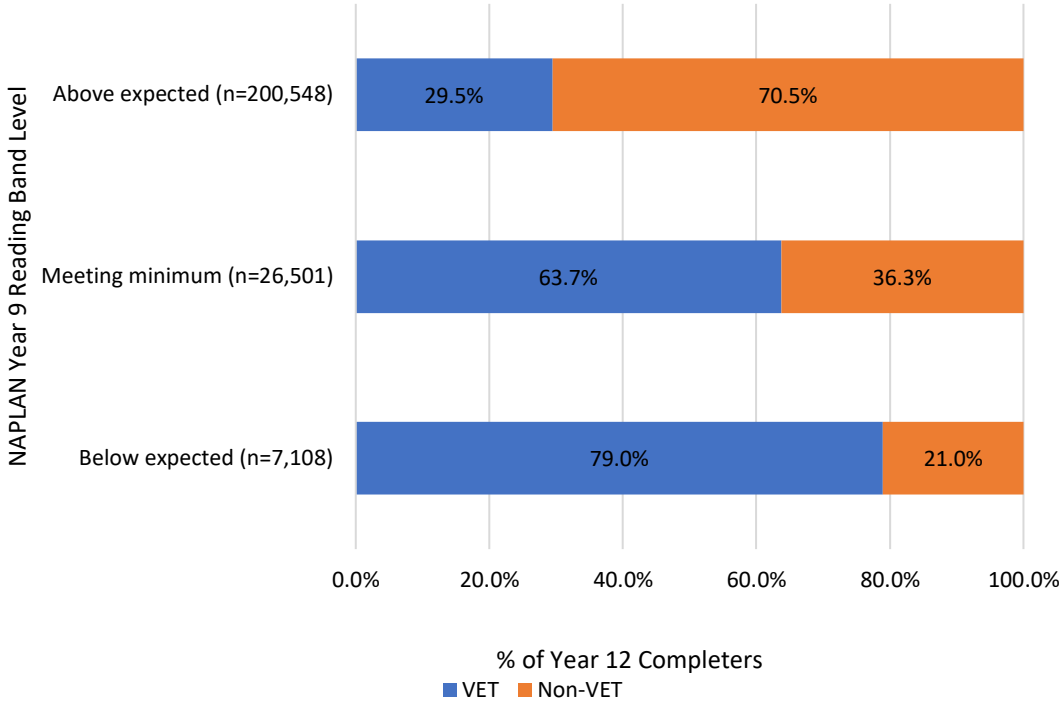

Figure 2 NAPLAN Year 9 Reading Bands of VET and non-VET school completers

Source: NSW Destinations and Expectations Survey 2014–2018.
Note: Below expectations–Band 5; Meeting minimum expectations–Band 6; Above expectations–Bands 7 to 10.

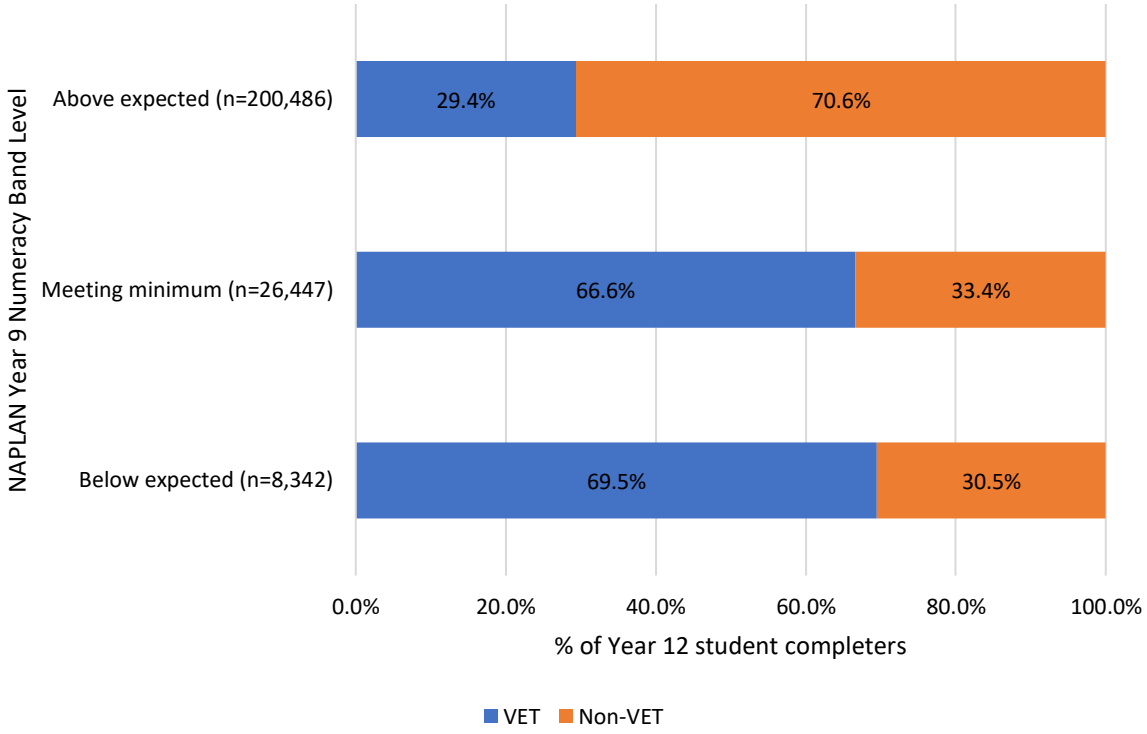

Figure 3 NAPLAN Year 9 Numeracy Bands of VET and non-VET school completers

Source: NSW Destinations and Expectations Survey 2014–2018.
Note: Below expectations–Band 5; Meeting minimum expectations–Band 6; Above expectations–Bands 7 to 10.

3.2.7 Participation by location

VET students are less likely to attend schools in metropolitan areas, and more likely to attend schools in provincial areas and remote and very remote areas (Centre for Education Statistics and Evaluation 2019: 9). This finding confirms an earlier Parliament of Australia report (Ey 2018).

3.2.8 Participation by field of studies and qualification level

In NSW, the 47,895 secondary students enrolled in VET in 2018 covered a range of fields of studies. There are over 700 qualifications offered across NSW. Courses in Food, Hospitality and Personal Services, Management and Commerce, and Engineering and Related Technologies were the most popular fields of education, with many students also in mixed field programs (NCVER 2019). Table 2 summarises subject enrolments by field of education in NSW.

Table 2 Number of VET subject enrolments in NSW in 2018 by field of education and qualification level

Field of Education	**Certificate I**	**Certificate II**	**Certificate III**	**Certificate IV**
Agriculture, environmental and related studies	85	32,095	2,020	
Architecture and building	25	45,185	3,005	0
Creative arts	25	4,655	12,890	0
Education	0	0	625	0
Engineering and related technologies	9,840	32,105	10,160	0
Food, hospitality and personal services	210	93,910	5,320	0
Health	2,005	38,895	20,765	75
Information technology	5	20	7,125	15
Management and commerce	2,895	30,015	33,915	0
Mixed field programs	5,900	88,065	20,490	10
Natural and physical sciences	1,895	8,565	350	10
Society and culture	15	13,480	11,125	0
Total	22,900	386,990	127,790	110

Source: NCVER (2019). VET in Schools Data Slicer, retrieved 10 September 2019 from https://www.voced.edu.au/content/ngv%3A84263

Note: This table reports subject enrolments, rather than student enrolments. Individual students may have more than one subject enrolment.

3.2.9 Participation by AQF level

Across Australia, most VET students in schools are enrolled in courses at AQF levels 2 and 3, with the majority in Certificate II programs (NCVER 2019). In NSW in 2018, approximately two-thirds of VET students (67.5%, n=32,325) were enrolled in Certificate II, a further 30.1 per cent (n=14,435) in Certificate III, 2.3 per cent (n=1,120) in Certificate I, and only 15 VET students enrolled in Certificate

IV (see Table 3). In NSW, the proportion of VET students undertaking Certificate III has increased from 25.4 per cent in 2014 to 30.1 per cent in 2018, while the proportion of VET students studying Certificate II has decreased from 72.0 per cent in 2014 to 67.5 per cent in 2018. The number enrolled in Certificate IV has decreased from 385 students in 2014 to 15 students in 2018 (Figure 4).

Table 3 Percentage of VET students in Australian schools 2018 by Certificate and state/territory

State	N	Certificate I	Certificate II	Certificate III	Certificate IV	Diploma and higher	Total %
NSW	47,895	2.3%	67.5%	30.1%	0.0%	0.0%	100
Vic	50,725	2.8%	49.8%	46.3%	0.7%	0.3%	100
Qld	74,655	12.5%	44.9%	35.7%	1.8%	5.1%	100
SA	11,685	9.8%	36.6%	52.5%	0.9%	0.1%	100
WA	36,975	5.8%	72.2%	18.3%	3.7%	0.0%	100
Tas	3,395	14.6%	63.5%	21.6%	0.3%	0.0%	100
NT	2,555	28.8%	40.3%	28.8%	2.0%	0.0%	100
ACT	2,815	25.6%	42.1%	32.3%	0.0%	0.0%	100

Source: NCVER (2019). VET in Schools Data Slicer, retrieved 10 September 2019 from https://www.voced.edu.au/content/ngv%3A84263

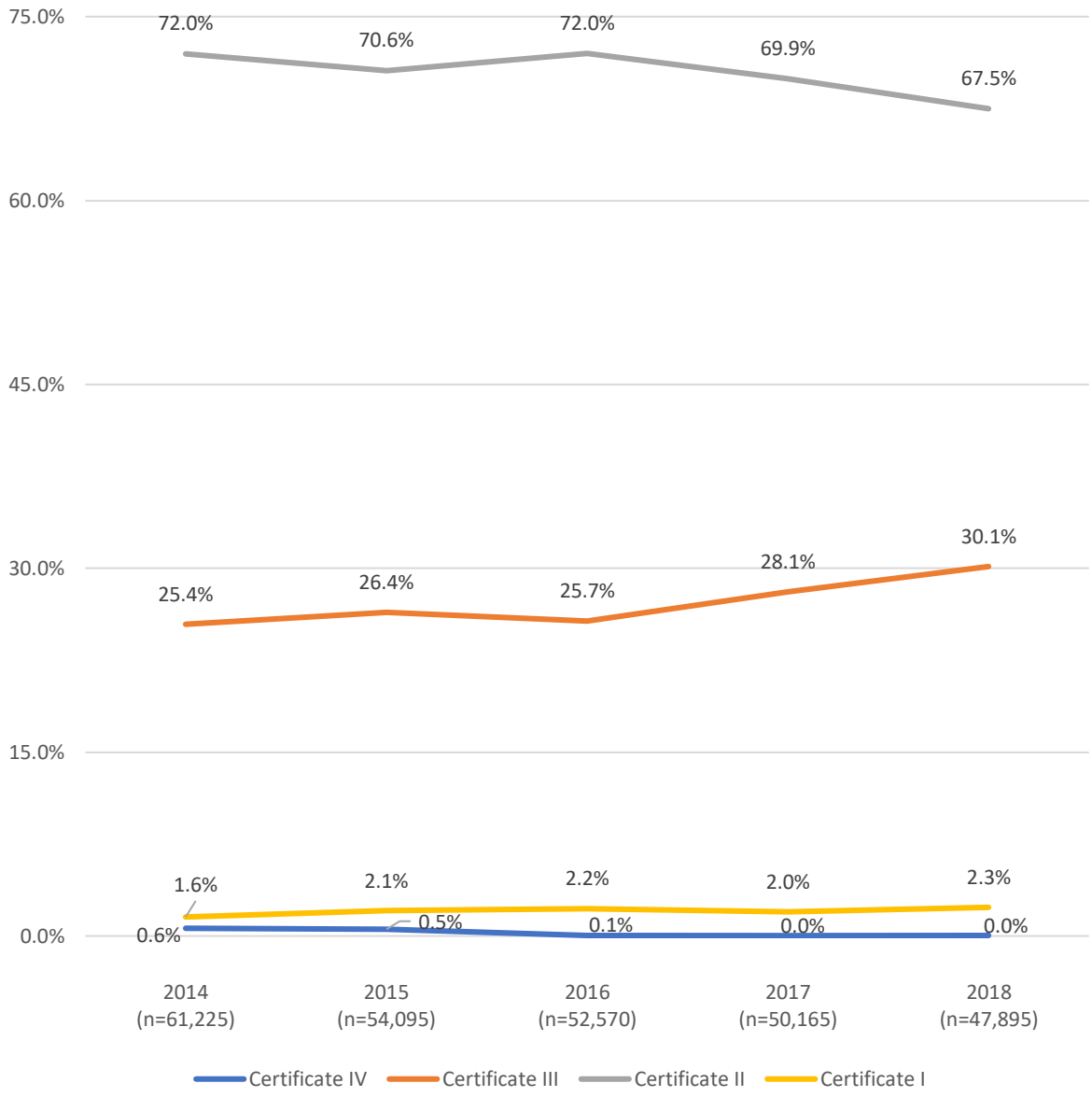

Figure 4 Percentage of VET students in NSW schools 2013–2018 by AQF level

Source: NCVER (2019). VET in Schools Data Slicer, retrieved 10 September 2019 from http://hdl.voced.edu.au/10707/519192

Note: Students enrolled in other recognised programs: n=260 in 2014, n=205 in 2015, none in 2016–2018.

3.2.10 Participation in SBATs

In 2018, SBATs formed a minority (8.6%) of VET enrolments across Australia (NCVER 2019). Participation in NSW is a little below the national average, with one in twenty (5.0%) VET students in SBATs (see Figure 5), with no differences in the rate between male students and female students.

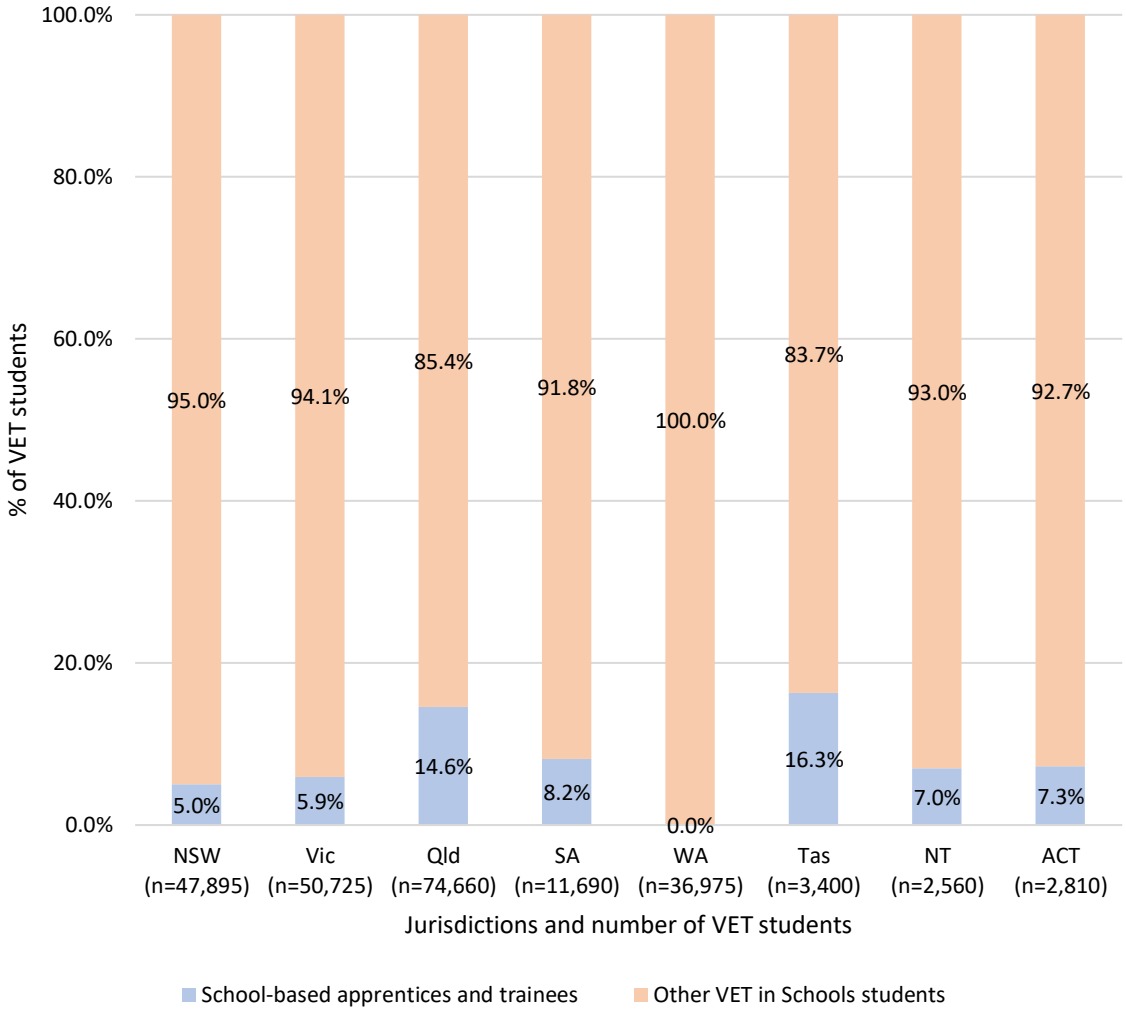

Figure 5 Percentage of students in Australia 2018 by apprenticeship and traineeship status

Source: NCVER (2019). VET in Schools Data Slicer, retrieved 10 September 2019 from https://www.voced.edu.au/content/ngv%3A84263

Note: SBATs include students who undertook at least one unit/module of competency in an SBAT.

However, this low rate may partially reflect the relatively high rate of transitions to apprenticeships and traineeships for early school leavers in NSW, compared with similar size states of Victoria and Queensland (see Table 4 below). This is further affected by the higher rate of early school leaving in NSW. The NSW rate of transition to apprenticeships and traineeships for school completers is also (marginally) higher than for school completers in the other states.

These patterns of entry into apprenticeships and traineeships suggest that some young people seeking an apprenticeship or traineeship in NSW may be doing so by leaving school before Year 12 or entering the pathway after completing Year 12, rather than entering an SBAT. It also suggests that the overall rates of young people (combining SBATs and students entering apprenticeships and traineeships after leaving school as early leavers or school completers) may not be greatly different from those in other states. Having said this, the data suggests that students in NSW schools are more reluctant to enter this pathway while still enrolled at school than their peers in neighbouring states. This is investigated further in Chapters 5 and 6.

Table 4 Rate of entry to apprenticeships and traineeships for early leavers and school completers in NSW, Victoria and Queensland 2017 (2016 school leavers, surveyed in 2017)

Exit type	NSW	Victoria	Queensland
Year 12 completers	11.1%	8.1%	8.8%
Early leavers	38.1%	31.6%	17.1%

Sources: Victorian Department of Education and Training 2017, Queensland Department of Education and Training 2017, Social Research Centre 2017.

3.3 Motivations and aspirations

This section considers the aspirations and motivations young people have for participating in VET programs at school in terms of two broad factors: 1) engagement and retention, and 2) transitions to work. It also assesses these against patterns of retention and engagement and actual transitions to the labour market. There is a relative lack of data reflecting student voice by participation in VET. However, we report VET students' views of work placement from the Work Placement Coordination Program Feedback Survey, the Quality Indicator Learner Engagement Data for the four NSW state school RTOs, and views of work expressed by school leavers in the NSW Destinations and Expectations survey.

3.3.1 Engagement, retention and certificate completion

On the contribution of vocational studies to school completion, a recent US study found that students enrolling in vocational subjects (career and technical education courses) were more likely to complete high school and more likely to graduate on time (Gottfried & Plasman 2018). In NSW, the 2013 Destinations and Expectations study (Polesel et al. 2013) reported nearly half of all VET students said that the opportunity to do a VET course was an important reason for them staying at school, and nearly seven in ten indicated they would have liked to study VET subjects in Year 10. The vast majority of teachers (92.6%) also agreed that VET engaged students who might otherwise have left school early, with 40.5 per cent strongly agreeing. These positive perspectives on VET were largely reflected in the views of parents. However, the evidence for links between VET programs and retention is not straightforward. Anlezark et al. (2006), in one of the few studies investigating the impact of VET on retention, found in a national Australian study only a small positive effect on retention from Year 10 to Year 11, but a negative impact from Year 11 to Year 12. Overall, VET had a small negative impact on Year 10 to Year 12 student retention (Anlezark et al. 2006).

Within the states, it is difficult to find evidence that VET has impacted positively or negatively on retention. The need to increase retention was clearly central to the reforms in NSW from the 1989 Carrick Review onwards. However, growth in retention (in NSW and across Australia) from 1985 to the early 1990s seems largely driven by a sharp recession in the early 1980s and rising youth unemployment (Figure 6). Following this, retention in NSW seems to show little effect that might be attributed to VET. Retention in NSW has risen significantly since 2008, but this does not coincide with any VET-related reforms. A NSW government law to raise the school leaving age from 15 to 17 years in 2010 may have had a positive impact. Since 2010, the retention rate has increased by 8 percentage points, resulting in a current rate close to 80 per cent. It is unclear why retention in NSW has been historically so much lower than in its most similar neighbours in Queensland and Victoria (see Figure 7), and whether this might be linked to the requirements of the senior certificate. However, we also note the relatively higher rates of transition from school to apprenticeships and

traineeships in NSW, both for early leavers and school completers, suggesting the operation of a specific "pull factor" in NSW that may be related to job opportunities.

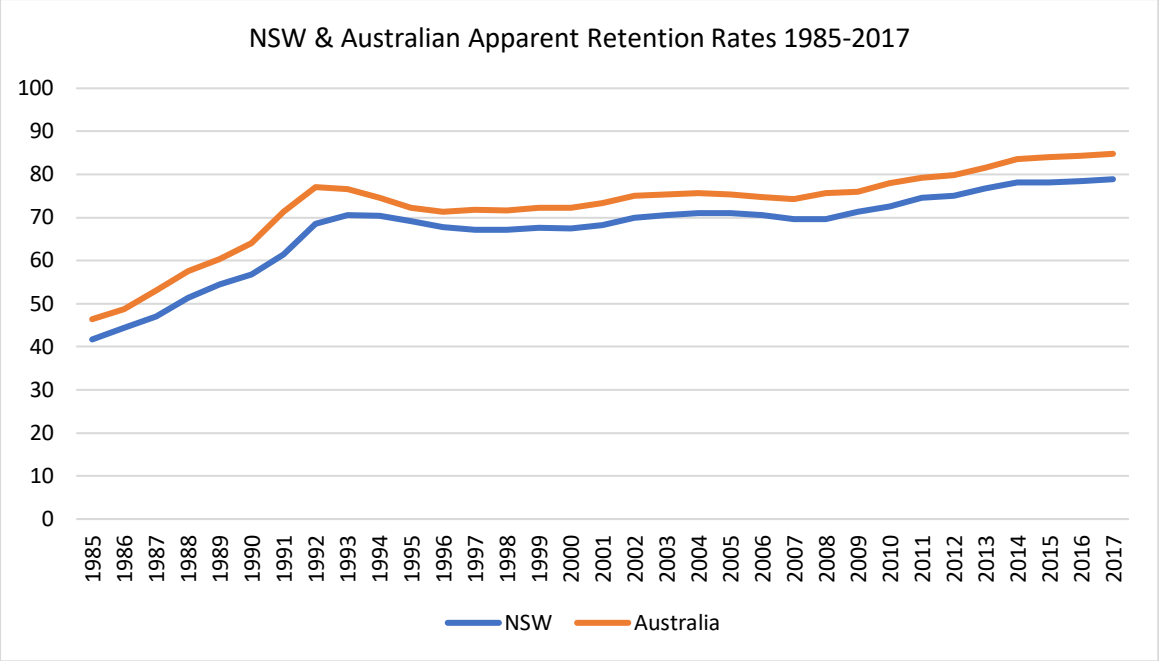

Figure 6 NSW and Australian Apparent Retention Rates (Year 7-12) (ABS 2017)

Source: Australian Bureau of Statistics (2017). *4221.0 Schools Australia 2017*, retrieved 2 July 2018 from: http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4221.02017?OpenDocument

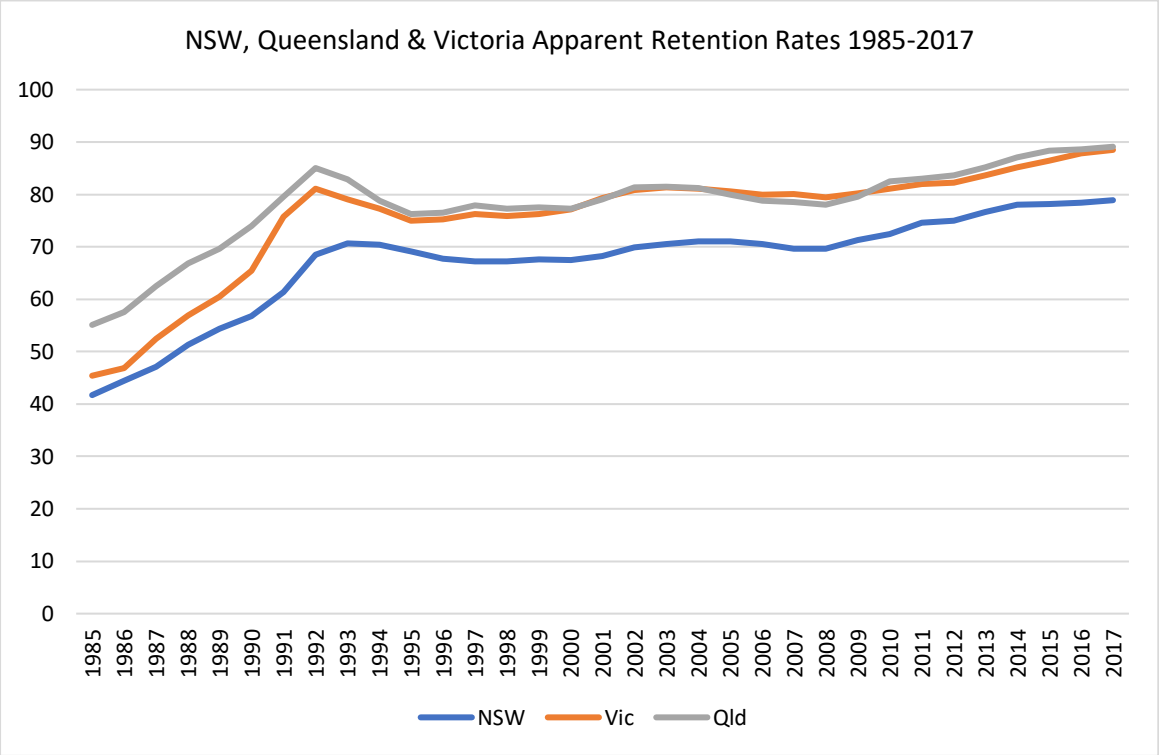

Figure 7 NSW, Queensland and Victoria Apparent Retention Rates (Year 7-12) (ABS 2017)

Source: Australian Bureau of Statistics (2017) *4221.0 Schools Australia 2017*, retrieved 2 July 2018 from: http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4221.02017?OpenDocument

3.3.2 Achieving the HSC

The nature and structure of VET courses are also heavily influenced by the structure of the SSCEs and their delivery. In NSW, nine RTOs cover delivery of VET in schools in the Catholic system on a regional basis, four cover schools in the state system (two in Sydney and two in regional NSW) and one covers independent schools across the state. VET in NSW is dual accredited, meaning that Year 9–12 students undertaking VET can receive recognition towards their school qualification (RoSA or HSC). Some VET courses include an HSC examination that enables students to have the HSC examination score included in their ATAR.

This suggests that recognition of VET achievement is considered within the framework of a certificate designed principally to measure achievement for university entry and which includes VET courses that are delivered and assessed within a framework designed for school-aged students. The school attendance requirements, dress and behaviour requirements, modes of delivery in short subject blocks scheduled between 8.30am and 3.30pm, assessment and reporting practices, school facilities and resources, teacher attributes and skills, and pedagogical practices are predominantly aligned to the teaching and learning associated with the general (academic) curriculum (the education logic outlined in Appendix B). In these respects, the NSW HSC is similar to senior certificates across Australia.

For this reason, we consider another means of assessing the impact of senior secondary schooling. This measure reports the proportions of the entire cohort achieving their Year 12 certificate and achieving an ATAR, and was used by Ramsay and Rowan (2017) in a report prepared in response to the recent Australian Council for Educational Research review of the Tasmanian secondary education system (Masters, Moyle, Rothman, Hollingsworth, Perrett, Weldon, Perkins, Brown, Radloff, Freeman & Damianidis, 2016). The advantage of this measure is that it does not depend upon or assume school completion. It shows that 70 per cent of the total commencing NSW cohort (including early leavers) received the senior certificate (placing it below the national average of 75 per cent) and 59 per cent of the cohort received an ATAR (among the higher rates reported and above the national average). This discrepancy can be explained by relatively low rates of school completion and low rates of certificate completion in NSW, compared with other jurisdictions, counter-balanced by comparatively higher rates of ATAR attainment amongst those who do stay at school and do complete the HSC (see Table 5 below).

The contrast between NSW and Victoria is striking, given the states' similarities. While both generate similar proportions of their cohorts receiving an ATAR (59% in NSW and 61% in Victoria), the proportions receiving a senior certificate vary widely (70% in NSW and 87% in Victoria). This suggests the role played by the HSC is more closely aligned, though not limited, to the generation of the ATAR, while the Victorian Certificate of Education and Victorian Certificate of Applied Learning play a broader role, providing more opportunities for both ATAR and non-ATAR options.

Although this measure includes all NSW students (not just VET), it once again points to the constrained role the HSC can play in engagement, given it recognises the achievement of just seven in ten students in each cohort commencing secondary school. It suggests that the HSC is effective in generating ATARs, but that its coverage of the cohort is more limited than that of the equivalent certificates in comparable jurisdictions with more flexible approaches to VET.

Table 5 Comparative retention, certification and ATAR rates

	NSW	Vic	QLD	WA	SA	Tas	NT	ACT	Aus
Apparent Retention Rate (2015)	78.2%	86.4%	88.4%	82.8%	95.7%	71.7%	53.7%	96.6%	84%
Year 12 Certificate as % of Year 12 cohort (2015)*	70%	87%	76%	71%	70%	51%	42%	98%	75%
ATARs as % of Year 12 cohort (2015)**	59%	61%	42%	39%	57%	33%	28%	60%	53%

*Students gaining a SSCE as a proportion of the total estimated Year 12 cohort.

**Students gaining an ATAR as a proportion of the total estimated Year 12 cohort.

Sources: Apparent Retention Rates: Australian Bureau of Statistics (2015).

Year 12 Certificate and ATAR:

- Australian Council for Educational Research (2016). *Review of Years 9 to 12 Tasmania.* (Figure 14 Number of Students Who Received a Year 12 Certificate or ATAR by State and Territory, 2015)
- Ramsay, E. and Rowan, M. (2017). *Years 9-12 Education in Tasmania: A Response to the ACER Review.* Table 3: Year 12 certificates and ATARs as a percentage of the Year 12 cohort. *Notes: Year 12 cohort calculated as one fifth of 15-19 year olds, in accordance with COAG protocol. Population data from http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3101.0Jun 2015?OpenDocument*

3.3.3 The contribution of workplace learning to engagement

A study of VET in a Swedish upper secondary school (Ferm et al. 2018) found that VET comprising workplace learning contributes to the formation of students' vocational identities as industrial workers, with students taking responsibility for their own learning, seeking deeper knowledge, searching for role models and actively developing behaviours and learning strategies to adapt to the norms and ideals of the workplace. A United States study (Hoffman 2015) found that the workplace provided an environment in which young people could be taken out of their comfort zones and challenged in authentic settings. A recent Dutch study (Baartman et al. 2018) confirmed that students recognise the importance of the vocational knowledge they learn in school while they are in the workplace and vice versa, allowing them to contextualise knowledge learned in both settings.

These positive outcomes are also evident in the literature on school-aged students in Australia. Anlezark et al. (2006) argued that school-based VET courses with workplace learning prepare young people better for the entry to work. A recent Australian study (Torii 2018) found that placement in industry opened students to the possibility of a range of new and emerging occupations, strengthened their engagement with learning, and developed capabilities including entrepreneurial skills, digital skills, problem-solving and collaborative abilities (see also Mulraney & Turner 2001). Another Australian study (Gemici & Curtis 2012) found that participation in VET with workplace learning in Year 11 is associated with an increase in Year 12 completion and an increase in full-time engagement in education or employment one year after the Year 12 completion age. A Group Training Australia (2014) study of the experiences of school students in work placements also found positive student views. The experiences included SBATs, mentoring and structured workplace training. The positive engagement effects for VET are clearly linked to workplace learning.

These positive effects are also evident in the NSW context of mandatory work placements. Our analysis of the Work Placement Coordination Program Feedback Survey (data combined across the years 2016–2019) found overwhelmingly positive views by students on the four surveyed items relating to work placement. The first two items below relate broadly to the quality of the placement,

while the second two items relate to the role of the Work Placement Service Provider, with students' views uniformly positive on all items. The four items are reported in Table 6 below.

Table 6 Students' views of work placement

	Strongly Disagree	Disagree	Agree	Strongly Agree	Total
The work placement met my needs and expectations	5.4%	7.8%	40.1%	46.6%	100%
Overall, I would recommend this experience to others	7.2%	6.8%	33.7%	52.3%	100%
My WPSP provided me with good information	3.8%	5.9%	46.4%	43.8%	100%
My WPSP arranged the work placement in sufficient time	2.8%	2.6%	45.9%	48.7%	100%

N=719 students. WPSP = Work Placement Service Provider.
Source: Work Placement Coordination Program Feedback Survey (data combined for 2016–2019), data supplied by NSW DoE.

The Work Placement Coordination Program Feedback Survey data, which provides an employer perspective on the NSW work placement program, shows that employers' views, like those of the students reported above, are also overwhelmingly positive about the program. Nearly 100 per cent of the 312 surveyed employers were positive about all four reported aspects of work placement (Table 7).

Table 7 Host employers' views of work placement

	Strongly Disagree	Disagree	Agree	Strongly Agree	Total
The work placement met my needs and expectations	0.0%	1.3%	64.1%	34.6%	100%
Overall, I would recommend this experience to others	0.0%	0.6%	63.1%	36.2%	100%
My WPSP provided me with good information	0.3%	0.3%	67.6%	31.7%	100%
My WPSP arranged the work placement in sufficient time	0.3%	1.0%	63.1%	35.6%	100%

N=312 host employers (data combined across 2016–2019). WPSP = Work Placement Service Provider.
Source: Work Placement Coordination Program Feedback Survey (2016–2019), data supplied by NSW DoE.

Respondents interviewed in the fieldwork for our study confirmed the challenges schools faced in engaging the full range of students and the role that work placement could play in engagement (Appendix C). While one respondent questioned the aim of keeping students in school ("Is raising the school leaving age a good thing?"), most agreed that school provided young people with a resource

for advice, learning and connection, which could be difficult to replicate once they left. These respondents saw access to VET as a means to "maintain enrolment, engagement, allow them to get success… and engage with meaningful curriculum". The most positive views of VET, however, related to SBATs. One principal argued that the types of students requiring re-engagement through VET also required "micro-management" and that schools were the best place to do this, to the extent that school-delivered VET was preferable to VET in TAFE or other adult providers.

However, there was also some questioning of these engagement aims. One department respondent stated that VET "started as retention and engagement and its roots are there, but it now caters for a much broader range of students". Another department respondent suggested that while VET might play a useful role in re-engagement, its conceptualisation as a tool for re-engagement risked framing it in deficit terms, rather than "an opportunity to develop skills and have opportunities, whether it is to go to university to be an engineer or to do an apprenticeship to be a chef". A regional respondent made the same point, arguing that VET programs are seen primarily in terms of engagement rather than VET – "VET is often looked at as a dumping ground".

This element was also discussed at length during our focus group with TAFE providers. The respondents questioned the emphasis placed by schools on VET as a tool for "engagement not pathways". They suggested that there was policy ambivalence on the "ultimate objective" of the program, with schools facing problems with engagement and retention, and seeing VET as a simple solution. This made it difficult for TAFE to respond, to make choices between structuring their training as "engagement or pathways – knowing which of these it is". The issue is that the students are managed across two sectors, with TAFE struggling to meet the conflicting demands of schools, where in the past students would have left school with the clear aim of completing a vocational qualification in an adult sector setting.

The Quality Indicator data (see Table 8) also presents evidence of strong student engagement with all aspects of their VET programs, from skills development to assessment, from quality of teaching to quality of facilities and from equipment to pedagogical approaches and expectations.

Table 8 Quality Indicator Learner Engagement data for the four NSW state school RTOs

Statement	Strongly Disagree	Disagree	Agree	Strongly Agree	*N*
I developed the knowledge expected from this training	1.9%	2.3%	61.4%	34.3%	*2943*
I developed the skills expected from this training	1.6%	2.9%	62.6%	32.9%	*2918*
The training had a good mix of theory and practice	2.7%	8.5%	55.8%	33.0%	*2895*
Overall, I am satisfied with the training	2.1%	4.1%	59.4%	34.4%	*2929*
I would recommend the training organisation to others	2.2%	5.1%	54.6%	38.1%	*2910*
Training organisation staff respected my background and needs	2.1%	2.5%	49.5%	45.9%	*2950*
Trainers had an excellent knowledge of the subject content	2.5%	2.8%	46.3%	48.5%	*2947*
I received useful feedback on my assessments	2.2%	7.2%	58.0%	32.6%	*2913*
The way I was assessed was a fair test of my skills and knowledge	1.8%	2.9%	60.0%	35.3%	*2922*
I learned to work with people	1.9%	3.6%	54.8%	39.7%	*2933*
Assessments were based on realistic activities	2.0%	4.7%	60.0%	33.3%	*2912*
Training facilities and materials were in good condition	2.5%	3.8%	61.0%	32.7%	*2929*
Trainers explained things clearly	2.4%	4.1%	51.7%	41.8%	*2956*
The training organisation had a range of services to support learners	2.3%	6.0%	61.4%	30.2%	*2910*
I learned to plan and manage my work	2.0%	6.4%	62.6%	29.0%	*2914*
The training used up-to-date equipment, facilities and materials	2.5%	4.8%	61.0%	31.6%	*2929*
I approached trainers if I needed help	2.1%	4.4%	56.7%	36.8%	*2971*
Trainers made the subject as interesting as possible	3.2%	6.8%	53.8%	36.2%	*2929*
Trainers encouraged learners to ask questions	2.3%	3.8%	55.9%	38.0%	*2947*
Trainers made it clear right from the start what they expected from me	2.1%	3.7%	54.9%	39.3%	*2942*

Source: Quality Indicator Reporting Data (Learner Engagement) from 4 RTOs (2018). Data supplied by NSW DoE.

3.3.4 Transitions to work

The national Education Council framework for VET (2014) refers to the need to ensure that VET is consistent with current changes in schools and workplaces. With revolutions in technology and global competitive markets, low skilled, entry-level jobs are slowly diminishing, and employers are demanding more high skilled workers who are digitally literate (Education Council 2014). Young people need to equip themselves with the most recent knowledge and skills and be responsive and flexible to rapid changes in industry. Clarke (2012) has suggested that VET should focus on providing students with a clear pathway to post-school vocational training (including apprenticeships) rather than giving direction to students to enter the workforce straight after secondary school completion. This is because the lower AQF level of the VET qualifications, often incomplete and at or below Certificate III, offered in schools does not necessarily provide preparation for entry to skilled work.

Most recently, the Skillsroad (2018) survey of 30,000 young people (aged 15–24) in Australia found that only half the respondents believed they received quality careers advice or had a meaningful conversation about careers throughout their schooling. Just under half reported that they felt pushed or encouraged to pursue an unsuitable pathway. A recent NSW study argues that effective career guidance at school should assist youth in the transition from education to employment, particularly for disadvantaged students (Bowen & Kidd 2017). This study found that the quality of career guidance provided in NSW schools varies considerably depending on the needs of the schools and the principals' decisions, and students often perceive career guidance as not useful (Bowen & Kidd 2017). Once young people have left school, they do not have access to free independent careers advice (Leahy et al. 2016).

The 2013 NSW Destinations and Expectations Study report suggested that students overall were positive about the impact of their school course on their future careers, but with marginally lower satisfaction expressed among the VET group (Polesel et al. 2013). A helpful perspective was also provided by a school principal consulted in our fieldwork who suggested that some VET could play a role in developing work readiness and pre-employment skills, especially where a full qualification might restrict the student's future employment because school leavers would have to be paid more – "it's important to get the level of the qualification right".

A recent NCVER study found the main reasons given by NSW students for choosing VET were an interest in particular jobs and their benefits, experiences related to a job, a desire to help others and perceptions of their own suitability for that job (Gore et al. 2017). However, the study found some misalignment between students' understanding of pathways and actual jobs and some confusion about VET offerings. This aligns with some of the findings of the 2013 Destinations and Expectations study (Polesel et al. 2013) which found that, while VET students were less likely to aspire to a professional occupation than other Year 12 completers, this was still the most common expected destination for VET students. VET students were also more likely to expect to be in a technical or trade occupation than other Year 12 completers.

In an NCVER report Ryan (2011) argues that completing a VET certificate at school in Australia does not contribute to higher earnings or job quality for early school leavers, while a recent study on VET suggests that schools need to align the vocational curriculum with labour market opportunities (Clarke 2014). A study conducted by Service Skills Australia (2010) found a poor alignment between VET studied at school and the requirements to enter the workforce or to undertake further studies, although the international research cited in Appendix B highlights difficulties in aligning VET courses with specific, real-time skills demand. This difficulty is also apparent in any attempt to match the fine detail reported in skills shortages lists from the federal Department of Employment, Skills, Small and Family Business with the broader training areas in the Industry Curriculum Framework areas.

School leaver tracking data for NSW, combined for the last five available years and weighted to reflect population parameters (see Figure 8), presents further evidence that participation in VET is not necessarily associated with a more effective transition to the labour market. However, the academic profile of VET students is very different from that of their non-VET peers and this has an impact on their transitions. To begin, higher proportions of non-VET students enter university, as might be expected (64.7%, compared with 26.8% of VET students). Partly compensating for the lower proportions entering university, post-school VET destinations (including apprenticeships and traineeships) are significantly higher for the VET participants (33.9%, compared with 12.4% for the non-VET students). Overall, 60.6 per cent of the VET students were in education or training, compared with 77.1 per cent of the non-VET students. This resulted in approximately four in ten of the VET participants making a direct entry to the labour market without further education and training, compared with a little over two in ten of the non-VET participants. The VET students were distributed among full-time work (11.7%), part-time work (16.7%), unemployment (8.3%) and not in the labour force, education or training (2.7%).

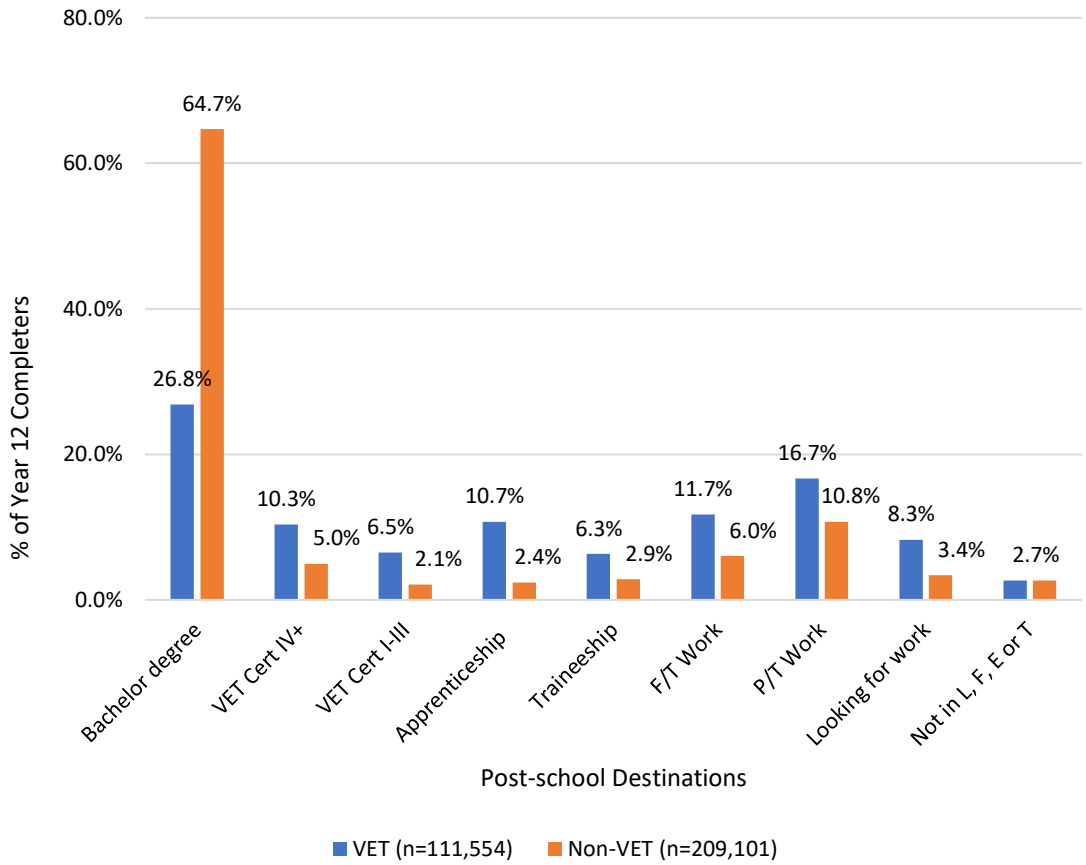

Figure 8 Year 12 completer destinations in NSW by VET status, 2014–2018 combined
Source: NSW Destinations and Expectations Survey 2014–2018, provided by NSW DoE.

The category of full-time work represents a full-time load of 35 hours or greater but may be made up of multiple jobs, similarly for part-time work. In any case, the proportions of school leavers in full-time work are consistently lower than those in part-time work, and the labour market for young people is predominantly composed of part-time, low skilled and low paid work, with many young people reporting under-employment (working fewer hours than they wished) as well as unemployment (Polesel et al. 2017). In this context, a transition to full-time work, while clearly preferable to unemployment or under-employment, cannot necessarily be considered a strong outcome. Transition into any of the labour market categories (also including the small proportion not in the labour force, education or training) is not optimal for most, unless it involves further education or training. This is mainly because of the nature of the jobs accessed (Figure 8). However, a more detailed analysis of hours worked, focusing on school completers entering the labour market (excluding students, apprentices and trainees), shows some positive effect for VET graduates, who are more likely to be working 36 hours or more per week (full-time equivalent) and less likely to be working 1–10 hours per week, compared with non-VET graduates (Table 9).

Table 9 Hours worked by VET and non-VET school completers, NSW, 2014–2018 combined

Hours worked per week	VET	Non-VET
1–10 hours	14.0%	28.7%**
11–20 hours	26.3%	36.6%**
21–35 hours	23.4%*	18.6%
36 hours+	36.3%**	16.1%

Significant at X2 (3, N=212,924) = 15337.11, p < .001
*Significant at p <.01, **Significant at p <.001
Authors' analysis of NSW Destinations and Expectations Survey 2014–2018 data.

For the occupations entered by Year 12 completers in NSW, the differences between the two groups are not strong (Figure 9). For both groups, the two main areas are community and personal service jobs and sales work. Non-VET students are somewhat more likely to classify themselves as professionals, but this might be questioned as professional occupations usually require a university qualification. As the literature indicates, these outcomes are a reflection of the nature of the youth labour market, which comprises mainly low skilled and low paid work. Participation in VET does not seem to impact greatly on this.

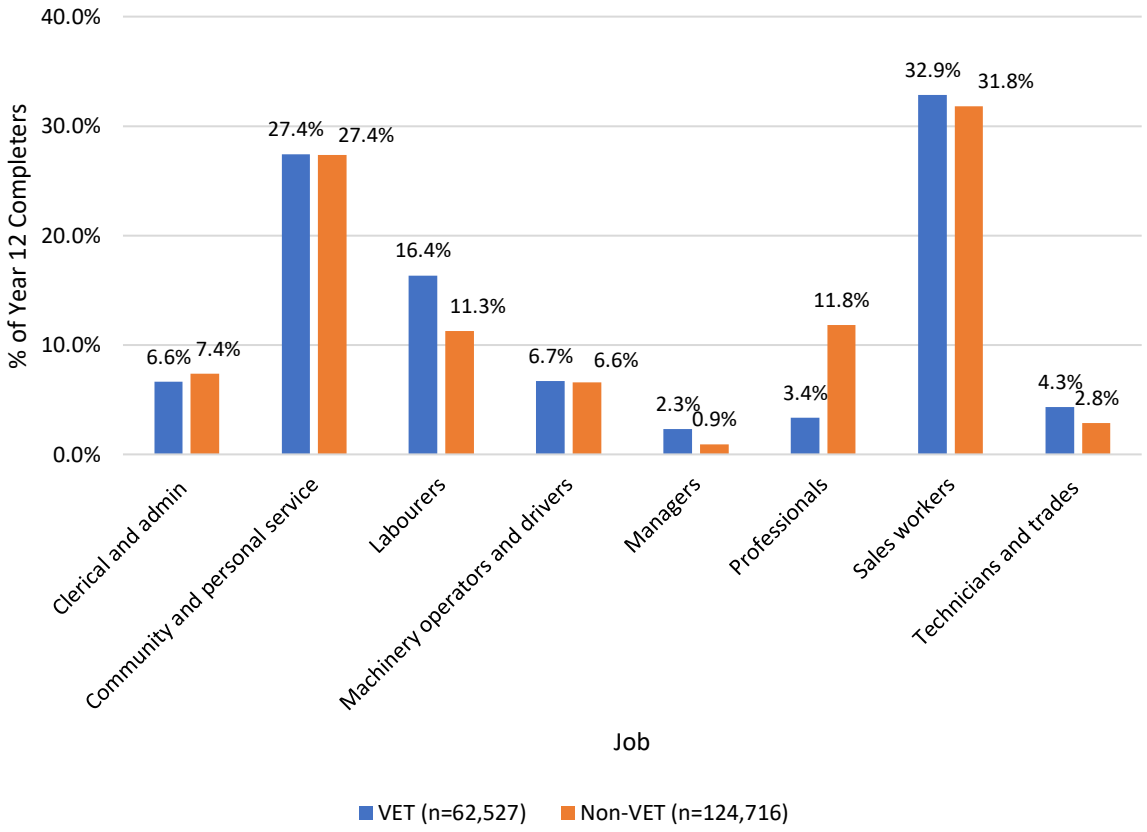

Figure 9 Occupations of VET and non-VET Year 12 completers, NSW, 2014–2018
Source: NSW Destinations and Expectations Survey 2014–2018. Note: missing cases and "other" excluded.

Finally, we consider the perceptions of VET and non-VET school leavers regarding their jobs, again focusing only on those who have made a direct entry to the labour market. While the differences between the two groups are not large, there is a statistically significant difference indicating VET students are more likely to give their job the highest approval rating ("I like my job a lot") (Table 10).

To summarise, these patterns indicate that VET students are more likely to make a direct entry into the labour market, with all that it entails in terms of the negatives of part-time, casual, low paid and low skilled work (as well as unemployment). This is partially offset by higher levels of transition into vocational education, including apprenticeships and traineeships. Within this labour market, the types of jobs accessed by VET and non-VET graduates are very similar. However, there is evidence to suggest that the VET graduates are more likely to be working full-time equivalent and may be more positive about their jobs than the non-VET school completers. These patterns, including destinations of school completers and their labour market outcomes and relative differences between VET and non-VET students, are not unique to NSW, but are reflected in data reported annually in Queensland and Victoria (e.g. Queensland Department of Education and Training 2017; Victorian Department of Education and Training 2017).

Table 10 Views of job by VET and non-VET school completers, NSW, 2014–2018 combined

I like my job…….	**VET**	**Non-VET**
Not at all	2.2%	2.0%
Not very much	6.3%	7.4%**
Somewhat	33.5%	39.1%**
A lot	58.1%**	51.5%

Significant at X2 (3, N=217,574) = 939.81, p < .001

**Significant at p <.001

Authors' analysis of NSW Destinations and Expectations Survey, weighted to reflect population parameters.

The stakeholders' views on entering the labour market directly from school varied considerably. Some said that while a direct entry was not ideal, it would always remain a reality for some students and that VET should therefore better prepare them for this transition. However, one regional respondent saw danger in the "get a job type stuff, as it tends to go to the less aspirational pathway of default". Another was concerned by the pressure from large employer groups and business chambers arguing for work-ready young people. The respondent argued this was a narrow view and that VET should not be about a single pathway, but rather "developing the whole person, supporting them as productive persons in Australian society, not employees for a particular task". The same respondent argued that VET should be teaching transferable skills across a range of occupations, an aim that should also include post-school VET.

3.4 Transitions from VET to same field of education

Estimates of the extent to which VET fields of study translate into further study in the same field of education in post-school VET were supplied by the DoE. The data, based on longitudinal data sets matched from multiple sources, suggests the figure is in the range of 50–55 per cent overall and that it increases with the VET qualification level studied at school (Table 11). However, most VET students in NSW (nearly 7 in 10) are studying at Certificate II level.

Table 11 Estimates of transition from VET to same field of study in post-school VET

VET level at school	Transition to post-school VET
VET Certificate I	~45%
VET Certificate II	~50%
VET Certificate III	~70%

Note: Most NSW VET students study at Certificate II level.
Source: DoE analysis. The study reports a positive correlation at the higher Certificate levels but does not specify details of significance or strength of the correlation.

This is, perhaps, unsurprising as undertaking a higher level of VET study at school is likely to indicate a clearer and earlier pathway decision. Certificate III level courses tend to have stronger employment outcomes and so may provide clearer pathways in the same field. Student demographics and social background influence VET enrolment. Another consideration is whether transition within the same field of study should be considered an indicator of success (Anlezark et al. 2006: 6). VET courses offered to secondary students provide a clear vocational pathway for some students, particularly for males studying in the areas of building and engineering. However, for most students the pathway is not so direct. Further, when comparing students of similar ages, there are different types of vocational education and training studied in and outside the school environment. For most students, there is a poor alignment between the types of VET programs studied at school and the requirements of the world of work or further study. The study (Anlezark et al. 2006) suggests that females, for example, use VET as a 'taster' or for immediate employment outcomes rather than for longer term post-school VET pathways: "many students are using school VET programs to eliminate what they do not want to do post-school, rather than to direct them into post-school VET pathways" (Anlezark et al. 2006: 8). Karmel and Mlotkowski (2008) found the link between training and destination occupations for the majority of courses is weak.

3.5 Conclusions

This chapter presented an overview of VET participation by secondary students in Australia and NSW. In summary, it shows that VET participation was approximately 230,000 students in 2018, but the last six years have shown no growth and, as a proportion of the senior secondary cohort, there is a decline nationally and in NSW. In terms of VET participation characteristics:

- Across Australia, males are more likely than females to participate in VET, but female enrolments as a share of all enrolments are higher in NSW than in other states.
- The mean socio-economic status of VET students in NSW tends to be lower than that of non-VET students, similar to elsewhere in Australia and internationally.
- Students in provincial, remote and very remote areas are also more likely to enrol in VET than students in metropolitan areas.
- Across Australia, most VET students in 2018 were enrolled in programs at Certificate levels II and III, with the majority in Certificate II, as is the case in NSW.
- Across Australia, SBATs form a minority of VET enrolments, with participation in NSW below the national average.

VET programs are designed to achieve two broad aims: 1) increase engagement and improve retention, and 2) provide transitions to employment. These aims largely reflect the aspirations and motivations young people have for participating in VET programs. Finally, there are clear differences in the transitions from school of VET and non-VET students, with higher proportions of non-VET students entering university and higher proportions of VET students entering post-school VET.

CHAPTER 4 WHAT ARE USEFUL MEASURES OF VET PROGRAM EFFECTIVENESS?

Summary

The literature review identified three major areas of focus when reviewing the effectiveness of VET undertaken by secondary school students: access and participation, industry relevance and quality.

For each of these focus areas, best practice indicators were established by drawing on the literature on VET for secondary students.

For Access and participation, the best practice indicators are:

1.1 That there is seamless integration of nationally recognised VET qualifications into the SSCE so that they make a meaningful contribution to the SSCE.
1.2 That there are no barriers to post-school pathways of the student's choice.
1.3 That VET is attractive to a broader range of senior secondary students.

For Industry relevance, the best practice indicators are:

2.1 That VET meets the needs of the labour market.
2.2 That there is a strong element of structured workplace learning.
2.3 That there are strong links between schools, VET providers, employers and any other key stakeholders at the local level.

For Quality, the best practice indicator is:

3.1 That all senior secondary students have access to quality VET courses.

This chapter assesses each of these indicators on the basis of inputs, processes, outputs, outcomes and impacts, which are summarised for each indicator. This assessment then forms the basis of the SWOT (strengths, weaknesses, opportunities and threats) analysis in the following chapter.

4.1 Introduction

The literature review identified three major areas of focus when reviewing the effectiveness of VET undertaken by secondary school students:

a. Access and participation
b. Industry relevance
c. Quality.

For each of these focus areas, best practice indicators were established by drawing on the literature on VET delivered to secondary students. VET courses have distinct characteristics that distinguish them from those focused on vocational learning. VET refers to nationally recognised qualifications (full or partial) under the AQF, whereas vocational learning refers to learning about work, including the range of occupations and industries, how to apply for jobs and how to behave in a workplace. Vocational learning helps students make better-informed career decisions and develops their capacity to function effectively in work. Some aspects of vocational learning have been identified when they contribute to the best practice indicators.

The best practice indicators (Table 12) have been selected to capture this uniqueness of VET that leads to nationally recognised qualifications under the AQF (e.g. see Education Council 2014).

Table 12 Best practice indicators

Focus	Best practice indicators
1. Access and participation	1.1 That there is seamless integration of nationally recognised VET qualifications into the SSCE so that they make a meaningful contribution to the SSCE 1.2 That there are no barriers to post-school pathways of the student's choice 1.3 That VET is attractive to a broader range of senior secondary students
2. Industry relevance	2.1 That VET meet the needs of the labour market 2.2 That there is a strong element of structured workplace learning 2.3 That there are strong links between schools, VET providers, employers and any other key stakeholders at the local level
3. Quality	3.1 That all senior secondary students have access to quality VET courses

4.2 Determining program effectiveness for students and employers

When reviewing the effectiveness of a program, evaluators frequently examine the five key areas outlined in Table 13 (e.g. Stufflebeam 2003).

Table 13 Evaluation foci

Focus	Definition
Inputs	The resources put into the program to enable it to occur (e.g. human, financial, physical).
Processes	The procedures and activities that underpin and constitute the program.
Outputs	Products and deliverables of the initiative (e.g. number of students participating, number and/or type of qualifications/units of competency awarded).
Outcomes	Effect of the initiative on the targeted group (e.g. changes in particular student behaviours).
Impacts	Cumulative effects of the initiative (which may not be directly observable or measurable during the implementation of the initiative but may be measurable over time following implementation).

This framework was applied to assessing the effectiveness of VET programs as follows:

a. **Inputs**: e.g. provision and access
b. **Processes**: e.g. models of delivery
c. **Outputs**: e.g. participation
d. **Outcomes**: The outcomes of VET courses can be viewed from the perspective of students and employers, which can overlap:
    a. Student outcomes: e.g. transitions

b. Employer outcomes: e.g. perceptions of benefits

e. **Impact**: e.g. quality of outcomes.

For each of the best practice indicators, the inputs, process, outputs, outcomes and potential impact measures were determined on the basis of evidence from the research literature and available data on participation and outcomes. This information is presented in Table 14 below. Ideally, other measures and indicators which might be useful could be included, but are not necessarily available. Such measures include analysis of outcomes that take account of the amount of VET included in a student's SSCE, which might range from a few units of competency to a full Certificate III or Certificate IV qualification. This data is not easily accessible in current reporting frameworks, as noted at the start of Chapter 3.

4.2.1 Access and participation indicators

Rationale

VET is delivered to secondary students in Australia in the context of the relevant SSCEs. It is crucial that this occurs in a coordinated and effective manner that provides students with the opportunity to enrol in accredited VET programs with no negative impact on their SSCE (Education Council 2014), and that it supports post-school transitions into employment and further study (McGaw 1997). There is strong evidence that effective provision of VET within the SSCE requires support at all levels – policy, school, external providers (e.g. McGaw 1997; Polesel & Clarke 2011; Joyce 2019).

Table 14 Access and participation: Indicator 1.1 – Seamless integration of nationally recognised VET qualifications into the SSCE so they make a meaningful contribution to the SSCE

PROGRAM EFFECTIVENESS MEASURES					
Input	**Processes**	**Outputs**	**Outcomes for Students**	**Outcomes for Employers**	**Impact**
Schools and students are adequately resourced to undertake VET courses as part of their senior secondary education studies. The school leadership values VET courses and the pathways they can open up for their students.	VET courses offered to school students are recognised by both the relevant school jurisdiction and national VET regulator. Schools select VET course offerings in close consultation with students, parents, neighbouring schools, RTOs and local industry. Schools provide students with the care and support required to succeed in their VET courses and their SSCE. Timetabling of VET courses are considered in close consultation with other teaching staff, other local schools, the RTO and local employers, with the students' needs of primary concern.	Proportions of VET students undertaking Board-developed and Board-endorsed courses (as proxies for ATAR and non-ATAR pathways). Percentages of SSCE graduates who have received a nationally recognised VET qualification (partial and/or full) as part of their SSCE as a function of gender, location and socio-economic status. SSCE completion rate of students who have undertaken a significant amount of VET studies as part of their SSCE (available from Boards of Studies, but not normally used in output reporting, e.g. destination studies).	VET courses have flexible timetabling and delivery modes to ensure that students can complete VET without compromising on other aspects of their schooling. The SSCE is structured in a way that allows students to complete a VET program and the SSCE. Students attain qualifications or skills that are attractive to employers and/or enable them to transition successfully to work or further study.	VET is valued, attracting a broad range of students. Students leave school understanding the broad range of occupations and industries. Employers gain access to a pool of potential new employees.	Proportion of students who consider that their VET courses studied as part of their SSCE helped them successfully complete their SSCE. Proportion of students who consider that their VET courses studied as part of their SSCE influenced their career choices.

Table 15 Access and participation: Indicator 1.2 – No barriers to post-school pathways of the student's choice

PROGRAM EFFECTIVENESS MEASURES					
Input	**Processes**	**Outputs**	**Outcomes for Students**	**Outcomes for Employers**	**Impact**
Schools have dedicated and qualified career education staff who have strong links with local industry and tertiary education providers to ensure accuracy and currency of information provided.	Schools provide current, timely, accurate and impartial information to students and parents on a broad range of career options and alternative pathways to employment of their choice. Schools provide access to taster and other career programs and activities in earlier years (Years 9 and 10) to assist with career choice. Schools work closely with local tertiary providers to establish formal alternative entry and/or credit transfer arrangements for VET courses completed by school students.	Proportion of SSCE graduates with VET qualifications (full or partial) entering full-time work and/or study (as opposed to part-time work with no study or unemployment). Proportion of SSCE graduates with a nationally recognised VET qualification (either full or partial) accepted into tertiary studies. Level of VET qualification undertaken.	Students make informed choices about subject/course selection. Students are ready for employment and/or further study as a result of undertaking VET courses as part of SSCE. Tertiary education providers recognise SSCE with significant VET component for entry into VET and higher education qualifications.	Employers prefer to employ school leavers with VET qualifications. Employers prefer to employ graduates with a mixture of academic and vocational qualifications.	Students use VET qualifications for meaningful employment and/or further study. Employers use VET qualifications and experience when recruiting school leavers. Tertiary education providers use school leavers' VET qualifications to determine entry and/or grant credit transfer/advanced standing.

Table 16 Access and participation: Indicator 1.3 – Attractive to a broader range of senior secondary students

PROGRAM EFFECTIVENESS MEASURES					
Input	**Processes**	**Outputs**	**Outcomes for Students**	**Outcomes for Employers**	**Impact**
A variety of VET course offerings that cover a wide range of industries are available to students as part of their SSCE. Achievement in VET courses can contribute toward the ATAR.	Students (middle years) and parents are provided with impartial information on occupations, qualification requirements, education and training pathways and labour market trends. Students are provided with vocational learning programs to prepare for, or help enhance, the VET component of their SSCE.	The proportion of SSCE students undertaking a *significant* amount of VET studies (i.e. more than 25% of their senior secondary education studies are VET[5]). Of the total VET offerings within the SSCE, the proportion offered that contributes toward both the SSCE and the calculation of the ATAR. Of those VET courses that contribute toward the ATAR, the extent to which students' competency-based assessments contribute toward the calculation of the ATAR (e.g. graded performance-based assessments).	Students and their parents make informed decisions about VET options within their SSCE. Students with a wider range of ability levels undertake a significant amount of VET as part of their SSCE. Students leave school with a nationally recognised VET qualification (either full or partial).	School leavers with VET qualifications (either full or partial) are better prepared to enter the workplace than their non-VET counterparts.	High achieving students pursue a career in the same industry as their VET studies undertaken at school.

[5] An estimate based on consultations with NESA staff.

4.2.2 Industry relevance indicators

Rationale

VET courses undertaken by SSCE students must meet the needs of the labour market (National Center on Education and the Economy 2018). Employers value the work experience of applicants and VET programs with strong links to work through structured workplace learning, and apprenticeships and traineeships are shown to be the most effective in achieving strong transitions to work (Education Council 2014; Hoeckel, Field & Grub 2009).

Table 17 Industry relevance: Indicator 2.1 – Meet the needs of the labour market

PROGRAM EFFECTIVENESS MEASURES					
Input	**Processes**	**Outputs**	**Outcomes for Students**	**Outcomes for Employers**	**Impact**
Schools are adequately resourced to meet and manage the demand for VET courses by students and industry, including SBATs. All students have access to industry-standard equipment and facilities. VET courses are based on current industry Training Packages and delivered by RTOs in accordance with ASQA regulatory requirements. Students are trained and supported by people with relevant and current industry experience and qualifications (Education Council 2014: 13). VET courses are delivered by RTOs that have strong partnerships with local schools, employers and WPSPs.	VET courses are selected and regularly reviewed by the school based on industry demand, national and state-based skill shortage lists, appropriateness for secondary students and capacity to provide opportunities to students to develop broader competencies, including those resilient to offshoring and automation. Students are selected into VET courses based on ability, suitability, interests and informed choices. Maintaining industry currency of teaching staff is regularly monitored and prioritised within the school/RTO.	Proportion of school leavers with VET qualifications (full or partial) entering full-time work and/or study in the same industry/cognate area as their VET studies undertaken at school.	School leavers with VET qualifications (either full or partial) are better prepared to enter the workplace and have qualifications that are valued by employers.	VET courses offered to secondary students enable students to gain competencies for an immediate employment outcome as well as broader competencies that can be transferred to other workplace settings (Victorian Department of Education and Training 2015).	VET courses offered to secondary students improve school leavers' long-term prospects and employability (Victorian Department of Education and Training 2015). School leavers see the broader relevance of what they have learnt, and the skills and capabilities acquired as a result of their VET studies completed when they were a school student. School leavers pursue a career in the same broad industry field as their VET studies undertaken at school.

Table 18 Industry relevance: Indicator 2.2 – Strong element of structured workplace learning (SWL)

PROGRAM EFFECTIVENESS MEASURES					
Input	**Processes**	**Outputs**	**Outcomes for Students**	**Outcomes for Employers**	**Impact**
Schools are adequately resourced to manage and monitor the quality of SWL undertaken by their students. Support is available to students and workplace supervisors throughout the full duration of the SWL.	SWL has clearly articulated documentation that outlines the purposes, roles and responsibilities of all parties, expected competencies to be demonstrated, volume of learning, assessment processes and procedures and record keeping requirements. Mandated SWL component in all VET courses that has been carefully designed to provide students with the opportunity to apply and enhance their occupation specific skills and knowledge learnt off the job as well as enhance their employability skills. Students are carefully and thoughtfully matched to the workplace based on the student's abilities, interests and needs and the expectations of the workplace supervisors. The allocation of SWL opportunities is coordinated to ensure that all students have access to high quality vocational learning. The quality of the student's SWL is regularly monitored by school or support agency staff with appropriate expertise and adequate resources to monitor the student's competency development, the quality of the workplace for learning, as well as the student's health, safety and well-being.	Proportion of students successfully completing the SWL component of their VET courses. Number of enterprises in formal partnerships with local schools and/or RTOs to offer SWL to students undertaking VET courses. High workplace supervisor satisfaction measures. Shortages of SWL opportunities for secondary students by local area/region.	Students have access to quality SWL (e.g. transport is not prohibitive in time and/or cost). Students complete their SWL with enhanced industry specific skills and knowledge, improved employability skills and new networks. Students have a clearer idea of the world of work and have a firmer and better informed idea about their post-school pathway.	Workplace supervisors have clear and accurate expectations of the SWL processes and outcomes for students and their own organisation. Students have applied and enhanced their occupation specific skills and knowledge learnt off-the-job to real workplace settings. Students have enhanced their employability skills in the context of the occupation and/or industry (e.g. team work, communication skills) and have begun to develop adaptive capacity. Students are employed by their SWL employer (this could be after completing Year 12 or following further study).	The host workplace supervisors assist students wanting secure paid and meaningful employment to gain employment (e.g. acting as a referee). School leavers with SWL experience are more productive in the workplace when entering the workforce than those with no SWL experience (National Center on Education and the Economy 2018).

Table 19 Industry relevance: Indicator 2.3 – Strong linkages between schools, VET and employers and other key stakeholder groups at the local level

Input	Processes	Outputs	Outcomes for Students	Outcomes for Employers	Impact
Establishment of Local Management Committees to administer and monitor VET courses undertaken by secondary students with representation of local schools, RTOs, employer associations, local councils, support agencies and regional development boards.	Local Management Committee disseminates information, provides advice on course offerings and timetabling, produces agreed guideline protocols and procedures. Effective use is made of existing sources of career information at the local, state and national levels, including those developed by government and industry bodies. Local support agencies manage SWL placements within the local area. Decision-making power within the Local Management Committee is balanced between the RTO, network of schools, local government and local employers (National Center on Education and the Economy 2018). The Local Management Committee has well-developed communications and networking channels.	Information brochures and social media/web-based sites for key stakeholder groups (e.g. parents, students and host employers). Documented policies and procedures to manage and monitor the quality of SWL. SWL supporting materials. Budget reports and forecasts for VET programs. Strategic plans. Annual reports.	Access to high quality courses and SWL opportunities that are valued by the local community, including industry.	Efficient use and allocation of scarce resources. Minimise over-burdening local host employers (for SWL). Shared goals and mutual benefits for all partners.	Stronger youth labour market outcomes and lower youth unemployment in local area/region.

4.2.3 Quality assurance indicators

Rationale

All students have a right to access to quality VET courses (Education Council 2014) that are reviewed regularly to ensure their quality and relevance (National Center on Education and the Economy 2018). Klatt et al. (2018) emphasise the importance of quality provision and partnerships and Guthrie (2010) emphasises the importance of quality programs that meet industry and regulatory standards.

Table 20 Quality: Indicator 3.1 – All senior secondary students have access to quality VET courses

PROGRAM EFFECTIVENESS MEASURES					
Input	**Processes**	**Outputs**	**Outcomes for Students**	**Outcomes for Employers**	**Impact**
Adequate funds are allocated to schools to work with partnering RTOs and employers to design, implement and review the quality assurance arrangements that underpin the delivery of VET to secondary students.	VET courses offered to secondary students are developed in collaboration between the secondary education sector, the VET sector and industry. VET course offerings and delivery arrangements are regularly reviewed by schools to provide evidence of active planning for future improvement. Schools partner with RTOs who have a strong track record of quality training and assessment, as evidenced by ASQA reports and satisfaction surveys of key stakeholder groups (i.e. students, employers). The Local Management Committee continuously monitors the quality of the training and assessment provided to students to ensure that it meets the needs of the students as well as the standards specified in the relevant industry training package.	High stakeholder satisfaction with the course delivery and competencies achieved by the students. Participation rates in VET courses by level of qualification.	VET courses offered to secondary students are underpinned by core knowledge and skills and meet the quality standards of the VET and school regulators and are nationally recognised.	School leavers with VET qualifications (full or partial) have developed industry specific skills and knowledge to the standard expected by industry.	VET delivered to school students has parity of esteem with VET delivered to other cohorts of students outside the school system undertaking the same course (i.e., no distinctions are made in terms of perceived quality by industry and/or the wider VET sector).

CHAPTER 5 WHAT ARE THE STRENGTHS AND WEAKNESSES OF CURRENT VET PROGRAMS IN NSW GOVERNMENT SCHOOLS?

Summary

1. **Access and participation** – the best practice indicators are:

   1.1 That there is seamless integration of nationally recognised VET qualifications into the SSCE so that they make a meaningful contribution to the SSCE.

   The disruptions to seamless integration can be found at the level of system design and at the level of individual institutions within the system. For example, VET is part of the HSC and can contribute to the ATAR, but RTO-based assessments do not contribute to the ATAR (only performance on a written externally developed examination contributes). Some schools do not offer VET, offer limited VET or do not support timetabling and curricular structures that facilitate VET participation.

   Consideration should be given to:
   - strengthening acceptance of VET participation that may not generate an ATAR
   - reviewing metrics to ensure schools are recognised for providing a comprehensive program, including VET
   - introducing graded competency-based assessment at the RTO level so that a combination of RTO-based assessment and externally developed written examinations can contribute toward the ATAR.

   Including RTO assessments in the calculation of the ATAR will allow a broader range of attributes to be recognised in the assessment of students. This approach is found in most other Australian SSCEs. Currently, the HSC may not adequately accommodate the broad range of students and some school leaders and parents do not value VET courses if they do not contribute to the ATAR. Metrics for schools (e.g. Distinguished Achievers) create a disincentive for schools to offer extensive VET programs.

   1.2 That there are no barriers to post-school pathways of the student's choice.

   The HSC provides strong VET offerings, supported by the department and NESA and VET provides pathways for many students from disadvantaged backgrounds. SBATs are valued by many employers and provide effective pathways to work and higher level VET studies. However, many employers misunderstand the implications of hiring VET graduates (e.g. believing they must be paid higher wages), school students tend to take lower level VET qualifications, participation in SBATs is low, and high numbers of VET and non-VET HSC graduates enter work with no further education and training. There is a need to clarify the range of purposes of VET, including the longer-term opportunities it provides, address employer misconceptions about hiring VET students, and provide better information for parents and careers advice for students during and after school. This can improve subject selection and pathways planning. VET requires significant resources to support students with timetabling, organisation of structured workplace learning and participation in programs across a range of sites (TAFE, employers, other RTOs).

Short-term and linear views of post-school pathways and current funding models (e.g. previously uncapped university places, marketisation of the VET sector) have impacted demand for post-school VET and the appeal of VET offered to school students.

1.3 That VET is attractive to a broader range of senior secondary students.

More than one in five NSW students complete some VET and NSW has the highest female participation in VET. Participation in Australia and in NSW has declined over the last six years. VET is more likely to attract disadvantaged students, which can be both a strength and a weakness. The demographics of VET students reveal the vital role the VET sector plays by providing educational and employment opportunities for young people from disadvantaged backgrounds. However, there is also the risk that VET will not be regarded as a valued option for all young people.

There is a need to improve perceptions of VET, explore alternative approaches (e.g. within the HSC as well as alternatives to the HSC), extend provision in alternative settings (e.g. trade schools), support students who do not require an ATAR in their HSC, and explain the value of VET for all students.

Currently, some industry stakeholders do not value VET and the requirements of the HSC may discourage VET participation.

2. **Industry relevance** – the best practice indicators are:

2.1 That VET meets the needs of the labour market.

VET in the HSC involves nationally recognised qualifications (full or partial). However, VET does not seem to provide an advantage to those making a direct entry to the labour market from school, qualifications are at a low level and current VET courses may not prepare young people for a changing labour market or meet specific industry needs.

Consideration should be given to increasing the level of some VET courses if appropriate for the industry sector, developing and promoting effective VET pathways to further study and work, reviewing VET to ensure it prepares young people for a changing labour market, reformulating Training Packages so they prepare students for broad vocational areas, and developing the capacity of VET teachers and workplace supervisors.

Currently, some industry areas question the value of VET delivered to secondary students, there is a difficulty reconciling immediate and longer term labour market needs, some VET teachers lack recent, relevant industry experience, and school teachers need better understanding of VET and competency-based training.

2.2 That there is a strong element of structured workplace learning.

NSW mandates structured workplace learning, strongly supported by NESA. There is a clear distinction between structured workplace learning and work experience, and WPSPs play an effective role.

However, there is a shortage of apprentices and trainees in key areas and employers may not fully understand their role in structured workplace learning and SBATs. It is still

difficult to obtain structured workplace learning in rural areas, SBATs are complex to administer, and the ATAR is seen as presenting a barrier to SBATs.

There is the potential to review funding for WPSPs to improve coverage, increase the use of part-time work for VET and SBATs, promote the viability and advantages of non-ATAR patterns of study in the HSC for SBAT and some VET students, simplify SBAT processes, and consider activities in designated centres as an alternative for students unable to find structured workplace learning places.

Currently, there is an inability or reluctance of rural VET students to travel for structured workplace learning or SBAT placements.

2.3 That there are strong links between schools, VET providers, employers and any other key stakeholders at the local level.

There are strong partnerships in some locations. WPSPs support links between schools and employers, and the recent appointment of Regional Industry Education Partnership officers is positive. However, there tend to be a more limited number and range of available partners in some areas, especially rural and regional NSW.

Industry involvement needs to grow and become more effective. There could be improved coordination between schools on a regional basis to facilitate better partnerships with VET providers and industry, and dedicated roles (e.g. in schools) to manage partnerships.

Currently, partnerships are dependent on staff who may be transient, and the potential contribution of other stakeholders such as unions has not been addressed.

3. **Quality** – the best practice indicator is:

3.1 That all senior secondary students have access to quality VET courses.

VET programs are seen as high quality and valuable by most stakeholders, and quality is enhanced by strong partnerships. However, the lower quality of some courses may affect views of employers, and leadership in some schools is not supportive of VET.

Significant reform of VET and the way it is included in the HSC may be needed to improve its impact, non-ATAR patterns of HSC studies could be better explained, promoted and celebrated to improve take-up and quality of VET and SBAT programs, and the capacity of VET teachers should be developed.

Currently, some school leaders and school cultures do not support VET and many teachers, generally, do not understand VET, some VET teachers are perceived as lacking VET expertise and experience, and Training Packages are developed by industry with limited input from educators.

5.1 Introduction

The previous chapter identified seven best practice indicators, each linked to measures focusing on inputs, processes, outputs, outcomes and impact. In this chapter, the major strengths and weaknesses of current VET programs in NSW government schools have been identified against each of these best practice indicators, focusing on outcomes for students, outcomes for employers and impact. The evidence for outcomes and impact has been drawn from the research literature, available data and the consultations conducted as part of this review. A summary of the major findings has been presented above using a SWOT analysis of Strengths, Weaknesses, Opportunities and Threats. The SWOT analysis draws on the four major sources of data collected and analysed as part of this investigation:

- data on the VET programs offered to Australian school students (Chapter 2)
- the demographics of students in VET programs offered to NSW school students, focusing on NSW (Chapter 3)
- the literature review (Appendix B)
- the consultations (Appendix C).

5.2 SWOT analysis and discussion

5.2.1. Access and participation

5.2.1.1 That there is seamless integration of nationally recognised VET qualifications into the SSCE so that they make a meaningful contribution to the SSCE

Strengths

- VET is included in the HSC (Chapter 2, Appendix B).
- VET can contribute to the ATAR (Chapter 2, Appendix B).

Weaknesses

- Assessment of students' performances in VET courses to contribute toward the ATAR is limited to their performance on externally developed and scored paper-based examinations. The exam assesses the cognitive aspects of the VET units of competency but not the practical skills (industry respondents). All non-VET courses in the HSC use a combination of school-based and external examination to contribute toward the calculation of a student's ATAR score (e.g. mathematics and English courses). This can signal that VET is not valued or considered as rigorous as academic subjects. Other jurisdictions allow for scored competency-based assessment of the student's performance on tasks designed and administered by the school or RTO to contribute toward the ATAR (e.g. Victoria) or provide credit points (e.g. Tasmania).
- Some schools do not offer VET, offer very limited VET or manifest cultural barriers (including very narrow interpretations of the HSC and its regulations) that prevent effective implementation of VET programs, mainly through timetabling and curricular inflexibility (see Appendix C) and prioritisation of ATAR programs and pathways (Polesel & Clarke 2011).

Opportunities for improvement

- Strengthen key stakeholders' (students, parents, school leaders, employers) understanding and acceptance of the value of non-ATAR patterns of study in the HSC. This issue was raised by policy makers and industry respondents, although the latter argued lack of flexibility on this issue reflected a problem in schools rather than the HSC itself.
- Celebrate and recognise non-ATAR patterns of HSC studies, an issue raised by respondents in nearly all the categories – policy makers, brokers, government, schools.
- Support the collaboration of schools, RTOs and employers to resolve practical issues such as timetabling and delivery modes to ensure students are able to take VET subjects without compromising other aspects of their schooling, an issue raised by workplace brokers, schools, policy makers and government respondents.
- Introduce graded competency-based assessment at the RTO level so that the RTO assessment can be used in combination with externally developed written examinations to calculate the ATAR, thus recognising a broader range of attributes in the assessment of students, as is the case in most other courses in senior certificates in Australia. This would also make VET subjects more consistent with other HSC subjects, with the ATAR calculated on the basis of internally and externally set assessments (Guthrie 2010), an issue also raised by school respondents.

Threats

- The HSC needs to accommodate a broad range of students, including students intending to: enter university, enter post-school VET, secure an apprenticeship or traineeship, or seek employment directly after finishing school. This tension is not new. There is a risk that the university pathway and academic courses will be given priority in many schools and by parents. This issue has been central to reforms of senior certificates in all states and territories and over a considerable period of time (e.g. Blackburn 1985; McGaw 1997) and was also raised by schools' respondents.
- School leadership and culture are critical to the successful development and implementation of VET programs within schools but some do not support VET, an issue raised by WPSPs and school and Department of Education respondents.
- The metrics of 'success', such as a focus on university entry and numbers of Distinguished Achievers, are important as they can shape the nature and extent of VET programs in schools. The metrics help determine the school leaders' priorities and can therefore affect resource allocation within a school. The metrics need to be broadly conceived so what is judged to be successful can take a variety of forms, an issue raised by respondents across nearly all categories.
- Lack of flexibility in timetabling, curriculum offerings and delivery approaches also affect the success of VET. The approaches adopted need to be student centred, while being mindful of employer needs. This issue was described in detail in an analysis of the processes used to allocate resources in a disadvantaged Australian school (Polesel & Clarke 2011), processes which discriminated against VET.

5.2.1.2 That there are no barriers to post-school pathways of the student's choice

Strengths

- The NSW HSC provides a comprehensive offering of VET for school students with about 80 per cent of VET enrolments in the 13 Industry Curriculum Frameworks and the remainder in the wide range of Board-endorsed courses (see the description of offerings in Chapter 2).
- SBATs are valued by many employers and provide effective pathways to work and higher-level VET studies, providing better linkages between offerings and areas of skills shortage, as argued by Smith and Wilson (2004) and policy maker and school respondents.
- The NSW Department of Education and NESA provide strong support to schools for implementation of VET in government schools (see Chapter 2).
    - VET can provide disadvantaged students with pathways to employment and further education.
    - Students from the most disadvantaged quintile of the Socio-Economic Index for Areas are the most likely group to enrol in VET in secondary schools (NCVER 2019) and VET plays a strong role in engagement, as shown by students' views reported in the NSW Destinations and Expectations survey (Polesel et al. 2013).
- Students in provincial areas and remote and very remote areas, in particular, are more likely to enrol in VET (Centre for Education Statistics and Evaluation 2019: 9, Chapter 3).
    - There are clear differences in the transitions from school of VET and non-VET students, which may be a strength and a weakness. Higher proportions of non-VET students enter university (64.7%) compared with 26.8 per cent of VET students, as shown in the NSW Destinations and Expectations surveys and similar tracking studies in other states.
- Post-school VET destinations, including apprenticeships and traineeships, are significantly higher for the VET participants (33.9%) compared with the non-VET students (12.4%), as shown in the NSW Destinations and Expectations survey.

Weaknesses

- Employers in some industries such as building are reluctant to employ students who have completed VET while enrolled at school (including SBATs) as apprentices because the students are perceived as lacking industry experience and need to commence as second or third year apprentices. However, it was also reported that this perception is inaccurate and based on a misunderstanding about employers' options (see Appendix C).
- Students undertaking VET in secondary schools tend to complete competencies from lower level VET qualifications, which tend to provide limited support for transitions into employment or further study. For example:
    - Across Australia, most VET students who are also secondary education students are enrolled in programs at AQF levels 2 and 3, with the majority in Certificate II courses (NCVER 2019) (Chapter 3).
    - In NSW, approximately two-thirds of these students (67.5%) were enrolled in Certificate II, a further 30.1 per cent in Certificate III, 2.3 per cent in Certificate I, and only 15 students in Certificate IV (Chapter 3).

- Participation in SBATs
    - There is a shortage of apprentices and trainees in NSW (NSW Department of Industry Skills and Regional Development 2016) and SBATs are highly valued, providing better linkages between offerings and skills shortage areas (Smith & Wilson 2004).

    - However, SBATs form a minority (8.6%) of VET enrolments across Australia (NCVER 2019) (Chapter 3).
    - Participation in NSW is below the national average, with one in twenty (5.0%) VET students in SBATs (Chapter 3).
- Approximately one-quarter of VET and non-VET students enter the labour market with no further education or training, although VET graduates have higher rates of transition to post-school VET, including apprenticeships and traineeships (Chapter 3).

Opportunities for improvement

- A major issue is to clarify the range of purposes for VET, especially for those students not aiming or wishing to go to university, for whom VET can play an engagement role, provide a pathway into post-school VET or provide industry experience.
- Employers' views of potential problems employing VET graduates and SBATs were considered inaccurate and arising from myths and misunderstandings by some of the industry respondents (see Appendix C). These could be addressed by targeted information sessions for employers.
- There is an opportunity to increase the diversity of students undertaking VET, which may help improve the status of vocational pathways (Appendix B, Chapter 3). All VET programs offered to secondary school students should provide post-school pathways that provide longer term opportunities for secure employment (Appendix B). Taster programs have a real value in informing career and study choices (Appendix C).

Threats

- VET for school students is sometimes presented as an option to support engagement and retention. It is important that these aims do not distract attention from the need for all VET programs to provide post-school pathways to employment and further study (Appendix C).
- Many studies focus on the immediate post-school transition (e.g. typical destination surveys) and not longer-term trajectories (Appendix B).
- Students need to be well-informed to make good decisions about subject choice and post-school transitions. They need access to experienced and qualified careers advisers who understand a broad range of post-school options and not just university pathways (Appendices B and C).
    - "Schools need to be confident that they are providing students and parents with comprehensive, accurate and impartial information on occupations, qualification requirements, education and training pathways and labour market trends. This confidence is increased when the information is developed in collaboration with employers and tertiary providers and is regularly updated" (Education Council 2014: 12).
    - Schools and careers teachers lack a good understanding of VET opportunities and pathways. Better and more expansive career options need to be explored with students so that they can make the best subject and career choices (Appendix C).
    - A broad range of pathways between school, VET, higher education and work is possible, but is not well understood by schools and parents. Such paths may be more 'crazy paving' than linear, but they are still rewarding.
    - Students need quality, independent advice and continuing support when they have left school, as shown in a recent NSW study of disadvantaged school leavers facing difficulties in obtaining effective, independent guidance on their post-school VET options (Leahy et al. 2016).
- Tertiary education funding models can affect the decisions young people make. The introduction of uncapped funding for higher education was one factor in reducing demand for post-school

VET and increasing demand for higher education. This has implications for the value and funding attached to VET and the demand for VET offered to school students.

5.2.1.3 That VET is attractive to a broader range of senior secondary students

Strengths

- More than one in five students in NSW complete some VET.
- Nationally, enrolment in VET tends to be higher for males. However, overall, NSW VET is successful in that it attracts a relatively high proportion of female students:
    - Over the period 2006–2015, female enrolments as a share of all enrolments have been higher in NSW than in the other states.
    - Currently, the proportions of males and females are approximately equal, with VET students no more likely to be male than non-VET students (Centre for Education Statistics and Evaluation 2019).

Weaknesses

- VET is more likely to attract the most socioeconomically disadvantaged students and less likely to attract the most advantaged:
    - There are higher participation rates in VET by students from low socio-economic status backgrounds (e.g. lowest quintile of Socio-Economic Indexes for Areas), whose parents do not have a tertiary education, who attend government schools, reside in non-metropolitan areas and have lower levels of prior academic achievement, who are Aboriginal, who are less engaged with school, less likely to intend to complete Year 12, and have lower self-perceived academic ability, as shown in the analyses of participation by student group in Chapter 3.
- After an initial period of growth, participation in VET in most of Australia, including NSW, has shown a decline over the last six years (NCVER 2019) (Chapter 3).

Opportunities for improvement

- Improve status of VET by ensuring it supports strong post-school pathways.
- A program such as the Victorian Certificate of Applied Learning might be introduced as an additional alternative to the HSC. Extending VET studies at school to three years was also raised (e.g. Year 13 trial in Victoria) by policy makers. There is also potential to increase the number of alternative settings such as trade schools (Appendix C).
- The perceived pressure placed on students to generate an ATAR may inhibit VET take up for some cohorts. Messaging on its importance and the option of non-ATAR patterns of studies in the HSC may be needed to strengthen other post-school pathways and options (Appendix C).
- A review of the HSC to improve options and flexibility may be a positive step (Appendix C).
- There may still be too great a focus on the value of VET for the disadvantaged and disengaged, rather than having value for all students. For example, VET can give all students valuable exposure to industry and development of employment-related skills (“soft skills”) (Appendix C).

Threats

- Some stakeholders, including some parents and school leaders, do not value VET. They regard it as lower in status than the more academic HSC courses.

- There is some uncertainty among stakeholders in schools and policy makers regarding the extent to which the HSC or its interpretation by school leaders places barriers in front of students wishing to focus on a VET pathway (including SBAT pathways).

5.2.2 Industry relevance

5.2.2.1 That VET meets the needs of the labour market

Strengths

- VET courses offered to secondary students as part of the HSC are based on nationally recognised qualifications and nationally endorsed industry Training Packages (full or partial) (Chapter 2).

Weaknesses

- For those students making a direct entry into the labour market, the occupations accessed by VET and non-VET students are remarkably similar. The two main areas of work are community and personal service jobs and sales work, as shown by school leaver destination surveys across Australia (e.g. Polesel et al. (2013) for a NSW example).
- As discussed in response to indicator 1.2, AQF qualifications undertaken by school students across all jurisdictions are at a relatively low level, as shown in the participation data.
- Current VET qualifications may not prepare young people for a changing labour market, a concern often raised regarding VET, including in high performing systems such as Germany.
- It is difficult to align VET courses with specific real-time industry needs.

Opportunities for improvement

- Develop and promote effective VET pathways, leading to skilled work and further study at higher levels of the AQF (Certificate IV, Diploma, Advanced Diploma) and higher education.
- Review VET to ensure it prepares young people for a changing labour market. For example, VET could focus on broader industry areas rather than specific occupations, as argued by Wheelahan (2015a, 2015b).
- Develop the capacity of VET teachers and workplace supervisors.
- Increase the level of VET completed by students in some industry areas, given the very basic qualification levels (predominantly Certificate II) offered in schools.

Threats

- Not all current VET programs provide effective pathways. This can reflect:
    - the strength and clarity of the pathway
    - the quality of VET, and/or
    - employer perceptions (see response to indicator 1.3). For example, industry respondents reported that some employers fear they will need to pay higher wages to school leavers who have done VET.
- Changes to work due to digital disruption (Appendix B):
    - Ensure the VET courses selected are not too narrow. Students will be better prepared for a changing labour market if VET qualifications prepare students for the vocational area or vocational cluster rather than a specific occupation, as argued by Wheelahan (2015a, 2015b) and Clarke (2014).

- VET can play a role in preparing school students for the changing labour market, but this requires a reconciliation between:
    - the broader needs of students
    - the immediate needs of some employers
    - the need to develop workforce capacity for the industry sector (different but also complementary needs raised by the range of respondents).
- VET teachers need both vocational currency and to be able to understand the needs of school students engaged in VET, especially those in TAFE and other RTOs. In addition, the same would apply to those workplace supervisors engaged in supporting structured workplace learning (see indicator 2.2), an issue raised by school, industry and department respondents.
- School teachers may need to understand competency-based training better, especially how it differs in terms of pedagogy and assessment, an issue raised by TAFE and Industry respondents.

5.2.2.2 That there is a strong element of structured workplace learning

Strengths

- That NSW mandates structured workplace learning in VET courses, supported by NESA guidelines. This is important, successful and highly valued because it develops:
    - specific industry and occupational skills and knowledge
    - employability skills
    - an understanding of work and the industry that can support longer-term career choices. These are among the more indirect benefits of VET, widely reported in the literature and mentioned by the respondents in this study from a range of categories but sometimes neglected in public discourse as they are not easy to measure.
- There is a clear distinction between structured workplace learning and work experience:
    - "Work experience and structured work placements are different in nature and intent. Work experience is part of vocational learning and its purpose is career exploration while structured work placements are part of VET and focus on competency acquisition and practical experience (Education Council 2014: 7).
- NESA provides detailed advice on how to maximise the value of workplace learning.
- SBATs are supported by the Industry-Based Learning HSC unit.
- WPSPs broker structured workplace learning placements and play an important and valued role in the structured workplace learning process, a view supported by virtually all the respondents, in that they:
    - support schools, businesses and students
    - ensure a good match between student and structured workplace learning placement
    - ensure structured workplace learning is high quality
    - support students to ensure they are ready for structured workplace learning.
- Students' preparation for structured workplace learning:
    - Students complete a mandatory module comprising Work Health and Safety, Personal Attributes, and Employment Related Skills and the Industry Competency to qualify for a Work Placement Ready Certificate. Areas covered are personal, professional and industry related, ensuring young people are ready for the work placement (NSW DoE 2019).
    - There is also a program for refugees and new arrivals – RAW (Ready Arrive Work) https://www.jobquest.org.au/raw-ready-arrive-work.

Weaknesses

- Employers may not fully understand the process and their obligations both in structured workplace learning and SBATs, as raised by school respondents and WPSPs.
- There are still difficulties in obtaining accessible structured workplace learning for regional and rural students, as raised by schools' respondents and WPSPs.
- SBAT programs could be expanded, but there are administrative issues and complexities associated with them, a particular concern among the school respondents.
- Attaining an ATAR as well as undertaking an SBAT has workload implications for the student and this may negatively affect a student's decision to proceed, an issue raised by respondents across a range of categories.

Opportunities for improvement

- Review the models for funding WPSPs and charging schools to ensure more effective and extensive service provision, a suggestion made by a policy maker as well as a provider.
- Better use part-time work undertaken outside of structured workplace learning in VET programs, a suggestion made by a policy maker and by employers.
- Use part-time work effectively in SBATs, also suggested by a policy maker and by employers.
- Promote the viability and advantages of non-ATAR patterns of HSC studies for SBAT and some VET students.
- Consider supervised activities and projects in designated centres as an effective alternative for students in isolated areas unable to find structured workplace learning placements, a proposal put forward by a WPSP seeking a solution to the impact of distance on participation in such activities.

Threats

- There may be an inability or reluctance for some VET students to travel to structured workplace learning or SBAT placements, particularly in rural and remote areas, as raised by rural respondents.

5.2.2.3 That there are strong links between schools, VET providers, employers and any other key stakeholders at the local level

Strengths

- Partnerships enable structured workplace learning and SBATs and can help support post-school employment (e.g. Klatt et al. 2018), an issue raised by a range of respondents.
- The links between schools and employers will be supported by the new appointment of Regional Industry Education Partnership officers, as raised by a policy maker.
- The WPSPs facilitate and support the links between schools and employers (see response to indicator 2.2).

Weaknesses

- There tend to be a more limited number and range of partner organisations in some communities, particularly those located in rural and regional NSW, an issue raised by school and policy maker respondents and also confirmed by rural WPSPs.

Opportunities for improvement

- Increase industry involvement to strengthen VET. Currently VET in Australia is industry led, with industry responsible for defining the competency standards that form the benchmarks for training and assessment in Australia for purposes of issuing nationally recognised qualifications. Education providers are then responsible for converting these competency standards into curriculum as well as providing training and assessment to students in accordance with the relevant Training Package requirements. There is potential to include input and decision making of all key players at each stage.
- Improve coordination between schools on a regional basis to facilitate better partnerships with VET providers and industry, a common finding in the research literature.
- Include dedicated VET or partnership staff roles in the partnering organisations, i.e. schools, employers, TAFEs and other RTOs. Clear roles support the sustainability of partnerships by reducing the risk of remaining dependent on individual connections. Strong sustainable links can be supported by recognising, valuing and rewarding partnership work. The continuity and focus this can provide was mentioned by respondents from both schools and WPSPs.

Threats

- There were questions about who provides the voice for industry – industry associations or local business, and whether there is a role for unions (Appendix B).
- Partnerships can depend on the relationships between key players and not be sustainable longer term (e.g. Klatt et al. 2018).
- The quality of relations and partnerships are critical. This is particularly so with local employers, but also involves the relationships with other stakeholders such as TAFE and trade unions. Bosch and Charest (2008) emphasise the importance of these partnerships.

5.2.3. Quality

5.2.3.1 That all senior secondary students have access to quality VET courses

Strengths

- VET programs are seen as high quality and valuable by most stakeholders.
- Quality is enhanced when there are strong school–employer/industry partnerships.

Weaknesses

- The lower quality of some courses may affect employers' acceptance and recognition of VET delivered to school students, an issue raised mainly by industry respondents and reflecting a perception that needs to be addressed.
- Some school leaders do not support VET, with policy makers and school respondents raising the concern that in some schools VET was either too difficult to administer or of lower value to the students.

Opportunities for improvement

- Address current and emerging challenges, including the need to prepare young people for a changing labour market, which may require significant reform of VET and its position in the HSC.
- Better explain, promote and celebrate non-ATAR patterns of HSC studies. This would strongly improve the take-up and quality of VET and SBAT programs. This was a common theme across respondents from all categories.

Threats

- Some school leaders and school culture do not support VET.
- Some teachers lack the expertise and experience to be effective VET teachers, a particular concern among TAFE and industry respondents.
- Nationally recognised VET qualifications are based on Training Packages that are developed by industry with limited input from educators (Appendix B) (see response to indicator 2.3).

CHAPTER 6 RECOMMENDATIONS TO IMPROVE VET PROGRAMS

Summary

This report finds that VET delivered to secondary students in NSW plays a role in engaging and retaining students and in preparing them for the labour market. Both of these roles are constrained in particular ways:

- The engagement and retention role is limited by the constraints placed on the delivery of VET by the difficulties integrating VET curriculum and delivery in the HSC, by how the HSC is conceptualised in schools, by school culture and by the prioritisation of academic courses and university entry pathways.
- The labour market role is constrained by limited resources and commitment to support industry linkages by the department and by a lack of engagement and poor understanding of VET delivered to secondary students by many industry partners.

Access and participation

Recommendation 1: That the NSW DoE works with other key agencies, including government departments and employer organisations, to strengthen the acceptance of undertaking the HSC with a non-ATAR eligible pattern of study among students, parents, school leaders and employers.

Recommendation 2: That the NSW DoE documents and promotes pathways that emphasise longer-term career trajectories as well as immediate post-school transitions.

Recommendation 3: That the NSW DoE works with other key agencies, including government departments and employer organisations, to develop more resources to support careers advice and pathways planning.

Recommendation 4: That the NSW DoE works in partnership with schools, employer organisations and employers to promote VET and the pathways it can create into employment and further education and training.

Recommendation 5: That the NSW DoE explores alternative models of senior secondary education, including an alternative SSCE, and expand access to alternative settings such as trade schools and technical colleges.

Recommendation 6: That the NSW DoE supports the development and sustainability of partnerships by documenting and promoting partnership models.

Recommendation 7: That the NSW DoE works with employer organisations, employers and TAFE NSW to dispel misunderstandings on employing school graduates who have completed all or part of a VET qualification, including through SBATs.

Industry relevance

Recommendation 8: That the NSW DoE, in consultation with NESA, employer groups and employers, offers a greater range of Certificate III programs to secondary school students where this better meets the needs of industry.

Recommendation 9: That the NSW DoE increases funding for WPSPs to expand the role they play in supporting employers and young people in NSW.

Recommendation 10: That the NSW DoE works with other key agencies, including government departments and employer organisations, to promote the use of part-time work in the delivery of VET and SBATs.

Recommendation 11: That the NSW DoE, in consultation with WPSPs, employer groups and employers, reviews options for providing structured workplace learning, particularly in rural and regional NSW.

Recommendation 12:	That the NSW DoE works with other key stakeholders, including representatives from government and employer organisations, to increase industry involvement across all stages of VET course development and delivery, including better incentives for industry to participate in SBATs.
Recommendation 13:	That the NSW DoE works with other key agencies, including government departments and employer organisations, to simplify administrative processes associated with SBATs to reduce the complexity of the process and time to sign up students and to boost participation.
Recommendation 14:	That the NSW DoE recognises and funds dedicated staff in schools to manage partnerships with TAFEs and other RTOs, WPSPs and employers.
Quality	
Recommendation 15:	That the NSW DoE works with other key agencies, including government departments and employer organisations, to introduce graded competency-based assessment of VET delivered to secondary students by TAFE and RTOs and introduces TAFE and RTO assessment in the calculation of the ATAR.
Recommendation 16:	That the NSW DoE broadens official and unofficial measures of school performance to minimise barriers to effective VET provision.
Recommendation 17:	That the NSW DoE continues to strengthen provision of careers advice within schools and examines models to provide independent high-quality careers advice for young people once they have left school.
Recommendation 18:	That the NSW DoE works with other key agencies, such as NESA, to develop a more nuanced definition of what constitutes a 'VET student' to improve data collection and analysis and comparisons.

6.1 Introduction

The recommendations in this chapter are based on the opportunities for improvement identified in the SWOT analysis and presented in Chapter 5. These are grouped under the three major areas of focus identified in Chapter 4:

- Access and participation
- Industry relevance
- Quality.

6.2 Recommendations

Underpinning these recommendations is a view that VET delivered to secondary students in NSW plays an important role in engaging and retaining students and in preparing them for a labour market that has a strong demand for skilled workers. These aims are interlinked and cannot and should not be separated. Both are important, and neither should be prioritised, despite the views of some stakeholders.

In NSW both of these roles are constrained in particular ways. The evidence suggests this is also the case in other Australian jurisdictions. However, the recommendations address these constraints with

a focus on the NSW system of delivery. Firstly, we argue that the engagement and retention role of VET delivered to secondary students is limited by the constraints placed on its delivery by the difficulties integrating VET curriculum and delivery in the HSC, by how the HSC is conceptualised in schools, by school culture and by the prioritisation of academic courses and university entry pathways. Secondly, we argue that the labour market role is constrained by limited resources and commitment to support industry linkages by the department and by a lack of engagement and poor understanding of VET delivered to secondary students by many industry partners. The recommendations seek to address both of these limitations.

6.2.1 Access and participation

Recommendation 1:	**That the NSW DoE works with other key agencies, including government departments and employer organisations, to strengthen the acceptance of undertaking the HSC with a non-ATAR eligible pattern of study among students, parents, school leaders and employers.**

Aim: To strengthen acceptance of non-ATAR eligible patterns of study within the HSC.

This could involve advising and encouraging most VET students to de-link the HSC and ATAR requirements. This contributes to the curriculum flexibility required to participate in SBATs, attend work placements, attend externally delivered VET programs and construct HSC subject combinations which will provide a coherent range of studies. This requires schools to provide advice and clarity that the absence of an ATAR does not cut off many university options and allows access to high level VET options – Certificate IV, Diploma and Advanced Diploma options.

There is a need to support curriculum organisation and timetable flexibility for non-ATAR eligible patterns of study in the HSC as legitimate and important components of curriculum breadth (see second strategy supporting Recommendation 3). There is also a need to promote and celebrate non-ATAR eligible patterns of study in the HSC.

Strategies to achieve this aim include:

- documenting case studies that explain non-ATAR eligible patterns of study within the HSC and the pathways they provide
- extending measures of "success" for schools beyond rates of transition to university and academic distinction, to remove disincentives and address perceptions of disincentives which discourage schools leaders from supporting VET.

Recommendation 2:	**That the NSW DoE documents and promotes pathways that emphasise longer-term career trajectories as well as immediate post-school transitions.**

Aim: To promote VET as providing longer-term opportunities.

This involves providing clear and explicit maps of industry-specific pathways that include campus-based options both in higher education and vocational education, and work-based options including apprenticeships, traineeships and cadetships.

This recommendation requires a coordinated approach at the school, regional and state level. It involves the production and dissemination of attractive advertising material, a focus on careers advice in schools and post school, and campaigns to promote excellence in VET achievement, such as award evenings, sponsors and support from high profile community figures.

Consultations with industry representatives, in particular, reported the need for all students to participate in VET and structured workplace learning to develop their personal attributes, including the ability to communicate and work with other people, to gain a better understanding of the world of work.

Strategies to achieve this aim include:

- documenting pathways that acknowledge uncertainties in emerging labour markets by focusing on:
    - preparing students for industry areas (vocational streams and clusters) rather than specific individual occupations
    - developing the capacity to navigate changing labour markets.
- documenting case studies of schools delivering effective VET courses that provide strong post-school pathways, presenting a range of models that address issues such as timetabling, VET teacher development and support, partnerships with employers, working effectively with WPSPs and Regional Industry Education Partnership officers, and promotion of VET to students and parents.

Recommendation 3:	**That the NSW DoE works with other key agencies, including government departments and employer organisations, to develop more resources to support careers advice and pathways planning.**

Aim: To provide better information for parents and careers advice for students to improve subject selection and pathways planning.

Careers advice should use the full range of resources, including employers, industry, WPSPs and VET providers. External (to the school) provision of some services should be considered. Support for young people who have left school and have no source of independent advice or services must be included in the planning.

Strategies to achieve this aim include:

- Develop a model that enables schools to supplement careers resources with regional and local information on employment options by working in a systematic way with regional and local partners. Not all young people wish to remain in their local area, so resources need to present a broad range of options.
- Ensure resources reflect the most recent analysis of emerging labour market trends and the implications for jobs and the skills, knowledge and attributes that students will require.

Recommendation 4:	**That the NSW DoE works in partnership with schools, employer organisations and employers to promote VET and the pathways it can create into employment and further education and training.**

Aim: To improve perceptions of VET and the opportunities it creates.

Celebration of VET achievements comparable to the celebration of ATAR and university entry success is essential in improving perceptions of VET. The most effective way to improve the status of VET is to demonstrate how it creates pathways to sustainable high-quality employment. This recommendation is linked to recommendations 2 and 3.

This involves providing clear and explicitly marketed pathways into SBATs, transition to higher level VET in post-school providers and transition into higher education through the full range of non-ATAR entry options. Although VET has a role in supporting retention and engagement, a primary purpose of VET is to provide pathways to employment, including pathways to employment through further study. The aim should be to promote VET as providing a valuable option for a range of students. There is scope to develop options that combine vocational and academic subjects to support pathways in areas such as engineering and health.

Strategies to achieve this aim include:

- documenting pathways that address uncertainties in current and emerging labour markets by focusing on preparing students:
    - for industry areas (vocational streams and clusters) rather than specific occupations
    - to develop the capacity to navigate change.
- documenting case studies of schools delivering effective VET that provides strong post-school pathways including approaches to timetabling, VET teacher professional development, partnerships with TAFE and other RTOs, employers and WPSPs, and promoting VET to students, parents and employers.

Recommendation 5:	**That the NSW DoE explores alternative models of senior secondary education, including an alternative SSCE, and expands access to alternative settings such as trade schools and technical colleges.**

Aim: To explore alternative approaches to the HSC and the expansion of access to alternative settings such as trade schools and vocational colleges.

In the context of the NSW Curriculum Review, it is not possible to specify changes or alternatives to the current HSC structure. However, it was a recurring theme of the consultations that alternative approaches to the predominantly ATAR-focused HSC should be considered. There may be scope to achieve these within the current HSC structure, but the introduction of an alternative SSCE and the expansion of access to alternative settings could be an effective way of broadening the range of high-quality options available for young people in NSW. It is important to avoid a complete separation between academic and vocational education. There is a demand for higher level vocational skills underpinned by academic studies.

Recommendation 6:	**That the NSW DoE supports the development and sustainability of partnerships by documenting and promoting partnership models.**

Aim: To improve the partnerships that support the education of young people in NSW government schools.

A strategy to achieve this aim is improving clustering approaches and links with neighbouring schools (including non-government schools), TAFE and reputable RTOs. This includes regional coordination of timetables. There is the potential to build on the strengths of the NSW school system, which are evidenced by the role played by WPSPs and Regional Industry Education Partnership officers.

Recommendation 7:	**That the NSW DoE works with employer organisations, employers and TAFE NSW to dispel misunderstandings on employing school graduates who have completed all or part of a VET qualification, including through SBATs.**

Aim: To address misunderstandings about the implications of employing young people who completed all or part of a VET qualification through schools, including through an SBAT.

Employers' views of potential problems employing VET graduates and SBATs, including their wage conditions, were considered inaccurate and arising from myths and misunderstandings by some of the industry respondents (see Appendix C). These myths could be addressed by targeted information sessions for employers.

6.2.2 Industry relevance

Recommendation 8:	**That the NSW DoE, in consultation with NESA, employer groups and employers, offers a greater range of Certificate III programs to secondary school students where this better meets the needs of industry.**

Aim: To increase the qualification level of VET if appropriate for industry.

This involves a closer relationship between schools and industry, with schools attentive to industry-specific requirements and industry playing a greater role in the development of VET curriculum suitable for the school environment. There needs to be scope for regional variation by providing schools and local employers with a suite of options.

Recommendation 9:	**That the NSW DoE increases funding for WPSPs to expand the role they play in supporting employers and young people in NSW.**

Aim: To extend the role of WPSPs to improve coverage.

The role of these providers was regarded as essential and one of the strengths of the NSW education system. Strategies to achieve this aim include expanding the role to include a broader range of functions such as careers advice and support, brokering SBATs and post-school apprenticeships and traineeships, supporting employers and coordinating activities and projects for students unable to obtain structured workplace learning, as well as funding to provide more effective coverage in rural and isolated settings, as raised in various consultations.

Recommendation 10:	That the NSW DoE works with other key agencies, including government departments and employer organisations, to promote the use of part-time work in the delivery of VET and SBATs.

Aim: To increase use of part-time work for VET and SBATs.

Several large employers consulted for this project provided examples of effective use of part-time work to support accredited VET through SBATs. A significant advantage of this approach was that training occurred outside of school hours, benefitting:

- employers, by providing access to labour outside normal working hours at evenings and weekends
- students, by not disrupting school attendance, providing valuable work experience and income, which can be particularly important for young people from disadvantaged backgrounds.

Recommendation 11:	That the NSW DoE, in consultation with WPSPs, employer groups and employers, reviews options for providing structured workplace learning, particularly in rural and regional NSW.

Aim: To document and promote models for providing structured workplace learning in areas where there are a limited number of employers and/or structured workplace learning opportunities.

Finding structured workplace learning places and workplace training for SBATs remains an intractable problem for some students, especially in rural and regional areas. WPSPs have developed innovative solutions in response to local conditions. There is an opportunity to document and promote these models.

A strategy to achieve this aim is examining alternative options. For example, one proposed solution to the challenge of providing structured workplace learning in rural and regional NSW is establishing designated centres to provide alternative, recognised activities, such as supervised group projects, lectures and information sessions with industry and employers, and discussion groups. Care is required to ensure that the well-recognised benefits of structured workplace learning are not undermined. There is potential to supplement alternative approaches to structured workplace learning by part-time employment. Even if the part-time work is in a different industry area, it will develop the student's capacity to understand a workplace and to work effectively.

Recommendation 12:	That the NSW DoE works with other key stakeholders, including representatives from government and employer organisations, to increase industry involvement across all stages of VET course development and delivery, including better incentives for industry to participate in SBATs.

Aim: To encourage greater and more effective industry involvement across all stages of VET course development and delivery.

SBATs are associated with employer confidence in the quality of training and better linkages between VET offerings and skills shortages. There is a need to better use industry liaison and regional coordination staff to create linkages between schools and employers, and better incentives for SBAT participation, including possible targets in government projects let out to tender. This involves co-ownership of program development.

Recommendation 13:	**That the NSW DoE works with other key agencies, including government departments and employer organisations, to simplify administrative processes associated with SBATs to reduce the complexity of the process and time to sign up students and to boost participation.**

Aim: To streamline the administrative processes associated with SBATS to improve access.

SBATs are associated with employer confidence in the quality of training and better linkages between VET offerings and skills shortages. The complexity of the process and the time involved in establishing SBATs can be a disincentive to schools and employers, thereby reducing the opportunities available to young people in NSW.

Recommendation 14:	**That the NSW DoE recognises and funds dedicated staff in schools to manage partnerships with TAFEs and other RTOs, WPSPs and employers.**

Aim: To provide dedicated staff in schools to manage partnerships.

Adequate investment in VET facilities, staffing and coordination is important to achieve this aim, as VET constitutes “more work”.

6.2.3 Quality

Recommendation 15:	**That the NSW DoE works with other key agencies, including government departments and employer organisations, to introduce graded competency-based assessment of VET delivered to secondary students by TAFE and RTOs and introduce TAFE and RTO assessment in the calculation of the ATAR.**

Aim: To introduce a more valid and fair approach to the assessment of VET subjects and to ensure parity of esteem with the HSC.

The introduction of graded competency-based assessment at the RTO level would enable performance-based assessments designed and developed by the local RTO to be used in combination with externally developed written examinations to contribute to the calculation of the ATAR. This would ensure that VET students who are seeking an ATAR score are not disadvantaged by having their ATAR score determined 100 per cent by external examination. Introducing graded competency-based assessment at the RTO or school level would also make VET courses more

consistent with other HSC subjects, with the ATAR calculated on the basis of internally and externally set assessments.

Recommendation 16:	**That the NSW DoE broadens official and unofficial measures of school performance to minimise barriers to effective VET provision.**

Aim: To ensure official and unofficial measures of school performance recognise the broad range of students' achievements and do not limit the potential for schools to deliver effective VET programs.

The ways in which school performance is judged influence school leaders' decisions about subject offerings and resource allocation. In addition to official metrics such as NAPLAN, there are unofficial assessments by parents, employers and the media largely focused on academic achievement and transition to university, which can have a significant impact on the status of schools. The perceptions of some school leaders, which are heavily focused on university entry, can encourage risk averse decision making about the programs offered to students.

Recommendation 17:	**That the NSW DoE continues to strengthen provision of careers advice in schools and examines models to provide independent high-quality careers advice for young people once they have left school.**

Aim: To ensure young people have access to high quality careers advice when they are at school and once they have left school.

Students in schools may not be able to access high quality careers advice while they are in schools. This advice can help students make considered and informed decisions about course choice and post-school pathways. There is also no accessible independent advice available for young people once they have left school. This can leave young people, particularly those from disadvantaged backgrounds, without the information and advice they need to support decisions about employment and tertiary education options.

Recommendation 18:	**That the NSW DoE works with other key agencies, such as NESA, to develop a more nuanced definition of what constitutes a 'VET student' to improve data collection and analysis and comparisons.**

Aim: To improve the quality of data reporting about VET students.

There is no consistent definition of what constitutes a 'VET student' in the reporting of data, which restricts the ability of the NSW government and key stakeholders to monitor, compare and evaluate the effectiveness of the VET programs offered to school students. It may be useful to identify different levels of VET participation rather than define students as VET or non-VET.

Appendix A – Data Sources and Interview and Focus Group Prompts

Data sources

This review was written based on four data sources:

1. Published research (see Appendix D References).
2. Policy documents (see Appendix D References).
3. National and NSW enrolment and survey data sets made available to the research team.
    - *National Centre for Vocational Education Research 2019.* VET in schools 2017 data, including participation rates, gender, school sector, socio-economic status, location, field of study, qualification level.
    - *Australian Bureau of Statistics 2017*. Schools Australia 2017. National and NSW apparent retention rates.
    - *NSW Secondary Students Post-School Destinations and Expectations Survey 2014 to 2018 (Social Research centre 2017)*. De-identified student level data files containing the following data for school (HSC) completers: post-school destinations, participation in VET, demographic student/school variables (gender, socio-economic status, school region/location, sector), and academic achievement (NAPLAN participation, Year 7 NAPLAN band (reading, writing, numeracy), Year 9 NAPLAN band (reading, writing, numeracy) and ATAR eligibility).
    - *NSW Work Placement Coordination Program Feedback Survey (2016–2019*). Student and employer feedback.
    - *Quality Indicator reporting data 2018 (DoE)*.
        - *Learner engagement*. De-identified item level learner engagement data for each of the school system Registered Training Organisations (RTOs) for 2018. This included perceptions of training and the following demographic variables, where available: gender, Aboriginal and Torres Strait Islander status, language other than English, field of training.
    - *DoE analysis.* Cross-tab report of VET (specific subjects, combinations of subjects, field of study and combinations of VET and non-VET curriculum, completion, qualification, AQF level, whether or not externally score assessed) by HSC outcomes and transitions to post-school VET broken out by sub-categories such as gender, socio-economic status/ICSEA, region/location, sector, achievement (ATAR eligibility/NAPLAN).
4. Fieldwork (interviews and focus group discussions).

The research team conducted a series of interviews and focus group discussions in April and July 2019. The list of participants was drawn up in consultation with the department to ensure that each interview and focus group was appropriately tailored and to increase the likelihood that valuable insights would be elicited to inform the report. University of Melbourne Human Research Ethics approval was received (no. 1953631) for this component of the study, and the NSW State Education Research Applications Process (SERAP) approval by the department was waived, given the project was commissioned by the same body. Interviews and focus groups were conducted either face to face or via telephone. Comprehensive qualitative data were gathered from representatives from the following sectors, summarised in Table 21:

- government agencies (e.g. NSW Department of Education, NSW Department of Industry)

- schools (i.e. principals)
- providers (e.g. schools, TAFEs, community and private providers)
- industry (e.g. major employers of VET graduates, industry associations/bodies).

Table 21 Organisations and roles of participants in interviews and focus groups

Category	**Organisation**	**Roles**	**Number of participants**	**Interview/ focus group**
Schools	NSW Department of Education	Principals	2	1 focus group
VET	TAFE NSW	Policy, pathways	5	1 focus group
Education	Catholic Schools NSW, Association of Independent Schools NSW, Australian Council for Educational Research	Senior management	3	3 interviews
Government – education	NSW Department of Education, NESA	Pathways, policy, VET, curriculum, teaching and learning, principals	16	2 focus groups and 2 interviews
Brokers – schools & industry	5 WPSPs	Senior management	5	5 interviews
Industry	1 employer peak body	Policy	2	1 focus group
Industry	1 employer		1	1 interview
Industry advisory body	1 industry peak body		1	1 interview
Government – industry	NSW Department of Industry	Policy, skills, industry and economic development	3	1 focus group and 1 interview
Government – central	NSW Department of Premier and Cabinet and Office of the Advocate for Children and Young People	Policy, education, skills, youth	6	1 focus group and 1 interview
Total			44	7 focus groups and 14 interviews

The aims of the focus groups and interviews were to:

- identify current strengths and limitations of VET programs
- explore perceptions of quality, relevance and value
- explore perceptions of the viability and feasibility of alternative models that emerge from the literature reviews and ascertain stakeholder appetite for further investigation

- provide feedback on the implications of each alternative model.

The consultations informed this report, but comments are not attributed to individuals or to the specific organisations they represent.

List of interview prompts

Interviews with industry, providers and government agencies – prompt questions

Course selection and structure

- Why does your organisation provide students with opportunities to undertake or support VET/work placement?
- How do you choose the students?
- What makes your approach different or special to other organisations?
- What is the major strength of your program? What aspects need further improvements?

Facilities and equipment

- What facilities (physical and financial) do you devote to the program?
- What are the resource implications of offering and maintaining these facilities?

Staffing

- What are the major staffing challenges of offering the program? How do you address these challenges?
- How do you select staff to work in the program?
- What professional development opportunities are provided to your staff? How is this determined?
- How do the staff maintain industry currency?

Working with schools

- What relationships do you have with schools?
- Who develops and maintains these relationships and what are the associated challenges?

RTO arrangements

- How many RTOs are involved in the delivery of your program?
- How are these partnerships maintained?
- How do you decide on RTO arrangements and what are the associated challenges?
- Are these arrangements sustainable or vulnerable to staff changes? Please explain.

Student support and communication

- How do you support VET students?
- How do you communicate with students and parents regarding VET arrangements and requirements?

General

- What has worked really well in your programs?
- What has worked less well in your programs?
- Are there programs in other organisations (in Australia or another country) that have inspired your current program or future plans? If yes, how or why?

Interviews with participants in schools – prompt questions

Course selection and structure

- Why does your school provide students with opportunities to undertake VET?
- What is the purpose of VET in your school?
- How did you choose the courses offered?
- What makes your approach to VET different or special to other schools?
- What is the major strength of your VET program? What aspects need further improvements?

Facilities and equipment

- What facilities (physical and financial) do you devote to VET?
- What are the resource implications of offering and maintaining these facilities?

Staffing

- What are the major staffing challenges of offering VET? How does your school address these challenges?
- How do you select staff to teach in VET?
- What professional development opportunities are provided to your VET teachers? How is this determined?
- How do the staff maintain industry currency?

Working with employers

- What relationships do you have with employers?
- Who develops and maintains these relationships and what are the associated challenges?

Integrating VET

- What are the challenges of integrating the demands of VET and the HSC (ATAR, curriculum versus competency-based, graded assessment)?
- How do you address these challenges?

RTO arrangements

- How many RTOs are involved in the delivery of VET for students in your school?
- How are these partnerships maintained?
- How does your school decide on RTO arrangements and what are the associated challenges?
- Are these arrangements sustainable or vulnerable to staff changes? Please explain.

Student support and communication

- How do you support VET students?
- What are the implications for career guidance/advice?
- How do you communicate with students and parents regarding VET arrangements and requirements?

Industry associations and peak bodies

- What links to industry has your school developed?
- What is the purpose of these links?
- Who develops and maintains these links and what are the associated challenges?
- How are these links maintained?

General

- What has worked really well in your VET programs?
- What has worked less well in your VET programs?
- Are there VET programs in other schools (in Australia or another country) that have inspired your current program or future plans? If yes, how or why?

APPENDIX B – LITERATURE REVIEW

Summary

Access and participation

- The context for understanding VET for NSW school students includes:
    - the Australian VET system, which is governed by an education logic and underpinned by a neoliberal market economy
    - a comprehensive school system, with SSCEs such as the NSW HSC, that is required to cater for the broad range of students expected to complete Year 12
    - VET courses can be included in the HSC
    - a selection of VET courses can also contribute to the ATAR if students elect to complete an externally developed examination of their knowledge and understanding related to relevant units of competency.
- The effectiveness of VET is determined by the extent to which it supports post-school transitions into employment and further study.
    - VET can help support pathways into secure employment, including into apprenticeships.
    - For many young people the pathway to secure employment requires that they undertake further study.
    - The immediate post-school transition is critical, but it is also necessary to take a longer-term perspective.
- Participation in VET is lower in Australia than in strong apprenticeship systems, such as Germany, Denmark and Austria.
    - In Australia, just over 20 per cent of secondary students complete at least one unit of VET (ACARA 2019) and approximately one quarter of young people leave school and enter a post-school VET course, apprenticeship or traineeship (e.g. Polesel et al. 2013).
    - In contrast, two-thirds of adolescents in Switzerland enrol in VET after completing compulsory education (e.g. after Year 10).
    - The status of VET influences demand from students.

Industry relevance

- There is a debate on the extent to which the needs of industry are being met.
    - There is limited evidence on meeting current labour market demand.
    - There is debate on how best to respond to digital disruption: i.e. the mix of knowledge and skills, and the types of skills that should be taught.
- Structured workplace learning provides strong benefit for students and employers.
- The partnerships between schools, employers and VET providers are important for all stakeholders and contribute to the quality of VET.

Quality

- The three key factors are:
    - school leadership and school commitment
    - teacher expertise and experience
    - employer involvement.

Introduction

This part of the report draws on international and Australian research literature to inform an analysis of the effectiveness and quality of VET for secondary school students. This chapter is structured around three core issues:

1. Access to and participation in VET
2. Industry relevance
3. Quality of VET programs.

The reference list for this chapter, and the whole report, is in Appendix D.

B.1 Access and participation

To evaluate the effectiveness of VET for secondary students, it is important to examine how well these programs support pathways into employment and further study, and to consider which groups of young people seek and gain access to VET programs. It is also important to consider which groups really do not, but perhaps should. Decisions about VET participation are shaped by the role VET plays in the education system and the labour market. It is also influenced by the extent to which key stakeholders, including parents and schools, are knowledgeable about it and hold VET in esteem as a viable alternative to other study and post-school options.

The following section first addresses the structural and institutional factors that determine the type of VET that is available (context), before considering the pathways it offers (transitions), and the demand from students (participation). This discussion starts with the international literature before focusing on the history and structure of VET in Australia and NSW.

B.1.1 Context – structure of VET (corresponds to indicator 1.1)

B.1.1.1 The logic behind VET systems: employment or education?

Internationally, approaches to VET vary considerably. Located in both schools and adult sector institutions and delivered using a range of delivery models from fully classroom-based to fully work-based, VET has typically struggled to enjoy parity of status with general education and to find a location within existing education structures (e.g. Brockmann & Laurie 2016; Gleeson & O'Flaherty 2013; Juul 2011; Iannelli and Raffe 2007; Ringer 1969).

A detailed comparison of a range of systems would require considerable political, historical and economic perspectives to provide context and would introduce a level of complexity that would limit its value. However, Australian VET can be understood by considering it in terms of two relatively simple frameworks of comparative analysis – the logic of delivery (Iannelli & Raffe 2007) and the economic framework of delivery (Bosch & Charest 2008; Hall & Soskice 2001).

Iannelli and Raffe (2007) typify VET systems as employing either an "education" logic or an "employment" logic. In an education logic, delivery is typically classroom or campus-based, with vocational studies required to adapt and conform to the structures of schools, school subjects and the cultures of school learning. Vocational studies typically form a minor part of a broader curriculum and are usually delivered at basic or entry level standards, with skills and competencies de-emphasised and simulated training the norm. Iannelli and Raffe (2007) argue that the co-location

of academic and vocational curricula in a school environment leads to ready comparisons and that the status of VET may suffer as a result.

There is evidence, including from Australia, that the academic curriculum can dominate learning activities and resources in secondary schools, with practical or vocational studies positioned at a lower status and often required to cater for the most vulnerable learners (e.g. Polesel 2008) and in some cases leading to schools prioritising non-VET resourcing and staffing needs over those of VET (Polesel & Clarke 2011). Shortages of VET teachers and trainers have been reported both internationally (OECD 2010) and in Australia (Polesel et al. 2004). Iannelli and Raffe (2007) characterise most of the English-speaking nations, including Australia, as employing this education logic approach to school-based vocational education. In these respects, the NSW HSC is no different from senior certificates across Australia, with strong links to higher education but weaker links to the labour market.

By contrast, employment logic systems involve significant levels of delivery in the workplace through an apprenticeship arrangement which links theoretical training in the classroom with paid work, often called the dual system. This arrangement requires close linkages between qualifications and specific occupations, with significant input into the curricula from employers and significant involvement by industry in the delivery of training. VET qualifications are highly valued in the labour market, ensuring that the relationship between academic and vocational curricula is not "reduced to a simple hierarchy of status" (Iannelli & Raffe 2007: 51). Germany, Denmark, the Netherlands, Austria and the German canton of Switzerland are all systems using this approach.

Research has found that the early tracking of children in Germany (at the age of 11 years in some states) into academic and vocational "streams" can entrench socio-economic status and limit the opportunities available to some groups of students, while an apprenticeship model that delays tracking (e.g. until the age of 16 years in Denmark) produces fairer outcomes (e.g. Sweet 2009). This latter approach would be the normal case in Australia for SBAT programs. Despite these concerns, apprenticeship models are generally associated with greater confidence in the quality of training, qualifications that are more likely to be valued by industry, lower levels of youth unemployment, and relatively secure pathways from school to skilled work. In Switzerland, for example, VET is a crucial part of the national education system with a strong reputation and a positive impact on the national economy (Hoeckel, Field & Grub 2009).

Finally, the Joyce Review of Australian VET (Joyce 2019) argues that a clear purpose is needed for VET. As Joyce points out, industry emphasises the importance of secondary school VET pathways in attracting people towards VET careers and encouraging them to pursue further training after school. Industry sees a need to have more motivated and capable students undertaking VET options while at school. Joyce's key message is that maintaining engagement requires a clear purpose for the vocational learning (Joyce 2019). Australian research (Polesel et al. 2017) found that the capacity of schools to engage with external partners depends on school principals' ability to communicate the role and value of VET to students and the broader community.

An economic logic for or against vocational education?

There is a second framework of analysis, an economic one, which draws on the work of Hall and Soskice (2001). It describes two different approaches: one that depends more heavily on governments and education systems to develop skilled workers, and another that is more likely to import skilled labour or even export jobs to reduce costs. In reality, most economies fall at some point between the two extremes, mixing the approaches to meet perceived needs. Murray and Polesel (2013), while acknowledging this is not a dichotomy, argue Australia is much less likely to use

its own training systems to develop a skill base than are countries like Germany and Denmark. The impact of globalisation and differences between regions and industries within a nation are also important to consider (e.g. Fast 2016) but do not take away from the analytical value of the two broad economic views.

Summarising the logics

Collectively, we believe these frameworks help explain the disparity of esteem found between VET and academic or general education. The logics help show how the difference in status has its roots both in the nature of the labour market and in the education system. The logics suggest that work-based training approaches such as apprenticeships provide the most effective and relevant VET programs, and that a strong and coordinated commitment by the state to training workers may be a more effective way of meeting skills formation needs than a reliance on markets and the importation of skilled labour.

B.1.1.2 VET delivered to secondary students in Australia

VET in Australia has typically been delivered in both adult sector institutions such as Technical and Further Education (TAFE) institutes, private providers, enterprise-based providers and adult community education providers and in schools.

Historically, most states and territories in Australia had a system of junior technical schools, conceived as alternative high schools for students destined to work in the trades. Most were boys' schools, although there were some girls' technical schools. Students usually left school on completion of Year 10. The technical school programs did not deliver accredited VET qualifications (as they are understood now) but provided pathways into apprenticeships, other forms of employer-based training, or directly into employment. The last of these type of technical schools in Australia were closed in Victoria in the 1980s. By this time, the technical schools were offering a broader curriculum, including Years 11 and 12, and various senior certificates ranging from university-oriented to technical and trade-oriented programs.

With the closure of the technical schools, "comprehensive" curricula and unified certificates became the norm across Australia. These were offered in high schools or secondary colleges. As the school leaving age increased in the 1980s and 1990s, there were increasing concerns that comprehensive schooling failed to cater for the increasingly diverse range of students. The academically weaker students were found to be the most alienated by the trend towards comprehensive provision (Teese & Polesel 2003). Control over the curriculum of the senior secondary years was a contested space. Of particular concern to VET provision in the senior secondary curriculum is the control exercised by the universities, which remains an issue in all states and territories. There are three main concerns:

- That the university-entry focused curriculum and the associated requirements for certification restrict the range of studies, pedagogical practices and assessment approaches available to young people, and that this is more likely to fail to meet the needs of young people not intending or unable to go to university.
- That this curriculum and its associated assessment requirements do not adequately record the achievements of students not intending to go to university, especially in providing the skills or certifying the broader competencies and capabilities required by the labour market and employers.
- That this curriculum does not engage the range of learners now required or wanting to stay on until the final years of schooling. This can negatively impact both engagement and retention.

Mechanisms to address these concerns include the development of alternative school-developed and school-assessed curricula (manifested in a system of separate subjects or separate certificates). The alternative programs take different forms across the states and territories, but they contribute to the maintenance of two pathways for young people. This confirms Baudelot and Establet's (1971) thesis that most education systems consist of two distinct tracks – one bound for university and one for a direct entry to the labour market. The contemporary Australian version involves two distinct tracks to employment: one through general education and university and the other through VET.

The academic or 'education pathway' is through SSCE units in the traditional disciplines of mathematics, sciences, humanities and languages, which involve significant components of external examination and favourable scaling practices. The 'vocational pathway', oriented more immediately to employment outcomes, may involve:

- accredited curriculum such as the Victorian Certificate of Applied Learning, or
- nationally recognised qualifications based on endorsed industry-developed Training Packages that may or may not contribute to the ATAR, including SBATs.

In reality, many students take a mix of courses and subjects from the two pathways, further diluting the VET component. The Victorian Certificate of Applied Learning integrates accredited vocational learning, mandatory workplace learning and foundation subjects in literacy and numeracy and does not lead to an ATAR. In Victoria, approximately one in seven of the students in the senior secondary years is in a Victorian Certificate of Applied Learning program.

The most common and best-known vocational pathways provided by the VET programs for secondary school students were introduced to provide breadth in the senior secondary curriculum, to contribute to engagement and participation, and to prepare young people for employment. Various national reviews during the 1990s (e.g. Finn 1991) and growing concerns from the business community that young people were not being adequately prepared for work supported the introduction and/or expansion of VET for school students.

The "re-introduction" of vocational curricula into secondary schools across Australia in the mid-1990s took place through state-based arrangements to offer accredited vocational subjects, originally known as Dual Recognition or VET in Schools subjects, through the senior certificates. The role of VET in the senior certificates varied across the states and territories. Differences across the jurisdictions included the assessment methods employed and their degree of standardisation to generate a study score and/or contribute to tertiary entrance rankings such as the ATAR, and the requirement for work placements.

The importance of the ATAR is stressed by the university sector and schools. Although the ATAR may assist some students to transition into higher education, it is becoming less relevant as the basis for admission for some universities, especially following the introduction of demand-driven university places between 2010 and 2017 (e.g. Blyth 2014, Productivity Commission 2019) and graduate entry into some elite courses. It is also less relevant for young people who have been out of school for a couple of years. In summary, a wider range of entry pathways to higher education is now available and used.

There have also been various initiatives involving alternative structures of delivery since the demise of the junior technical schools, including:

- Australian Technical Colleges for Years 11 and 12 introduced by the Howard government in the mid-2000s. The 24 colleges have since closed or been amalgamated into regular schools.

- Trade Training Centres, established by the Rudd government. These were typically cross-sectoral sites for Years 11 and 12 enrolling students from Catholic, government and independent schools, specialising in one or more trades and offering VET and sometimes SBATs, for example:
    - Southern Cross Vocational College, Sydney
    - Newman Senior Technical College, Port Macquarie
    - Sydenham Catholic Regional College, Melbourne.

Although innovative and important, most of these initiatives have not been applied across the entire system. They are available in a limited number of geographical areas, which means they are not a viable option for most senior secondary students.

These "alternatives" have increased diversity and choice within the senior certificates and may have played a role in engagement and retention but tend to be poorly understood in the community. Historically, concerns about the lack of rigour have emanated from universities (e.g. Penington 1989), conservative and media commentators (e.g. Donnelly 1989) or politicians (e.g. Hayward 1990). This pressure continues, particularly by commentators and politicians (e.g. The Sydney Morning Herald 2018).

What is not well understood are the longer-term pathways for those undertaking the two streams. Better longitudinal information will be required to explore this issue, and the way pathways unfold immediately post-school and in the longer term. This is, perhaps, something that will be delivered by emerging data matching exercises in time.

The NSW and HSC context

To be awarded the NSW HSC, students must complete a minimum of 22 credit units, of which 12 are Preliminary and 10 are HSC. This must include four credit units of English. Students must satisfactorily complete HSC course requirements to be awarded credit units. From 2020, students must also meet minimum standards of literacy and numeracy.

There are two types of VET courses that can be included in the HSC (and both can be used in SBATs):

- Board developed (or the Industry Curriculum Frameworks), which have optional examinations that contribute to the ATAR. These are developed by NESA.
- Board endorsed, which do not have exams and cannot contribute to the ATAR. These are approved by NESA.

There are 13 Industry Curriculum Frameworks: Automotive, Business Services, Construction, Electrotechnology, Entertainment Industry, Financial Services, Hospitality, Human Services, Information and Digital Technology, Metal and Engineering, Primary Industries, Retail Services, and Tourism, Travel and Events. The Industry Curriculum Frameworks are broad and may not equate precisely with areas of skill shortage. However, SBATs, by their nature, reflect and address industry need.

The school and RTO-based assessments for VET courses in the HSC are not scored or graded. Students are either assessed as 'competent' or 'not yet competent'. For some VET courses (i.e. which have industry skills frameworks), students may elect to undertake a written external examination designed and scored by NESA which can contribute to the calculation of the ATAR. This examination concentrates on the mandatory syllabus outcomes and content that can be reliably assessed through a "paper and pencil" test. It is therefore limited to assessing the cognitive aspects of the units of competency, but this cognitive assessment does not take account of the broader set of skills and attributes that contribute to vocational competency. This is problematic in the context

of the competency-based assessment system on which VET in Australia is based. It also highlights the challenge faced when trying to reconcile academic and vocationally oriented education systems, with their different and competing educational philosophies.

At the international level, we highlight that the United Kingdom has now introduced grading of competency-based assessment in all its courses (Newton 2018). In the absence of national policy on graded assessment, a wide variation in graded assessment and reporting practices has evolved in the Australian VET sector (Bateman & Gillis 2006; Gillis, Clayton & Bateman 2009; Gillis & Griffin 2005). For example, in Victoria it is up to the discretion of the RTO. The Productivity Commission (2017) recommended a national approach to grading competency-based assessment through establishment of proficiency bands (see section 3.3 and recommendation 3.2). Content specific scoring rubrics to grade competency-based assessment through RTO-based assessments have been piloted in VET delivered to secondary students (Gillis 2000; Gillis 2001; Gillis 2002; Griffin, Gillis & Calvitto, 2004; Griffin, Gillis & Calvitto 2007; Griffin & Gillis 2001; Griffin & Gillis 2002; Griffin, Gillis, Keating & Fennessy 2001) as well as to NSW TAFE students (Gillis 2004). This approach is currently used in numerous TAFEs in Victoria such as Box Hill and William Angliss to recognise and report achievement levels of students completing nationally recognised VET courses. In the Victorian Certificate of Education, there are VET programs that have a study score component based on the Units 3/4 (Year 12) sequence of the program, although students may elect not to include this aspect of assessment. If they do, the study score is calculated, based on school-developed and assessed coursework using generic scoring rubrics (66% weighting of the overall study score) as well as an examination set by the Victorian Curriculum and Assessment Authority (34% weight of the overall study score). Performance on both forms of assessment (school and RTO-based and examination) can then contribute to the calculation of the ATAR, as for other Victorian Certificate of Education units.

When considering the amount of VET that can be included in the HSC, it is important to distinguish between what is required to complete the HSC and what is required to generate an ATAR. Appendix C shows that some of those consulted considered the present HSC requirements in NSW too restrictive, especially for students wishing to undertake significant VET studies in their later years of schooling. Others felt the system was workable. At the very least, this suggests that review and options for reform need to be considered.

B.1.1.3 Review and reform

The operation of the HSC is an important context for the delivery of VET. Historically, senior certificates in Australia have represented the apex of secondary school achievement and have formed the basis on which universities select applicants. Changes to the rules governing the certificates have been careful, considered and relatively small. The HSC has been characterised by its stability, with changes tending to be minimal, incremental and determined by consensus.

The Carrick review of 1989 (Carrick 1989), tasked with improving the quality of education within a framework of equality of opportunity, identified the need for greater flexibility in catering for diverse populations. Its main recommendations in the senior secondary area related to greater school input into Board-developed courses, the retention of the school-developed courses which had begun to appear to complement Board-developed courses (within limits), and the establishment of a Board of Studies. All these recommendations were accepted in the government's response, issued by the NSW Ministry of Education and Youth Affairs (1989).

By 1994, the HSC comprised both Board-developed courses (grown to 145 in number) and numerous Board-endorsed courses, the latter including content-endorsed courses developed or accredited by

the Board, and school-designed courses developed to meet local needs. Contributing further to this complexity, Board-developed courses could be taken as 1-unit, 2-unit, 3-unit or 4-unit sequences, increasing in difficulty as the number of units increased. Board-endorsed courses tended to be 1-unit or 2-unit sequences. In 1994, the certificate was also divided into two distinct years, with Year 11 the Preliminary and Year 12 the HSC, the latter comprising external examinations.

A Green Paper in 1996 arose as the result of a review commissioned by the NSW government to stimulate public discussion of the HSC. It raised as a key concern the complexity of offerings and the proliferation of Board-developed and Board-endorsed courses. The paper questioned whether this broadening of the curriculum was "in the best interests of the students choosing to stay at school" (McGaw 1997: 11).

In response to a detailed analysis of the public consultations and input that followed the Green Paper, the 1997 McGaw report reiterated many of the concerns raised in Victoria eight years earlier during the period of the Blackburn Review and the establishment of the Victorian Certificate of Education. These centred on the need to accommodate diversity within a simplified, unitary structure. Also evident in the review was a pervasive concern with the need to accommodate both the students wishing to enter university and those who did not. Submissions received by the review were dominated by criticism that the structures and methods of the HSC were largely focused on preparing the minority wishing to enter university, even though only 37 per cent of those awarded the HSC in 1995 entered university.

McGaw identified the importance of finding a way to "attract and retain the one third leaving at the end of compulsory schooling" (McGaw 1997: 1) and pointed out the scarcity of employment opportunities for this group, putting both retention and labour market outcomes on the agenda for discussion. The review highlighted the tensions between accommodating the increasingly diverse student body entering the final years of secondary schooling and the need to prepare the most academically able for university, the latter group finding their most vocal advocates in the universities and in the selective schools (selective entry high schools being an established feature of the NSW secondary landscape). For some respondents, the needs of the two groups were mutually exclusive. However, the first recommendation of the review was that the HSC provide a curriculum structure that encouraged school completion and catered for the broader needs of all students in senior secondary schooling, including preparing them for the full range of post-school pathways into further education and training and employment.

The McGaw review had 26 recommendations focusing on the structure and contents of the curriculum to be offered. The most important of these centred on creating a framework to integrate accredited VET within the HSC (including mandatory work placement) and the requirement that students complete at least 12 units of study, at least two units of Board-developed English and at least six units of Board-developed courses (McGaw 1997). The government's response to the McGaw recommendations, in *Securing Their Future* (NSW Government 1997), was to accept all "the major directions proposed by Professor McGaw" (1997: i).

Overall, both the Green Paper and the McGaw report received little criticism. They were supported by both the Teachers' Federation and the universities, with little opposition to the maintenance of a 50–50 balance of internal and external assessment (Keating 1999). In a sense, this reflected a view of the HSC as an "expression of community traditions or trust, reinforced by a political establishment" (Keating 1999: 223). In reality, the proposed changes were not radical and it could be argued that they did not contribute significantly to greater flexibility in the senior secondary curriculum, as recommended in the earlier Carrick review. In 2002, the Australian Council for Educational Research

review (2002) of the HSC examinations and reporting found continuing broad support for the HSC reforms arising from the McGaw review and proposed no major changes.

The preoccupations of the McGaw review with balancing accessibility and inclusion were not isolated to NSW. Nor have they disappeared over time. Concerns regarding curriculum breadth and the focus on university entry have characterised debates over the senior certificates for many years. Reports including Blackburn (1985) and Kirby (2000) in Victoria, Ahern (1980), Wiltshire (1994) and Pitman and Herschell (2002) in Queensland and Beazley (1984) in Western Australia agonised over the competing demands of accessibility and engagement on the one hand and university preparatory functions and selection on the other. Breadth of curriculum and how this curriculum should be assessed occupied a central place in these debates. Various national reviews during the 1990s (e.g. Finn 1991) also bemoaned the narrowness of the senior secondary curricula across the nation and advocated for more vocational education in schools, calls which were taken up and explicitly endorsed in many of the review reports, including McGaw's in NSW.

More recent reviews of the HSC have focused mainly on specific issues such as scaling and standards. These include the Stronger HSC Standards reforms, announced in 2016 (NSW Board of Studies Teaching and Educational Standards 2016), which emphasised three areas: literacy and numeracy standards; new courses; and assessment.

In 2018, the Premier of NSW announced a review of the K–12 curriculum, to be led by Professor Geoff Masters from the Australian Council for Educational Research. The intention of the review, which has released its interim report (NESA 2019c), is to create a framework for implementing the findings of the recent "Gonski 2.0" report in NSW (Gonski 2018). These findings included the need for a greater focus on English, mathematics and the sciences, information technology and the inclusion of Australian perspectives throughout the curriculum. Those sections of the interim report dealing with the senior curriculum suggest that the rigid separation of vocational and academic curricula and the continued focus of schools on maximising ATAR and university entrance outcomes have not contributed to an inclusive HSC or to the most effective approach to VET delivery within the HSC (NESA 2019c).

B.1.2 Effectiveness of VET – post-school pathways and transitions (corresponds to indicator 1.2)

In evaluating the effectiveness of VET delivered to secondary students, a key consideration is the extent to which it supports transitions into employment and further study. It is important that VET can help support post-school pathways into secure employment, including into apprenticeships. For many young people the pathway to secure employment will involve further study. The immediate post-school transition is critical but, as was suggested above, it is also necessary to take a longer-term perspective. This includes transitions from tertiary education to work, between jobs, between industries, between various paid and unpaid roles, or after a prolonged absence from the workforce (PriceWaterhouseCoopers 2017). Students may participate in VET activities to explore a range of occupations and to assist them in making career choices, suggesting a broader role for VET in the school context.

Opportunities for educational and occupational progression have a positive impact on the prestige associated with VET. If taking VET courses is perceived to severely limit future opportunities, it will not be attractive to young people (or their parents).

This is a consideration in Australia and internationally. In Australia, VET has an image problem. As the issues paper supporting the current review of VET for school students in South Australia points out, parents and other key influencers do not know enough about VET and its strong prospective job, well-being and salary outcomes. Fragmented information about VET and career options, discussed in the next section, does not help. In addition, embarking on a vocational pathway at school allows students to get a head start in the world of work and commence a lucrative and worthwhile career (South Australia Department of Education 2019).

Internationally, strong apprenticeship systems such as those in Switzerland, Denmark and Germany are known for creating effective pathways into employment. A combination of practical skills learnt on the job and strong underpinning knowledge are known to result in the most effective acquisition of skills (e.g. Snell & Hart 2007). In Australia SBATs are highly valued, including by participants (Smith & Wilson 2004). They can also help address documented shortages of apprentices and trainees in key skill areas in NSW (NSW Department of Industry Skills and Regional Development 2016).

Pathways may also include movement from VET into higher level tertiary qualifications (vocational or academic), although in Australia there is not significant movement between post-school VET and higher education (e.g. Moodie et al. 2013). This may be for a number of reasons, including:

- the lack of incentive to move from some traditional trades into higher level study
- that VET is not always valued as a foundation for higher level study
- that many VET graduates do not seek entry into higher level vocational or higher education
- the lack of information about education, training and work pathways in the longer term and the use of VET studies to facilitate those.

A recent study conducted by NCVER, which linked 2006 VET data with the 2011 Census of Population and Housing, revealed that 78 per cent of past VET participants were in a job, 29 per cent were both working and studying, 9 per cent were studying only and 13 per cent were not in employment, education or training (Misko et al. 2017). However, Polesel (2008) argues that some young people who have completed VET while they were at school but have not undertaken post-school education and training can find it difficult to make successful transitions. Their post-school employment opportunities are limited to mainly low skilled, low paid and part-time occupations in retail and hospitality/food preparation (Clarke 2014; Polesel 2008). A recent report (Ranasinghe et al. 2019) argues that for a significant portion of the school leaver cohort, frequent “switching” between higher education, vocational education and the labour market is common, with VET more likely to lead to an early route to work.

The European Centre for the Development of Vocational Training (CEDEFOP) (2018) investigated a vocational effect, defined as the effect on labour market and education outcomes of taking vocational programs in upper secondary education. Previous research has indicated that vocational education could protect people against unemployment and unskilled work (the safety net effect) but may also restrict the range of occupation opportunities available (the diversion effect). The CEDEFOP findings confirm the early career advantages of vocational qualifications in European Union countries. The availability of the vocational option at upper secondary level reduces early school leaving by keeping more practically oriented young people in school. The completion of additional years of education improves young people’s labour market opportunities.

The longer-term benefits of engaging in VET can vary but are found to be stronger in apprenticeship systems. Korber and Oesch (2019) examined data from the Swiss Labour Force Survey 1991–2014 and the Swiss Household Panel 1999–2015 and found that employment prospects remain as good

for vocational as for general education over the second half of workers' careers. However, vocational education is connected with considerably lower incomes once workers enter their thirties, and women experienced this disadvantage more than men. While vocational degrees provide benefits against unemployment, they come at the cost of flat income curves over the life course (Korber & Oesch 2019).

On the other hand, Skilling Australia Foundation (2017) argues that "myths" about VET, including the lack of earning potential and employment opportunities, need to be put to rest. VET, they suggested, usually provides students with a faster, more cost-effective pathway to complete a qualification and enter the workforce than university studies.

B.1.2.1 Career advice and options

A key factor influencing the demand for vocational pathways is the extent to which they are promoted as valued options. The types of career support provided to young people, both formally (e.g. through schools) and informally (e.g. by parents and peers) are important. There are persistent concerns that vocational pathways are not strongly promoted in careers development programs for school students. The need for high quality independent advice is not restricted to students selecting the subjects they will take for the SSCE.

PriceWaterhouseCoopers (2017) argue that career support needs to be delivered through a model that offers lifelong, connected and accessible support – to any and all Australians, including their network of key influencers, providers, employers and educational institutions. This process starts while young people are at school. Good quality careers advice at this stage from schools, family and peers is therefore important. However, the Skillsroad 2018 Youth Census survey found that only half of the survey respondents reported they received quality career advice throughout their schooling and those who reported they did not receive quality career conversations had lower overall well-being scores than those who reported that they did (Skillsroad 2018).

Billett (2018) argues that parents, schools and young people have to move away from aspirational and university-oriented pathways as an only or "best" option, especially when considering education and vocational options for those near completing school. Indeed, the South Australia Department of Education (2109) reports that there is increasing evidence that some students are discouraged from undertaking a VET pathway and are instead steered towards university education.

The availability of VET subjects sends clear messages to students. Joyce (2019) suggests that the most important purpose of delivering VET qualifications in secondary school must be to offer students clear pathways towards VET-oriented careers.

A four-year study of more than 6000 school students from Years 3 to 12 examined their post-school aspirations, in particular those who wished to study in the VET sector (Gore et al. 2017). The research aimed to inform teachers, schools and VET providers about how they might better advise students given current gaps and misunderstandings in these students' knowledge about VET, which is caused by a misalignment between educational and occupational aspirations, along with confusion about what VET offers and the pathway required to a VET-related occupation.

One of the issues underpinning the exploration of post-school career and study options is the quality of careers advice available (Billett 2018; Joyce 2019). A broader range of options is required (Billett 2018). Career information exists and is widely available, but not to everyone. It is variable in quality, patchy, overwhelming or difficult to understand. The quality of programs is strongly dependent on

the knowledge, competence and skills of those providing them. Career advice and support needs to start as early as primary school, but it also needs to be age appropriate and in many forms in order to provide multiple channels to reach individuals (PriceWaterhouseCoopers 2017). Sadly, the available information can be out of date and can also reinforce the misconceptions surrounding the benefits of a VET pathway and occupations. Gender stereotypes about suitable occupations for males or females are also 'alive and well' from a very young age. These gender stereotypes restrict the career and study options that a school student might consider (Gore et al. 2017).

Billett (2018) believes schools should better inform young people about VET as a post-school option and include entrance into VET as an important performance indicator for schools. He also proposes that schools organise visits by young people to VET providers and companies championing work in VET fields.

B.1.3 Participation – student demand and regard for VET (corresponds to indicator 1.3)

Across Australia, just over 20 per cent of secondary students complete at least one unit of VET (ACARA 2019). Approximately one-quarter of young people leave school and enter a post-school VET course, apprenticeship or traineeship (e.g. Polesel et al. 2013). In contrast, two-thirds of adolescents in Switzerland enrol in VET after completing compulsory education (State Secretariat for Education, Research and Innovation/SERI 2016) and a majority (80%) enter the "dual" VET, alternating practical training at a host company for 3.5–4 days a week and theoretical and practical learning at a vocational school for 1–1.5 days a week (Lamamra 2017).

Demand for VET from school and post-school students is influenced by the type of VET system and economy discussed in the first part of this literature review. As this literature review has already pointed out, VET tends to be less prestigious when the VET system is based on an education logic and operates within a neoliberal market economy (Murray & Polesel 2013; Wheelahan 2015b). The esteem associated with VET has roots in the labour market and the education system (Leahy 2017).

The expansion of undergraduate places in some universities following the introduction of demand-driven funding in 2010 has influenced the demand for VET (Productivity Commission 2019). The expansion of higher education coincided with concerns about the quality of some VET provision and the collapse of some large commercial VET providers, particularly those funded through the failed VET-Fee-Help Scheme. The Productivity Commission's report (2019) acknowledged that the other major alternatives to university — a job or vocational training — have been undermined by relative weakness in the youth labour market and deep-seated challenges in the vocational education and training sector. The Productivity Commission found that, overall, the demand-driven system succeeded in increasing the number of students and made progress in improving equity of access in higher education. However, many students are entering university ill prepared and struggling academically. They concluded that university will not be the best option for many, and therefore viable alternatives in employment and vocational education and training will ensure more young people succeed (Productivity Commission 2019).

The OECD (2014) argues that it is important for schools with vocational programs to equip students with management and entrepreneurial skills and technical competences, to offer higher-level vocational qualifications as well as to provide pathways to academic qualifications. This raises the question of how well senior secondary schooling helps all students – including those not going to university – develop the necessary skills, knowledge and attributes required to navigate the complex world of work and engage in further learning in a competitive global marketplace. We know that

effective applied learning pedagogies help improve the academic outcomes of all learners, including those who go to university (Billett 1994), and the work of the Centre for Research on the Wider Benefits of Learning in the UK suggests that learning can exert a positive causal influence on social attitudes and behaviour but that this effect is realised through the development of employability skills, social interaction and the signals sent by the possession of qualifications (Department for Education and Skills (DES) 2006).

Schools and educationalists highlight the role VET can play more generally in encouraging more students to stay in school and complete Year 12, building their academic and technical capabilities at the same time. This focus on 'student engagement' risks some schools treating VET programs as a 'dumping ground' for less capable students, but is evidence of the important role that VET can play in engaging a broader range of students.

B.2 Industry relevance

The second core issue is the relevance of VET to employers and the jobs they offer. This section examines the extent to which VET programs address current labour market demand and respond to further challenges. We then consider how VET can be delivered effectively with structured workplace learning and through strong partnerships.

B.2.1 Meeting labour market demand (corresponds to indicator 2.1)

There are two aspects that need to be considered. The first is the extent to which the VET offered to school students meets current labour market demand. This includes the capacity of the VET sector to respond to regional variations and to differences across industry sectors (see e.g. Wheelahan 2015b). The second aspect is the capacity of the VET sector to meet emerging labour market demand given digital disruption which requires responding to high levels of uncertainty and change.

B.2.1.1 Meeting skills needs of employers and industry

The success of contemporary VET programs in preparing graduates for employment is the subject of debate (e.g. Beddie et al. 2017; Wheelahan 2015b). The views of employers, as reported in the NCVER Survey of Employer Use and Views of the VET system, are positive. The 2017 survey (NCVER 2017) found that 75.4 per cent of employers of jobs requiring VET qualifications were satisfied that VET provided employees with the required skills. A slightly higher proportion of the employers of apprentices and trainees (77.5%) reported satisfaction with skills acquisition through training. Of the employers using nationally recognised training, 82.2 per cent were satisfied.

Although the majority of employers report that VET qualifications prepare workers for their jobs, it can be difficult to recruit skilled labour. The most recent national skills shortage list (Australian Government Department of Employment, Skills, Small and Family Business 2019) shows that the VET-related occupations facing a skills shortage include auto electricians, motor mechanics, panel beaters, vehicle painters, sheet metal trades workers, bricklayers, carpenters and joiners, cabinet makers, glaziers, fibrous plasterers, plumbers, electricians, air conditioning and refrigeration mechanics, bakers, pastry cooks, butchers, hairdressers and child care workers. There will be variations in the skills gap at the state, regional and local level. There may also be differences in demand for occupations across industries.

In a comparative study on educational qualifications and occupational destinations across 13 countries, Shavit and Muller (2000) found that in most countries, vocational programs in secondary

schools increased the probabilities of youth entering the workforce as skilled workers and reduced unemployment. However, there is also a view that complex issues such as youth unemployment, skill shortages and the challenges of diverse labour market circumstances (Grubb 2006) cannot be solved solely by VET.

Internationally, VET is used as an economic tool. VET is often mobilised to compensate for economic and labour market weaknesses, as manifested in unemployment and skills shortages (Fitzenberger & Lickleder 2017; Psacharopoulos 1997). There are common perspectives worldwide that vocational education and training can reduce youth unemployment, supply the demand for middle-level technical jobs and equip those unemployed with skills so they can find employment and obtain an income, which in turn will contribute to economic development (Lewin 1993; Psacharopoulos 1997). However, the evidence for these beliefs is mixed (e.g. Sayer 2012).

One aspect of the disconnect between the VET sector and the labour market may be linked to gender. Misko et al. (2019) report that, overall, VET studies at school are gender segmented: caring, business, hospitality and beauty services for females, and information technology, trades, sport, fitness and recreation for males.

An important direct interface between employers and secondary school students is through work placements and structured workplace learning (addressed in section B2.2). A Group Training Australia (2014) study of the experiences of school students in work placements found significant benefits for employers in two main categories. The first related to the exposure work placement gave their industry, increasing students' knowledge of the industry and of the associated pressures and the expectations placed on them by employers and, related to this, the promotion of their industry as a realistic career possibility for young people.

The second category of benefits related to the value of work placement in assisting organisations to identify and trial employees for the future. Vallance and Palmer (2011) reported that although Australian businesses were partly motivated by altruism, business benefit is important (see also Harris & Turner 2001; Mulraney & Turner 2001; Mulraney et al. 2002). As reported in section 3.3 of this report, the Work Placement Coordination Program Feedback Survey data provided to our research team shows that employers' views, at least on the workplace learning component of VET, are overwhelmingly positive.

B.2.1.2 The changing nature of work

One of the major challenges facing education systems internationally is the changing labour market and the questions it raises about the best ways of preparing young people (e.g. Foundation for Young Australians 2015; Deloitte 2017). Increasing global integration is altering the production, consumption and delivery of goods and services. In addition, technical developments in automation and digitisation are changing the content, amount, organisation and quality of employment (Arntz et al. 2016; Autor 2015; Bisello et al. 2018; Committee for Economic Development in Australia 2015; Goos & Manning 2007; Spieza & Gierten 2016). There are debates about the extent and exact nature of the changes, and scenarios are often used to support analysis in the context of uncertainty. Scenarios enable potential trends, critical factors and the opportunities for policy intervention to be identified (Australian Workforce and Productivity Agency 2012; Shell Scenario Team 2013; Wilkinson & Kupers 2013).

Computerisation, automation and digitisation are changing the role people play in completing some tasks. Digital platforms are providing new ways of organising work and can also transform work that is organised in more traditional ways (e.g. the effect of Uber on the taxi industry). Although routine

jobs are most likely to be affected, the disruption is also affecting the content and organisation of many highly skilled and professional jobs including jobs that were once considered to be immune such as aged care. It is predicted that 47 per cent of jobs in the US and 40 per cent of jobs in Australia will be automated within the next 10 to 15 years (Durrant-Whyte et al. 2015; Frey & Osborne 2013; see also Arntz et al. 2016).

Other studies suggest many jobs will be transformed rather than eliminated (e.g. Arntz et al. 2016). There are questions about the way work will be distributed globally with implications for the availability of work and livelihoods.

This transformation of work raises questions about the purpose and nature of all forms of education, including VET. There is an ongoing debate about the extent to which education should develop job-specific skills, as opposed to knowledge and broader life and career skills (e.g. Lamb et al. 2017; Muller & Young 2019; Young & Muller 2014).

Wheelahan et al. (2015) argued that given the changing labour market, a narrow focus on specific workplace tasks or job roles can limit the value of VET qualifications. The importance of preparing young people for employment in occupational groups rather than for specific occupations was also raised by a report prepared for the Foundation for Young Australians (AlphaBeta 2016). Both Wheelahan et al. (2015) and AlphaBeta (2016) raise the issue of the relative emphasis given to more generic, lifelong and enabling capabilities and those of more immediate relevance. A balance needs to be struck, but there is an argument that the design of industry competency standards based on narrow occupational groupings is driven more by immediacy and the specific than the longer-term and more generic. Hence a greater focus on these latter ones at the school level may provide a better and more enduring legacy for VET learning.

B.2.1.3 Contribution to the development of generic skills and capabilities

There is an argument that the VET system in schools and more broadly should focus on developing students' broader vocational competencies and capabilities as well as occupation-specific qualifications. These have been referred to as generic or even 21st century skills. A recent NCVER report refers to these as "non-technical" skills, as opposed to technical skills (Misko et al. 2019). While having industry competencies has been argued to enable students to gain employability skills and strengthen the immediacy of the link between VET and the labour market (Biemans, Nieuwenhuis, Poell, Mulder & Wesselink 2004), if these competencies are based on specific occupations and job tasks, they may not necessarily prepare young people for the changing nature of work, and particularly in those industries subject to rapid change and subject to digital disruption. These arguments contain a concern with a narrow focus on occupations shared by Wheelahan et al. (2015) but propose a completely different approach.

CEDEFOP (2017) predicts that future jobs require digital and technical skills along with so called soft and behavioural skills. These skills include both cognitive (e.g. literacy, numeracy, foreign languages, problem-solving, learning to learn) and non-cognitive (e.g. communication, planning, customer service) aspects. Previous studies have indicated that there are several frameworks that encompass the main competencies or skills that employees should have to succeed in the workplace (Young & Chapman 2010). In the Australian context, Mayer (1992) suggests seven key competencies: collecting, analysing and organising information; communicating ideas and information; planning and organising activities; working with others and in a team; using mathematical ideas and techniques; problem-solving; and using technology.

The Australian Core Skills Framework (Commonwealth of Australia 2012) highlights the importance of learning, reading, writing, oral communication and numeracy skills. Deloitte (2019) points to more generic skills many employers are asking for too, including 'human skills' which are hugely undersupplied and in demand like customer service, sales and resolving conflicts.

The Ministerial Council for Education, Early Childhood Development and Youth Affairs (2010) published the Australian Blueprint Career Development as a framework which classifies skills, attitudes and knowledge required by employers. These include:

- Building and maintaining a positive self-concept
- Interacting positively and effectively with others
- Changing and growing throughout life
- Participating in lifelong learning that supports career goals
- Locating and effectively using career information
- Understanding the relationship between work, society and the economy
- Securing/creating and maintaining work
- Making career-enhancing decisions
- Maintaining balanced life and work roles
- Understanding the changing nature of life and work roles
- Understanding, engaging in and managing the career-building process.

The NSW Board of Studies (2012) also emphasises the importance of general capabilities comprising critical and creative thinking, ethical understanding, information and communication technology capability, intercultural understanding, literacy, numeracy, personal and social capability. In addition, civic and citizenship, difference and diversity, and work and enterprise are also recognised as essential learning skills.

Studies of VET in the US suggest that vocational graduates may not necessarily obtain work in the same occupation as their training, as the estimates of demand for specific skills training are often unreliable, although vocational education programs organised near or within workplaces are typically more successful than those that are totally campus-based (Psacharopoulos 1988). Moreover, many students participate in VET activities to explore the possibilities of working in a range of selected occupations and to assist them in making career choices, for example in the form of 'taster programs'. This suggests a broader role for VET in the schools context.

Some studies have suggested that VET delivered to secondary students in Australia gives opportunities for students to learn and develop more general occupational skills while completing their senior certificates (Clarke 2014).

Recent Australasian Curriculum, Assessment and Certification Authorities (ACACA) (2015) research suggests that practices used in the recognition of VET across the various senior certificates are approximately equivalent, but states that the majority of enrolments in VET may be considered pre-vocational or entry-level (AQF I and II), a problem also reported by Polesel (2008). This is a problem because it may indicate that they are not providing work-ready employees. It is nevertheless possible that they are providing other benefits, especially in the form of generic competencies.

Current concerns from the business community have not focused specifically on VET, but have questioned the capacity of the school curriculum more generally to meet employers' calls for greater work readiness, communication skills, problem solving and collaborative skills in young people (NSW Business Chamber 2017). However, the message from industry may not be a clear and unified one,

with questions also raised about the potential conflict in the delivery of VET programs between the broader "educational, social, cultural and personal development goals" of schools and the more specific skills required by particular industries (Misko et al. 2019).

The changing conditions of the youth labour market (increases in part-time and casual work) and the increasing need for tertiary (i.e. vocational and university) qualifications to access skilled work mean that VET in isolation may not have the capacity to provide direct pathways to skilled work (Clarke 2014), with the exception of the small proportions entering apprenticeships. Opportunities for structured workplace learning are often limited (although NSW has been a leader with its mandatory work placements), with schools exposed to the organisational and funding pressures of maintaining complex and challenging relationships with other schools, external VET providers, employers and industry in order to provide their students with the necessary workplace learning opportunities (Polesel et al. 2017). This has led to calls for a more realistic conception of the role and purpose of VET, centred on "foundational preparation for access to mid-level (VET) qualifications and entry to employment-based learning such as apprenticeships" (Clarke 2014: 3).

There is widespread, but not universal, consensus that education systems in general need to do more to provide students with the 21st century knowledge and skills necessary to succeed in life, careers and citizenship. In response to this problem, over the last few decades, countries around the world have been working on ways to assess and monitor the development of 21st century skills such as communication skills, creativity and problem solving (e.g. OECD 2018) among young people through large scale assessment programs. While some work has been undertaken to define life and career skills (Darden et al. 1996; Fleishman, Quaintance & Broedling 1984; P21 2011), such studies have not attempted to define the development learning progression and therefore provide little, if any, guidance for schools in terms of curriculum and/or instructional design.

Although there has been some work in the broader VET sector to define the Core Skills for Work Developmental Framework (Ithaca 2013), this framework assumes that the learners have access to a workplace. The recent report on non-technical skills in VET (Misko et al. 2019) suggests that much of the content taught in these courses could enable students to develop such skills, but that they are much easier to recognise in Training Packages when they are explicitly articulated as target skills.

This suggests that the broader benefits of undertaking VET have not been adequately considered or measured. A pilot study being conducted by the University of Melbourne in conjunction with ACACA is now collecting data from a national sample of VET and non-VET students to measure students' self-reported development of broader career and employment skills over time.

B.2.2 Structured workplace learning (corresponds to indicator 2.2)

Winch and Clarke (2003) identified the need for work-based learning in VET programs, arguing that the solely classroom-based approach to VET delivery contributes to the maintenance of a 'low skill equilibrium' in the workplace. However, the benefits to employers depend on the design of the program (Kis 2016). Excellent case studies of work-based learning in the international context may be found in Germany, Denmark and the Netherlands. However, a recent European Training Foundation (2013) report lamented the lack of work-based learning in the vocational programs offered in schools in most of its partner countries.

Hall and Soskice (2001) argue that Germany's apprenticeship-based system, which is informed by the employers' own curriculum, pedagogical design and workplace learning, delivers to them the

highly skilled labour they require, without the need either to export jobs or to import labour. Deissinger (2006) identifies some vulnerabilities of this approach, pointing out that economic conditions may impact on the ability of industry to offer training places. However, he also reports that school-based alternatives to work-based learning – such as full-time vocational schools designed to provide classroom-based experiential learning for those unable to secure an apprenticeship — have been criticised by employers, who say they offer only simulated training which is less effective in conveying the required competencies (Juskalian 2018).

Work-based learning is also important because it provides students with employment skills. A European Training Foundation (2013: 5) report summarises the benefits of work-based learning for young people in six main categories:

- the transfer of "hard skills, technical expertise and tacit knowledge", with workplace learning acting as a means of transfer of "skills and competence that are highly relevant to a particular profession and a specific workplace"
- "soft skills, other competences and behaviours", which are becoming increasingly important and sought after by employers and are very difficult to develop in settings outside real workplaces
- "socialisation and motivation", or the ability to understand workplace cultures, expectations and habits – again attributes that are difficult to foster outside of the workplace
- "smoother school-to-work transitions", both in the form of finding a job more quickly and integrating into the workplace more smoothly
- "entrepreneurship", with the finding that former apprentices are more likely to set up their own business
- a positive "impact on wages" earned by participants in work-based learning.

In Australia, there are four main types of work-related learning associated with the delivery of VET programs to secondary school students:

- placements that have specified learning outcomes and provide skills and experience are associated with a nationally endorsed Training Package qualification and/or accredited course (we use the term 'work-based learning' or 'structured workplace learning')
- placements that are designed to provide exposure to a workplace (also known as work experience), where work experience might be regarded as a part of vocational learning that offers career exploration for students
- paid employment with specified learning outcomes and an associated classroom component (apprenticeship, traineeship)
- work experience (paid or unpaid) to provide entry into an occupation, often a profession (internship).

The distinction between the first and second type is minor but mainly concerns the extent to which the experience is structured and the outcomes identified. We consider the NSW mandatory work placement to fit within the first category.

The McGaw review (1997) of the HSC in NSW created a framework for the integration of accredited VET within the HSC. This included mandatory work placement. While the integration of VET within the senior certificates became common practice across all the states and territories during this period, it was only in NSW that a mandatory work placement accompanied this initiative.

In Australia, a recent Foundation for Young Australians report (2018) points out that paid employment combining study and work in related fields speeds up the transition from education to work significantly. It argues that new models of work-integrated learning should be considered, although existing models of apprenticeships and traineeships already perform this function.

One of the advantages of this work-based learning system is that it seems to raise the status of VET. Shortages of apprentices and trainees in key areas in NSW and the positive outcomes associated with apprenticeships and traineeships (including those that are school-based) point to an important locus of potential reform.

A key consideration is the organisation and management of structured workplace learning. Internationally, different approaches emerge in response to local institutions and conditions.

A report prepared for the UK Department for Education and Skills in 2005 (McCoshan et al. 2005) considered the role of Work-Based Learning Providers (WBLPs) in the UK in meeting the needs of employers. WBLPs are organisations that train existing staff in firms, as well as meeting employers' needs for skilled staff through the provision of young people to participate in apprenticeships and traineeships. As such, they compete with further education colleges and private VET providers to meet the skills and training needs of employers in the UK. Their role also includes the provision of training and work-based assessment of competencies. Within this market-driven, competitive model, the report found some problems in engagement with employers and the need for more systematic and coordinated approaches to meeting their needs (McCoshan et al. 2005). Barriers in the form of funding, resources, staffing and poor dissemination of information have been reported. There are similar organisations in some parts of Australia, such as in the eastern suburbs of Melbourne. However, their success is tied to strong partnerships both with local VET providers and employers. They are, essentially, a work placement manager – an intermediary.

Smith and Betts (2000) call for less hierarchical and more flexible relationships between the parties and the need for planned management of knowledge but do not consider the potential role of a coordinating or mediating body. Hoffman (2015) specifically calls for the development of government policies that will incentivise intermediary organisations to coordinate collaboration. Advance CTE (2015) in the US also reported that the state has an important role to play in contributing to the environment that will support workplace learning, and design, build and scale up a quality workplace learning system. In the context of NSW and Commonwealth policy, the research suggests that policies need to be clearly articulated, that work-based learning needs to be given strong support in the form of funding and positive messaging, that the partners involved need to be given organisational support, and that intermediary coordinating organisations should be supported as an effective means of coordinating and monitoring the provision of effective programs. Mutual respect and the quality of relationships are the key.

A recent study of a pilot program in Ireland – the Career Traineeship program – found that this employer-led process was initially led by the UK Department of Education and Skills but was expected to be progressively managed more and more at the local level of Education and Training Boards, once again highlighting the need for a coordinating and mediating body, but in this case at the local or regional rather than national level (ICF Consulting Services Ltd 2018).

Hoffman (2015), in the US, found that government policies are required that will provide incentives for the positive and active involvement of each of the three main actors in the workplace learning relationship, including (as stated earlier) the intermediary actors. Incentives are required for:

- employers to take young people into workplaces for meaningful learning experiences

- educators to implement work-based experiences as a means of learning deeply
- intermediary organisations to translate between educators and employers and provide the infrastructure (Hoffman 2015: 3).

The Hoffman report argued that policies in the US need to target both federal and state actors, and this is also true in the Australian context, where Commonwealth and state policies impact the ability of schools to deliver work placements for their young people, although state policies may also be mediated at regional, local or school-cluster organisational levels.

The US study cited previously (Advance CTE 2015) also calls for the state to intervene in establishing a clear, coordinated and ambitious vision for workplace learning, creating the necessary intermediary organisations to support it, actively addressing major barriers to implementation including negative perceptions, rigorously defining and monitoring the outcomes of programs, and ensuring that the programs are "scaled" so they are available to all students and not made available only on a piecemeal or pilot basis.

SBATs constitute a very small proportion of VET enrolments in both the school and tertiary sector. However, Hall and Soskice (2001) argue there is an increasing need for employers to play a role in training due to their need for specific skills, and researchers such as Nielsen and Pedersen (2011: 564) see the potential for work-based learning to convey the "local and pragmatic kinds of knowledge" required in specific labour market contexts and locations.

B.2.3 Partnerships between schools, VET providers and other stakeholders (corresponds to indicator 2.3)

Iannelli and Raffe (2007) laud the close and well-signposted links between qualifications and specific skilled occupations in systems like Germany, where qualifications are highly valued by employers. Bosch and Charest (2008) argue that such systems work well because they develop links between training, qualifications and skills, through close cooperation between the social partners – government, schools, trade unions and employers. In Australia, unions are rarely mentioned in discussions of the role of social partners in influencing VET policy but may need to be involved to strengthen the sector.

The international literature reports on the benefits of strong relationships between schools and industry. A European Training Foundation (2013) report discussed the benefits of school–industry linkages and work-based learning for employers in five main categories:

- "higher productivity", with employers finding better and broader skills in recruits who had come through this pathway
- "recruitment impact", with employers able to better identify appropriate recruits, achieve lower recruitment costs and screen potential future employees through training programs
- "enhanced corporate image", with participation in training enhancing a company's reputation, although this was the case only in some countries and not others
- "staff retention and work satisfaction", with employees who had their initial training in a company more likely to show ongoing loyalty to that organisation
- the "opportunity to address skills gaps", with the investment made by the company in training allowing it to address its skill shortages.

On the issue of benefits versus costs, the report states that productive returns to employers were found to outweigh training costs over the medium to longer term, despite initially lower productivity (European Training Foundation 2013).

Research suggests that the engagement of industry with schools has also been shown to lead to higher rates of employment, better engagement with school and improved achievement in school for students (Lonsdale et al. 2011). Lee, Hope and Abdulghani (2016) found that work-based learning leads to improved life skills and business skills, and fosters enterprise and resourcefulness, all skills sought by employers. The influence of young people's engagement with work and with external agencies has also been shown to build a stronger platform for skills development (Federal Ministry of Education and Research. (BMBF). (2013)Hodgkins 2010). This is particularly important for young people from low socio-economic status backgrounds, who are overrepresented in VET in Australia. A recent Irish study (ICF Consulting Services Ltd 2018) found high levels of completion and qualification rates and high levels of post-qualification employment among participants, mostly with the same employers who hosted the work-based program. This research suggests that schools and industry should both be seeking linkages to improve outcomes in their respective spheres.

Recent Australian research (Polesel et al. 2017) found that the capacity of schools to engage with external partners such as employers depended on the ability of school leaders to communicate the role and value of VET both within the school and externally to the broader community. It also identified the need for schools to be flexible about which vocational programs they offered and how work placement and timetabling were organised. This has also been a recurring theme in the consultations carried out in our fieldwork for this review. One key aspect of the capacity of schools and workplaces to engage in partnerships to support work-based learning is staff time and expertise. Articulating the benefits to students, schools and business can support decisions to invest time in building learning partnerships. However, these benefits depend on the extent to which students and workplaces are prepared. Support is required to assist students' transition between classroom and workplace (e.g. Mulraney & Turner 2001).

In the Australian context, Klatt et al. (2018) found that effective provision of the partnerships that support workplace learning require a broad commitment from the social partners, including the state. The researchers found that the neoliberal framework of Australian politics means that school-industry interactions and partnerships are "not supported by a framework of nationally agreed and shared interests and commitments" (Klatt et al. 2018: 230), making them more dependent on good will, trusted relationships and the quality of staff both in schools and in industry (who may be transient, leading to termination of programs when staff changes occur).

The type of school–industry partnership that supports quality work-based learning depends heavily on relationships at the local community level, "independent of the educational bureaucracy or large industry management" (Watters & Diezmann 2013: 53). Ryan and O'Malley (2016) note the importance of the individual 'boundary spanner' in creating linkages between schools and employers, and in building and facilitating effective networks as some form of intermediary.

At the state or territory level, collaboration should be established to include education, training and employment opportunities, training and workforce development, arrangements between schooling and VET systems, and interaction between policies, rules and regulations at the state or territory level. Core system policies at the state or territory level should align with the national level; for instance, the recognition of arrangements for VET in senior certificates should be consistent with VET regulators and training package developers. Finally, national collaboration should develop

resources such as the NSW Work Studies Curriculum to increase the quality of skills, expertise and access to the program and to reduce costs.

B.3 Access to quality VET (corresponds to indicator 3.1)

The quality assurance literature (e.g. Green 1994; Martin & Stella 2011) defines quality in five ways:

1. Exceptional or as excellence (e.g. league tables, benchmarks), usually determined by external examiners, or an accreditation or audit process.
2. Perfection or consistency, involving the measurement of process standards rather than outcome standards (e.g. audit of functions and process).
3. Value for money (e.g. measurement of student retention, completion, employment rates).
4. Fitness for purpose (e.g. employer satisfaction).
5. Transformation, which refers to the enhancement and empowering of the students, through the learning process to develop a higher level of knowledge and skills (e.g. impact of teaching on the student).

Each approach generates measures that provide important insights into the quality of VET qualifications. There are issues with some of the information about quality of VET provision. For example, student satisfaction measures provide useful information about the students' experience but they can be a poor proxy for the impact of teaching or the quality of learning. Some of the data collected by the NCVER does not include students in school. The student outcome survey, for example, excludes young people under the age of 18 years.

Compliance with regulatory obligations is a minimum requirement. This includes adhering to the Standards for Registered Training Organisations 2015, especially the Australian Skills Quality Authority's users' guide (2014). The review of school-based VET in the Australian Capital Territory pointed out that "Compliance with these national regulations is a *core system* requirement that underpins all VET delivery, ensuring its quality and reputation for students, employers, further education providers and the community" (Centre for International Research on Education Systems 2015: ix). Elements of each of the first four approaches to quality outlined above are relevant. Also included are requirements for teacher expertise and industry involvement, discussed in sections B.3.2 and B.3.3. Although necessary, a compliance approach is rarely sufficient.

The Education Council framework (2014) argues that collaboration across many levels is needed to ensure the quality, value and relevance of vocational learning and VET delivered to secondary students. The need to establish and manage such a collaboration points to the importance of school leadership. This has implications for the two other key areas of quality – teacher expertise and employer involvement.

B.3.1 School leadership and commitment

Polesel and Clarke (2011) found that the success of vocational education offered to school students depends on the attitudes and approach of the principal. The school leadership allocates resources and establishes the structures around VET. Approaches to timetabling are critical. Flexibility and careful planning will ensure that VET students can access a broad range of subjects and are not marginalised through exclusion from core school activities. How VET is staffed and the way it is presented to students and their parents by teachers and careers advisers will also influence how it is valued by the wider school community.

This suggests that integrating students' needs, aspirations and interests requires leadership that builds strong trust, shared goals, mutual benefit, accountability and evaluation. It also requires commitment and support from stakeholders and open discussion with students, parents and employers. Similarly, relating learning opportunities to the workplace involves a coordination of local, regional and national industry needs and the employment of adequate resources to achieve these goals.

B.3.2 Teacher expertise

The issue of teacher quality is also relevant both in relation to the maintenance of their industry currency and their skills in delivering and assessing vocational education programs. Both are key elements of the RTO standards. The quality of VET programs is closely related to industry currency which is defined as the maintenance of trainers' vocational technical skills and knowledge (Guthrie 2010). It is important for teachers and trainers to keep up to date with current industry knowledge, skills and practice. Guthrie, Perkins and Nguyen (2006) suggest that vocational expertise and industry currency can be improved through industry engagement and networks, analysis of industry research, and the understanding of current and emerging industry practice, job roles and technology. However, there are possible barriers in maintaining industry currency, such as heavy teaching workloads and security and regulations in the industry which prevent some non-industry participants from being involved in full work activities (Toze & Tierney 2010).

VET teachers and trainers ideally should be required to have sophisticated pedagogical skills, use more learner-centred, work-centred and attribute-focused approaches, have experience working with different students in different contexts and learning sites, and understand the importance of combining learning and work (Guthrie 2010). However, while some argue that 'teaching is teaching', VET programs are competency-based and this can present philosophical dilemmas to school teachers attempting to boundary span the teaching, learning and assessment approaches used in VET as opposed to general education.

A common solution is for schools or regions to partner with VET RTOs, public or private, to deliver VET programs. In this case, compliance with the Australian Skills Quality Authority standards is a matter for the VET provider not the school (Centre for International Research on Education Systems 2015: 15).

B.3.3 Employer involvement

As discussed in sections B.2.2 and B.2.3, partnerships with local employers are essential for effective high-quality VET. Employers provide structured workplace learning opportunities, which are one of the key strengths of the NSW system. Employer knowledge of students, what they can do and what they know, provides an important quality control check on the VET qualification and how it is delivered. The partnerships between schools and employers can also provide opportunities for school-based VET teachers to maintain industry currency.

APPENDIX C – CONSULTATIONS

Introduction

This appendix summarises the interview and focus group information gathered from a variety of sources (see Table 21 Organisations and roles of participants in interviews and focus groups in Appendix A). The views and comments below are attributed in the text to one of three broad sources to preserve anonymity:

- policy makers – government and system managers
- practitioners – school staff, VET staff, education organisations
- industry representatives – employers, employer organisations, WPSPs, industry advisory groups.

The analysis framework developed by the project team and presented in Chapter 4 is based on three focus areas (access and participation, industry relevance and quality) and their related seven best practice indicators (see Table 22).

Table 22 Focus areas and best practice indicators for VET in NSW

Focus	Best practice indicators
1. Access and participation	1.1 That there is seamless integration of nationally recognised VET qualifications into the HSC so that they make a meaningful contribution to the HSC 1.2 That there are no barriers to post-school pathways of the student's choice 1.3 That VET is attractive to a broader range of senior secondary students
2. Industry relevance	2.1 That VET meet the needs of the labour market 2.2 That there is a strong element of structured workplace learning 2.3 That there are strong links between schools, VET and employers at the local level
3. Quality	3.1 That all senior secondary students have access to quality VET courses

Each of these focus areas and best practice indicators has a series of program effectiveness measures based around inputs and an associated set of processes, outputs and outcomes. In the longer term, these measures would have a series of positive impacts on the VET programs offered by NSW schools. They are used as an organising framework for the focus group and interview findings.

Some participants differentiated between structural issues such as funding models and education system design and implementation issues such as teacher professional development. There are structural as well as implementation aspects to each of the factors listed above.

Findings

Before examining the evidence presented which relates to each of the seven indicators in Chapter 4, there are contextual issues that need to be considered. First is the purpose of VET programs in schools. Second is the esteem in which VET is held both in an individual school and more broadly, and any differences between schools that affect their ability to offer VET programs. This is especially

relevant to schools in rural and regional areas. The final issue is the availability of suitable data on each of the proposed indicators.

The purpose of VET in secondary education

Participants in the forums and interviews discussed the purpose of VET for secondary school students. They argued that a clear sense of purpose is required before devising effectiveness measures:

> People see the purpose of VET differently… there are different purposes, it is not clear, it gets muddled. We can look at data but if we are analysing to see if it has achieved something and that is not the purpose, then hang on. (policy maker)
>
> … from a policy side, in a sense we are ambivalent on the ultimate objective. (policy maker)

Several purposes were identified:

- engagement and retention: ensuring that coherent and meaningful VET programs could be delivered flexibly in the HSC in order to engage students in the curriculum and retain them in school
- taster/industry information – see 1.2 below
- preparation for work: "In this regard, VET prepares young people for work, supporting their transition from school to a workplace. It is argued the purpose of VET is, ideally, to create a softer landing when they do get into the workplace… Less of a rude shock… The system should help ensure the transition is less abrupt and difficult" (policy maker)
- pathways – see 1.2 below:
  - aspirational pathways
  - second chance pathways.

The importance of parity of esteem for VET

The status of vocational compared with academic or general education is a persistent theme in the literature and in the focus groups and interviews conducted for this project. Parity of esteem is identified as an aspirational aim for VET.

Disparity of esteem is seen to indicate fundamental problems in the education system, with implications for the development of the NSW workforce. The status of VET reflects the attitudes of the broader community and parents as well as teachers and careers advisers.

To improve the standing of vocational education, six approaches were proposed during consultations:

- Establish meaningful pathways that lead into employment (usually via post-school VET).
- Develop VET programs that provide a valued curriculum option for the "full range of students: high flyers and struggling and those in-between" (policy maker).
- Develop higher level vocational options – "a clearly defined high aspiration, non-ATAR eligible pattern of HSC studies that students can opt into which would stream students into high level VET and provide additional seamless transition to university (if they choose to progress)" (policy maker).
- Ensure VET pathways include the opportunity to transition into a university degree.
- Provide careers advice that is informed by a deeper knowledge and understanding of both vocational and professional pathways, both in school and during the immediate post-school transition period (e.g. work placement coordinators and employers). This

needs to be addressed to parents as well as secondary school students. Linked to this is more effective marketing and celebration of VET programs, pathways and outcomes at the school and community level (policy maker).

- Demonstrate that VET involves the development of knowledge as well as skills and attitudes (industry representative).
- Disrupt the academic/vocational divide (a rigid divide also discussed in the recently released interim report of the NSW Curriculum Review (NESA 2019c)) by developing vocationally oriented study programs and pathways. For example, students interested in health would do a program that would develop skills and knowledge and could lead to different types of health-related employment (medicine, nursing, etc.) (proposed by a policy maker). This aligns with the approach proposed by AlphaBeta (2016) and Wheelahan (2015a).

Attempts to address this parity of esteem issue by making "VET rigorous enough to be comparable to academic subjects will keep us stuck in a fraught debate" (policy maker).

Some argued that the introduction of exams for the ATAR took VET away from the vocational (practitioner) and others said that it would be better to "work with pathways, establish VET, make it easier, resource it better, make it not something for the disengaged. The parents and the young people would see the benefit" (policy maker).

The Swiss model of secondary VET provision was identified as providing some useful insights. "The model provides parity of esteem between applied (VET) and academic schooling pathways while also promoting equal rigour and quality across the streams and a high degree of permeability for students" (policy maker).

Rural and regional issues

It was reported that VET is particularly important for students in rural and regional NSW.

> …the value is immeasurable, it provides breadth of curriculum for all students… VET is a great opportunity for country kids to stay in school… It provides an opportunity to engage in meaningful curriculum. (policy maker)

In rural and regional communities there is the potential for close local partnerships between schools and industry but often a limited range and number of work placements and SBATs. The changing role of TAFE was raised by one regional principal:

> …(the) TAFE college down the road is empty, most of the delivery is online and it does work for our kids. They would have to travel for a couple of hundred miles and stay somewhere, they have no money for accommodation, they don't have licences… In some parts of NSW, it's a one and a half hour bus to get to trade training. In Sydney, public transport can still be difficult, but we have none. (practitioner)

The availability and use of data

Some participants also reported limitations with the available data, for example the limited data on students' perceptions. The NSW Pathways project was welcomed as an important initiative, as it provides a detailed picture of students' pathways.

There is potential to conduct further research to develop a deeper understanding of young people's experiences, expectations and decisions around VET, and the extent to which these are shifting in response to changes in:

- education, such as rising education levels, changes in costs and tertiary education funding models
- employment, such as the changing labour market and growth in precarious employment.

The challenge of defining the 'VET student' was discussed by some of the policy maker participants.

Key points

1. There has to be a clear understanding of the purposes of VET delivered to secondary students, which are diverse, as well as how it benefits the school and particularly its students.
2. VET needs to be accessible and attractive to a broader range of students regardless of ability level. It must not be seen purely as a program for disengaged students and for those of low academic ability not destined for a higher education pathway.
3. VET has a parity of esteem problem. Schools need to recognise it as a potentially valuable study option and ensure that students and parents consider its value in terms of career options and pathways to further study and rewarding work.
4. Schools in rural and regional areas may be particularly challenged in offering viable and relevant VET programs. Partnerships with local VET providers and employers, as well as making best use of the resources of the local community, are key. Such programs can also help keep young people in the area post school.
5. Concerns were raised about available data to support any best practice indicators, including a student perspective.

Access and participation

Indicator 1.1: That there is seamless integration of nationally recognised VET qualifications into the SSCE so that they make a meaningful contribution to the SSCE

There are several issues. The first is the importance of school leadership and the extent to which leaders value VET programs. In turn, this affects the culture of the school and the extent to which leaders are prepared to commit resources to ensure that VET programs can be offered and run effectively (practitioners).

The importance of effective school leadership and attitudes to VET (1.1 Input)

The interviews and forums revealed that the attitudes of the principal, school leadership team and VET teachers are important factors shaping the school culture (practitioners and policy makers). It was stated that outcomes are "strongest when principals are student-centred and deal with barriers from funding and make sure processes work" (policy maker).

The impediments to implementing VET in the school's program effectively that were reported during the consultations included (1.1 Processes):

- lack of flexibility within the school curriculum and other school activities to schedule VET

- timetable inflexibility and lack of teacher time to monitor and support work placements
- the size of the school – smaller schools will offer a limited range of vocational subjects unless they are well networked
- limited industry engagement and influence over planning and delivery of VET (policy maker, industry representative)
- very difficult bureaucratic and administrative processes, including timetabling, application forms and data entry, associated with VET and especially with SBATs (industry representatives).

In some schools, VET is considered a "dumping ground and only in terms of school retention" (practitioner). In other schools VET is valued and seen to provide good post-school pathways for students.

One practitioner said that VET should be totally integrated into schools and taught by the best teachers: "Students who want to be a doctor may choose a VET subject 'cos that may put bread on the table while they study". This school had worked with the local TAFE to develop a timetable that would limit the classes VET students would miss when they went offsite. For this to work, parents have to be supportive.

It is important that schools celebrate vocational and academic success: "not only 99 ATAR, but apprenticeships… value excellence in different shapes. This should include award evenings, newsletters to parents and employers and celebrating graduation from VET programs, some of which is already done by major trainee employers such as McDonalds and Reece" (industry representative).

Thus, parity of esteem for VET is important contextually in meeting students' diverse needs and aspirations, as is measuring school success – the 'school's metrics' – effectively and fairly to allow for a diversity of successful outcomes.

> How schools and principals are judged has an impact. If they are judged by school retention, transition to university and ATAR, then they will not have the incentive to encourage students to leave to take an apprenticeship. (practitioner)

The school measures were seen as particularly important and should include VET "completions" and success in gaining apprenticeships, traineeships and cadetships: "If the school leadership doesn't support VET programs then resources are not allocated. VET is the first thing they chop" (industry representative).

> We need to celebrate VET by changing the ways schools are measured… it's broader than just ATAR. (industry representative)

In addition, if a student in an SBAT is offered a full apprenticeship, that should be considered a successful outcome. This is a common outcome for students who have completed a traineeship with two of the largest employers of SBATs – continuation to apprenticeships in similar or related fields (or in some cases, continuation to a Certificate III in the same field) (employer and rural work placement provider). "But principals are not measured on that… it is not valued [by the principal and the school]" (practitioner).

Finally, this indicator also incorporates the notion of flexibility – not only in terms of timetabling and curricular flexibility, but also how the programs are delivered. This should include consideration of 'vocational schools' as one of the available options (practitioner).

The approaches to delivery are also important, and need to be flexible and student centred (1.1 Outcomes for students)

Some participants identified the opportunity to develop a more student-centred approach to VET. This would be in the context of a system that responds to the needs of employers. It was argued that this is potentially sensitive and not straightforward, with employers expressing a range of views such as focus on immediate employment or longer-term workforce development. There are also variations across industry sectors (policy maker).

Participants also raised and discussed two models for the delivery of VET for secondary school students:

- 'Hub and spoke'
- Trade or vocational schools.

The 'hub and spoke' model can potentially address the challenge of running VET programs when there is a small cohort in a school. Although it was described as 'conceptually sound', a requirement to travel is a barrier to some young people, particularly those in rural and regional NSW. It was suggested that the hub and spoke model could be used for teacher professional development rather than VET delivery (policy maker).

Many participants referred to the successful vocational schools in NSW in both the government and Catholic sectors. With flexible delivery and strong connections with employers, these schools provide excellent employment outcomes. This is partly due to greater employer involvement:

> Currently, school-based apprentices and school-based trainees have a minimum of 100–180 days of training while at school, i.e. the equivalent of a first-year apprenticeship or a Certificate II traineeship. The vocational trade school model provides more intensive employment and training, as in the German model which includes 450+ days of training. (policy maker)

Successful partnerships in this area involve extensive involvement of employers in curriculum development and review, delivery and assessment. These types of schools are regarded as important but they cannot replace VET provision in mainstream schools. It was agreed that a diverse range of options are required (policy maker and practitioner).

Key points related to Indicator 1.1

1. School leadership and culture are critical to the successful development and implementation of VET programs.
2. The metrics of 'success' are important as they can shape the nature and extent of VET programs. They need to be broadly conceived, as 'success' takes a variety of forms. The metrics may also affect resource allocation.
3. Lack of flexibility in timetabling, curriculum offerings and delivery approaches also affect the success of VET. The approaches adopted need to be student centred, while being mindful of employer needs.
4. Some specialisation in school provider types (e.g. trade or vocational schools) may be appropriate in some settings.

Indicator 1.2: That there are no barriers to post-school pathways of the student's choice

The main concern is that most schools and careers teachers tend to focus on university pathways. There is less knowledge and understanding of vocational pathways. The need for careers advisers who are aware of a range of options and comfortable with VET was identified.

Young people need information about the job opportunities that are available in areas such as warehousing, meat processing and plastic moulding. This information should include the type of work, salaries and progression (practitioner and industry representative). Employers need to attend subject selection nights, produce simple and clear information and focus on the importance of mathematics, especially in building and construction trades (industry representative). The Apprenticeship Engagement Forum has developed a maths pathway subject aligned to the trades, using units from existing HSC subjects and now implemented in 60 schools with a projected target of 350 schools.

It was argued that much of the discussion around Science Technology Engineering and Mathematics is focused on universities "but there is so much STEM also required in VET. These opportunities need to be pitched at parents as well as young people. Parents are driving students' decision making" (industry representative). More effective promotion is required – "VET needs to be showcased. It needs energy and effort to promote it" (policy maker).

Finally, the role of careers advisers is not always respected as they may be called on to fill in when other classroom teachers are sick. "The first thing to drop off is support for VET programs" (industry representative).

Effective careers advice and the introduction to possible pathways between employment, VET and higher education throughout a student's career is important in:

> … enabling them to understand the different occupations and pathways, so they know there are options other than university, that there are other opportunities. (industry representative)

But:

> … [there is a] danger in the get-a-job type stuff. It tends to go to the less aspirational pathways of default. You need to set yourself up to take on further learning and be competitive in [an uncertain] job market. (practitioner)

One work placement provider argued for external careers advice hubs to support students while they are at school and also after they have left, to provide independent advice, continuity of advice and support and better links to employers (industry representative).

And:

> Most VET is at Certificate II level, which is almost being hand-held at work, absolute entry level… if you have higher level qualifications, they lead into higher level and higher skilled jobs. (policy maker)

In addition:

> Subject selection enables students – regardless of academic ability – to… engage and maintain the enrolment. For high performing students, it adds a layer of dual accreditation to do a range of things, such as hospitality work during university and thinking broadly how they can use VET as a springboard into other courses. (policy maker)

> VET is a way of linking them into a long-term employment scenario. The system should do this if it can. (policy maker)

In addition, the aim of VET was often narrowed in the consultations to a choice between engagement and pathways. The way this purpose is understood has consequences:

> ...for us [in TAFE] it makes a difference. What is the structure of training if it is about engagement and not pathways? If the object is to provide vocational experience, then what would be the nature of the delivery? (practitioner)

> …our core role [in TAFE] is vocational training. Maybe DoE need to look at engagement and the programs for the students in schools. We can't be everything from academic, to training, to SBATs (practitioner).

Post-school pathways (also 1.1 Impact)

To strengthen post-school transitions, students also need to appreciate the value of vocational qualifications. "Many young people do not understand TAFE and see it constantly demonised" (policy maker).

There was some discussion about whether students should be encouraged into employment directly after completing school or whether they should undertake tertiary studies. Concerns were expressed about the longer-term trajectories of young people with no post-school qualifications: "Going straight into work (after school) is not going to set you up" (industry representative).

Another participant argued for 'a pragmatic view', stating that it is "unlikely that all students will go on to post-school education so the system does have to deliver something for them… Ideally, they should go on, but, if they don't, they need options" (policy maker).

There was also a question about whether part-time jobs in areas such as hospitality provide a stepping stone to full-time work (policy maker).

The barriers to effective pathways identified in the interviews and focus groups included:

- The "unevenness in funding tertiary education has an impact on post-school transitions. The introduction of uncapped university places has led to an increase in higher education enrolments and a decrease in post-school VET enrolments. There is a need for greater consistency in funding to remove distortions" (policy maker).
- Different responsibilities within and between government departments "create barriers for seamless transitions from school-based VET to post-school VET" (policy maker).
- There is "a mis-match between the skills and experience generated by education and training pathways and the skills demanded by employers. A poor perception of existing vocational education outcomes is contributing to a shortage of skills in the labour market" (policy maker).
- There is an inaccurate view on the part of some employers that there were potential problems employing VET graduates and SBATs such as having to pay them second or third year wages (industry representative).

Taster/industry information and programs (see 1.2 Processes)

VET programs, particularly those offered before the senior certificate, can introduce young people to industries and occupations and advice about VET choices in the later school years. Some participants discussed the idea of offering non-award programs as "tasters" (policy maker). "Alternatively,

instead of doing an incomplete qualification, it may be better to do a series of tasters. This would be vocational learning rather than a vocational qualification. Currently, we don't distinguish intellectually between careers, pathways and VET advice" (policy maker).

One employer respondent argued that VET needs to be related to real jobs, even if its purpose is career exploration or gaining experience of industry (industry representative).

There are 'pros and cons' (to non-award programs) (policy maker). Questions were raised about how non-award programs could be introduced, including how they would be funded.

Key points related to Indicator 1.2

1. Schools and careers teachers lack a good understanding of VET opportunities and pathways. Better and more expansive career options need to be explored with students so they can make the best subject and career choices.
2. A broad range of pathways between school, VET, higher education and work is possible, but is not well understood by schools and parents. Such paths may be more 'crazy paving' than linear but can be rewarding.
3. Funding arrangements for education and training to support students post school can affect the options chosen. In particular, VET funding has suffered in comparison to that available for higher education.
4. Taster programs have real value in informing career and study choices.

Indicator 1.3: That VET is attractive to a broader range of senior secondary students

The design of the HSC

Two broad views emerged. One view is that the HSC is too restrictive, and it is difficult to deliver VET within the constraints. The other view is that the HSC is not the barrier and that a coherent program can be assembled if schools take a more flexible approach, of over three years or removing the ATAR requirements. This would allow more VET, such as having one whole VET day, and would allow schools to adopt a more senior college environment in the upper years (Anderson et al. 1980). The more significant issue here is the schools' approach or culture, which has been considered above.

On the other hand, some argued that there are aspects of the HSC that are limiting. According to one principal:

> The work placement is a NESA requirement. Kids love doing it and we're in a supportive community that makes opportunities available, but that doesn't make it easy. Kids are disadvantaged compared to [kids in] other centres (practitioner).

Other pressing concerns were also identified:

> Yes, it does place restrictions on them, but a minor part. The larger part here is the dumbing down of the curriculum, the set things to do for assessment, kids being in the same group – 6 weeks before they can turn on a stove because of OHS issues (practitioner).

Other participants were critical of the rigidity of the HSC. In one focus group it was suggested that the Victorian model of the Victorian Certificate of Education and Victorian Certificate of Applied

Learning should be considered (policy makers) and that NESA requirements need to change. The addition of Year 13, which would allow for a three-year apprenticeship was suggested (policy maker).

However, most of the participants said the HSC is not too restrictive if students are doing a non-ATAR eligible pattern of studies. The restrictions apply when students are seeking an ATAR. The vocational schools have more freedom as they focus on non-ATAR eligible patterns of HSC studies. Unhooking the HSC from the ATAR can be challenging as it can appear too risky to parents and some principals. One employer respondent argued that there is a lack of flexibility in schools rather than in the HSC (industry representative) and that schools and NESA need to work more cooperatively "with industry to solve problems".

One respondent said that fitting VET into the HSC is not difficult. The problem is with staffing and allocation of resources – "a school culture problem again, as the principal will prioritise mathematics or IT rather VET. Academic students are seen as more important" (industry representative).

Some argued that both problems co-exist. "The HSC is too rigid and this creates barriers [such as the scaling rules]. Schools are also too rigid, although some do better than others. A sympathetic school leader is essential" (practitioner, policy maker) – see also Indicator 1.1 above.

Supporting all students, but still too great a focus on the disadvantaged and disengaged?

To be successful, many VET students need additional support, including "kids from vulnerable backgrounds, the first in the family to have a job, [they] need mentors" (practitioner). There are programs that support such VET students, such as the Illawarra YES program, Opportunity Hubs for Indigenous students and the Sticking Together program.

There is also the potential to extend support services (policy maker). "They are disengaged from a learning environment… They may need a break, they don't need another environment where they have failed. They need to be captured, picked up later, when they have the maturity. That's really important" (policy maker).

There were mixed views about the increase in the mandatory school leaving age. It was seen as providing "an opportunity (for young people) to stay on (at school) and mature and develop literacy" (practitioner). However, there is a group of young people who stay at school but are disengaged. (industry representative). Although VET is often presented as the solution for this group, there is a risk that this will position VET as the option of last resort.

There was a concern in the VET sector that some students could be sent to TAFE because schools feel they can no longer manage their behaviour, "but that is not what we are about" (practitioner).

> … when does engagement end and training start? (practitioner)
>
> It is better to address disengagement as early as possible… (we) need something for the ones who aren't going to thrive. (policy maker)

The power and prestige of the ATAR an impediment to change?

In an ATAR program, students "can't do in-depth VET study due to the HSC limitations. This is in contrast to the aspirational approach to VET in the Swiss system. However a sufficient depth of learning in VET enables students to select a variety of pathways post-school" (policy maker).

It was agreed that the ATAR situation is driven by the media. “There is confusion in that the HSC is seen as being the ATAR. Thus, the messaging about ATAR needs to change” (policy maker).

However, the validity of having an exam for a vocational subject so it can contribute to the ATAR was questioned. “I don’t see that sitting an exam in any subject is a way of judging what a student has learnt” (practitioner).

One of the challenges is that students seeking an ATAR are faced with two sets of requirements – one for the HSC and one for NESA. “They don’t see the difference. Publicity is needed to ensure students are being taught the right thing. VET is often ignored in that HSC monitoring. We need to know what is happening in those courses at well. They may look at the Training Package, but NESA has a broader curriculum around the subject” (practitioner).

One employer respondent argued that VET was invaluable in the development of broader skills and that all students should do VET with structured workplace learning as a compulsory component of their HSC to develop the required soft skills and competencies. This could be incentivised with bonus points in the HSC or ATAR (industry representative).

Reviewing the HSC curriculum?

The outcome of the NSW Curriculum Review is an important consideration, potentially disrupting recommendations from the review of VET in secondary schools (policy maker).

The Curriculum Review was considered by some to provide an opportunity to create the type of positive disruption needed for VET for school students “to be reimagined” (policy maker). Findings from the interim report suggesting there are unhelpful and rigid distinctions between academic and vocational courses and too much emphasis on ATAR and university entry support this view. The opportunity to rethink the blend of vocational and academic learning was also raised (policy maker). “The HSC needs to be more open to the recognition of a broader range of achievements… A student may wish to do hospitality in their HSC because they have a passion for food or cooking but aspire to university” (policy maker).

Part of the issue was seen as the need to fit in with the HSC. “NESA say you can do that but on the ground it is difficult. You don’t get the cohort size. It’s also a matter of timing and how it fits with the HSC pattern of study” (practitioner).

Key points related to Indicator 1.3

1. There is some questioning over the extent to which the present HSC enables or inhibits VET studies. Some suggested that a program such as the Victorian Certificate of Applied Learning might be introduced as an additional alternative to the HSC. Extending VET studies at school to three years was also raised.
2. Working towards an ATAR score may inhibit VET take up for some cohorts. Messaging regarding its importance may need to change given other post-school pathways and options.
3. A review of the current HSC to improve options and flexibility may be a positive step.
4. There may still be too great a focus on the value of VET for the disadvantaged and disengaged, rather than having value for all students.

Industry relevance

Indicator 2.1: That VET meets the needs of the labour market

An important consideration is how schools can best prepare young people for a rapidly changing labour market. There were a range of views, including:

> …do you need 21st century skills as opposed to deep content knowledge before you can become a creative thinker? I don't think there is an answer, it is a debate that we are having. (practitioner)

> Employers oppose … more general VET. They are also focused on pathways into employment rather than pathways into further education. (policy maker)

> Employers say that young people are not ready for work… (they don't) know about turning up on time. (policy maker)

Attitudes, expectations and knowledge about employment opportunities were also identified as important:

> …even when industry has done its bit and taken on the kids, there are issues with kids not wanting to work in certain jobs. They need transparent information about work, salaries and progression, such as work in warehousing (policy maker).

Several participants discussed the idea of developing new types of vocationally oriented programs for senior secondary schooling. These would be prestigious, developing both academic knowledge and vocational skill, to prepare young people for post-school pathways at different occupational levels (policy maker).

A participant argued that we "are developing the whole person, supporting them as productive people in Australian society, not as employees for a particular task" (policy maker).

The key issue is that there may be a disjuncture between what some local employers will expect of those undertaking VET. Some expect immediacy of application, while others acknowledge that the programs should be broader in scope, preparing them not only for work in a particular occupational area, but also imparting skills and capabilities that will be useful to the student in the longer term. These two views are not easily reconciled, but are overcome if there is a strong relationship between the schools, local industry and the employers offering structured workplace learning or employment post school.

Industry expertise of those delivering the programs (2.1 Input)

There was also a view that there "is a shortage of suitably qualified VET teachers" (policy maker). This is due to the complexity, the level of skill required and the status of VET teachers in schools (practitioner).

> One of the chestnuts is that school teachers can't teach VET because they're not from industry, and also industry doesn't understand teens (there is a bit of truth in both). Yes, (we) can do it better – provide support for teachers. There are opportunities for TAFE and schools to work closely together, tried many times but it doesn't seem to have worked. The constraint of regulation, assessment, ASQA, accreditation means there is a focus on compliance rather than good pedagogy. (practitioner)

It was reported that some school teachers do not understand competency-based training, on which VET teaching and learning approaches are based. "They try and teach VET like any other subject… VET teachers in schools feel hard done by because they have to update their quals all the time" (practitioner).

Key points related to Indicator 2.1

1. VET delivered to secondary students can play a role in preparing students for the future labour market, but the broader needs of students and the immediate needs of some employers need to be reconciled.
2. VET teachers need both vocational currency and to be able to understand the needs of school students engaged in VET, especially those in TAFE and other VET providers. In addition, the same would apply to those workplace supervisors engaged in supporting structured workplace learning – see Indicator 2.2.
3. School teachers may need to understand competency-based training better, especially how it differs in pedagogy and assessment.

Indicator 2.2: That there is a strong element of structured workplace learning (2.2)

The mandatory work placements were regarded as important and very successful. It is the aspect of the qualification that was reported to be "what students value the most" (policy maker).

However, arranging suitable work placements is more challenging in rural and regional NSW:

> In regional area, it can be very difficult to find places, the town may not have a café… (for) externally delivered VET, [students] have to organise transport, and often there is no public transport to the next town. [With] hospitality, there is the issue of shift work. There is a more limited range of workplaces. Hard to get placements or experience if there is a skills deficit in the region… no plumbers in an area so you can't give a student experience as a plumber (policy maker).
>
> Some employers are really stretched. (policy maker)
>
> I source my own placements, easier way to do it. There were too many placements with retail, so I created my own placements. Taking students to cattle shows, they are preparing stock for competition. Some sites are not fulfilling the links with specific units of competency. You may find 2–3 willing farmers but the classes are up to 20 students… To take students to bigger towns… [involves] a bus going to work placements, supervising at night. There may be 3–4 students doing a variety of courses, and the same farmers assisting and no other opportunities. (policy maker)

A rural work placement provider suggested that alternative approaches to structured workplace learning, where employers could not be found, could include bringing students together from different schools in a centre or central location to do a supervised project, take part in visits, listen to industry talks, and take practical, hands-on master classes. This would remove the need to travel extensively for structured workplace learning.

Issues were identified with VET in the trade areas, particularly in construction. Industry does not consider the work placements provide enough time on the job. For example, a Certificate II in a trade area is equivalent to the first two years of the apprenticeship. There is a big difference in the

amount of time spent in the workplace. This situation disadvantages students. “It may be necessary to develop a Certificate II that does not articulate into the apprenticeship” (practitioner).

A participant from an educational organisation reported that some employers do not appreciate the difference between the mandatory work placement and work experience.

Most participants reported that the WPSPs play an important role (policy maker). “Brokers for work placements do a really good job. They have good industry connections, and without them schools would struggle (but) they don’t deal with SBATs. There is an opportunity to expand the WPSPs” (industry representative). One reported a more mixed experience (policy maker).

It was suggested that there should be an opportunity to recognise students’ part-time jobs as the mandatory work placement. The pay received is an important aspect of learning about work (practitioner). This approach is best encompassed in the large traineeship programs offered by employers such as Reece and McDonalds, which provide high quality training as part of their traineeships and benefit from employee stability, retention and skills, using young people’s capacity and need for part-time work in a mutually beneficial arrangement (industry representatives).

SBATs as a component of structured workplace learning?

There was strong support for SBATs with many participants calling for an expansion in the program. Although NSW has a relatively low number of SBATs compared to other states with fewer than 500 in 2018, the completion rates are very good.

It was reported that employers prefer work placements to SBATs. Many of the participants considered that SBATs are not appropriate in some vocational areas such as building trades and mental health (policy maker). But this was not a universal view. One building trade employer expressed a desire to grow their SBATs as the completion rate for this group was very high.

The following challenges were identified:

- SBAT coordinators play an important role in connecting schools and employers and were considered by many to be successful. Another participant found the relationship between schools and employers to be difficult – “we have employers who have no idea how to access students, schools say we have students who have no idea how to access employers… I see that link improving now”. (policy maker)
- It can be difficult to find employers, particularly in rural and regional areas:

  > …can’t always find employers, we could have more than 30 SBATs if the employment was there. Half or so are primary industry and plenty of farms, but 100 per cent of NSW is in drought, it’s pretty bad around here. (practitioner)

- Many young people are not aware of this option (industry representative).
- It can be difficult to combine work and school. The regular school timetable makes it difficult to fit in blocks of work (policy maker). “Sometimes principals and leaders need to be more creative, and curriculum delivery is rigid” (policy maker). The vocational schools structure their timetables to fit with SBATs and the mandatory work placements.
- Two large employers of trainees, however, pointed out students are working part-time and can do this at times that benefit both the students and employers, such as after school and on weekends, when students wish to work and when employers can benefit from lower rates paid to younger workers compared with penalty rates for adults on weekends and after hours.

- Students can only progress to the end of the first-year apprenticeship, even if they do the SBAT for two years. Some young people would be better off entering straight into the apprenticeship (raised in most interviews and focus groups).
- Some students are doing an SBAT and enough subjects to be eligible for an ATAR, which is a very heavy load. Fear of missing out on an ATAR and limiting post-school options appears to be the motivation. It was reported that this is often driven by principals and parents who lack confidence in vocational pathways (policy maker).
- Complexity of the process – "we need to get everyone in the room. This is expensive. The number of SBATs in Queensland is higher than in NSW. One of the issues is that in NSW students have to start in Term 1. If an employer wants to take on an SBAT later in the year, they can't, it is inflexible. In Queensland you can enrol at any time" (industry representative). One employer criticised the time-consuming process of manual entry of trainee data for NESA in NSW, in contrast to their trainees in other states where it links up with VET databases.

> … (SBATs) are difficult to set up, it's hard to get industry involved, and there are problems with young people and their perception of local industry. Difficult to implement but when it is implemented, it works really well. (policy maker)

Key points related to Indicator 2.2

1. Structured workplace learning is an important, successful and highly valued activity.
2. Finding suitable work placements can be problematic, particularly in rural and regional areas for both structured workplace learning and SBATs. Alternative approaches should be considered.
3. Employers may not fully understand the process and their obligations both in structured workplace learning and SBATs.
4. Work placement service providers play an important and valued role in the structured workplace learning process.
5. Part-time work undertaken outside of structured workplace learning could perhaps be better used in VET programs.
6. SBAT programs could be expanded, but there are administrative issues and complexities associated with them.
7. Attaining an ATAR as well as undertaking an SBAT has workload implications for the student, and attaining an ATAR may be of undue influence.

Indicator 2.3: That there are strong links between schools, VET and employers and other key stakeholder groups at the local level

The relationship between schools and local employers is a key factor determining the effectiveness of the VET programs. (policy maker)

Where the employers are connected to the schools, there are better outcomes. (industry representative)

Dedicated VET or partnership staff can play an important role (industry representative). The recent appointment of Regional Industry Education Partnership officers will strengthen the link between industry and schools, focusing on the industry side (policy maker).

Some respondents argued that it is important to look at what is successful and identify the critical factors. “Is it the personalities or are there (other) conditions for success?” (policy maker).

Strong connections between schools and employers were observed where the employers were also the RTO providing a traineeship, as structured workplace learning was then an unproblematic part of the student’s part-time work, the training and structured workplace learning took place outside of school hours, employers were invested in the design and delivery of the curriculum, and employers benefited from access to reliable, skilled labour (industry representative).

In cases where structured workplace learning did not pertain to traineeships (as is the case for the majority of VET students), the need for a coordinated approach to structured workplace learning delivery was strongly emphasised and arguments were made for the expansion of the role of WPSPs to include more promotional activities, a stronger role in providing independent careers advice (external to schools AND post-school) and a greater role in negotiating traineeships and apprenticeships (SBATs and post-school) to avoid duplication and disintegration of resources and services (work placement providers). Employers, especially, were regarded as needing this support, without which they would be reluctant to provide structured workplace learning or traineeships.

Key points related to Indicator 2.3

1. As indicated here and elsewhere the quality of relations and partnerships is critical. This is particularly so with local employers, but also involves the relationships with other stakeholders such as TAFE.
2. Having dedicated VET or partnership staff is important.
3. Coordination of services linking schools and employers, especially in the area of structured workplace learning, is essential.

Quality

Indicator 3.1: That all senior secondary students have access to quality VET courses (3.1)

Attitudes to the quality of offerings are positive

All participants were very positive about the quality and relevance of VET programs for secondary school students. It was reported to be “a really good thing” (policy maker). This view was shared by participants from an employer body: “(There is) high value in VET, especially with the strong industry partnership. There is value for students and for employers. When employers put in, there is workforce development and student development” (industry representative). It was argued that VET is an important curriculum option because more academic courses do not deliver practical skills such as effective communication (policy maker).

But there are issues with the quality of delivery of VET

The quality of delivery across different schools was reported to be uneven by some participants (industry representative). “Industry has a concern about the quality of the qualification and that degrades the national qualification” (practitioner). It was reported that school and TAFE teachers were not the same. Not all schools had access to “approved workshops” such as commercial kitchens (practitioner). Concerns with quality were not shared by all participants. Department participants outlined the quality assurance approach based on internal audits by highly trained teachers.

One participant argued that the potential of VET has not been fully realised: “There used to be a lot of energy about VET in secondary schools. It was innovative. However, it hasn’t evolved and ‘needs some disruption’. Initiatives have not had the desired impact” (policy maker).

Two of the employer respondents argued the main issue with quality was the poor mathematics skills of VET students rather than the quality of the VET programs themselves. This was especially the case in the building trades where measurement and calculation were regarded as key competencies. They also argued that the workplace experience and maturity gained through participation in a VET program were more important than any specific occupational skills gained and that completion of the certificate was a marker of maturity.

Key points related to Indicator 3.1

1. VET programs were seen as mostly high quality and valuable.
2. Quality is enhanced when there are strong school–employer/industry partnerships.
3. However, the quality of delivery is variable, and can affect its acceptance by employers.
4. Better maths skills were an essential ingredient in the delivery of VET programs, especially in the building and automotive trades, but not only in those occupational areas.
5. Some disruption may be needed for VET programs to improve their impact.

Conclusion

In summary, the key points to emerge from the stakeholder interviews were:

Access and participation

- There has to be a clear understanding of the purposes of VET delivered to secondary students, which are diverse, as well as how it benefits schools and their students.
- VET delivered to secondary students needs to be accessible and attractive to *a broader range of students* regardless of ability level, to impart knowledge of work and industry. It must not be seen purely as a program for disengaged students and for those of low academic ability not destined for a higher education pathway.
- VET has a parity of esteem problem. Schools need to recognise it as a potentially valuable study option and ensure that students and parents consider its value in terms of career options and pathways to further study and rewarding work.
- Schools in rural and regional areas may be particularly challenged in offering viable and relevant VET programs. Partnerships with local VET providers and employers, as well as making best use of the resources of the local community, are key. Such programs can also help keep young people in the area post school.

- Concerns were raised about available data to support any best practice indicators.
- School leadership and culture are critical to the successful development and implementation of VET programs.
- The metrics of 'success' in schools are important as they can shape the nature and extent of VET programs. They need to be broadly conceived, as 'success' takes a variety of forms. The metrics may also affect resource allocation.
- Lack of flexibility in timetabling, curriculum offerings and delivery approaches also affect the success of VET. The approaches adopted need to be student centred, while being mindful of employer needs.
- Schools and careers teachers lack a good understanding of VET opportunities and pathways. Better and more expansive career options need to be explored with students so that they can make the best subject and career choices for themselves.
- A broad range of pathways between school, VET, higher education and work is possible, but are not well understood by schools and parents. Such paths may be more 'crazy paving' than linear, but can be rewarding.
- Funding arrangements for education and training to support students post-school can affect the options chosen. In particular, VET funding has suffered compared to that available for higher education.
- Taster programs have a real value in informing career and study choices.
- There is some questioning over the extent to which the present HSC enables or inhibits VET studies. It was suggested that an alternative to the HSC should be considered. Extending VET studies at school to three years was also raised.
- Working towards an ATAR score may inhibit VET take up for some students. Messaging regarding its importance may need to change given other post-school pathways and options.
- A review of the current HSC to improve options and flexibility may be a positive step.

Industry relevance

- There may still be too great a focus on the value of VET for the disadvantaged and disengaged, rather than having value for all students.
- VET can play a role in preparing students for the future labour market, but the broader needs of students and the immediate needs of some employers need to be reconciled.
- VET teachers need both vocational currency and to be able to understand the needs of school students engaged in VET, especially those in TAFE and other VET providers. In addition, the same would apply to those workplace supervisors engaged in supporting structured workplace learning – see Indicator 2.2.
- School teachers may need to understand competency-based training better, especially how it differs in pedagogy and assessment.
- Structured workplace learning is an important, successful and highly valued activity.
- SBATs are highly valued as an effective and engaging approach to VET.
- Finding suitable work placements can be problematic, particularly in rural and regional areas for both structured workplace learning and SBATs. Alternative approaches should be considered.
- Employers may not fully understand the process and their obligations both in structured workplace learning and SBATs.
- Work placement service providers play an important and valued role in structured workplace learning.

- Part-time work undertaken outside of structured workplace learning could be better used in VET programs.
- SBAT programs could be expanded, but there are administrative issues and complexities associated with them.
- Attaining an ATAR as well as undertaking an SBAT has workload implications for the student, and attaining the ATAR may be of undue influence.
- The quality of relations and partnerships are critical. This is particularly so with local employers, but also involves the relationships with other stakeholders such as TAFE.
- Having dedicated VET or partnership staff is important.
- Coordination of services linking schools and employers, especially in structured workplace learning, is essential.

Quality

- VET programs were mostly seen as high quality and valuable.
- Quality is enhanced when there are strong school–employer/industry partnerships.
- However, the quality of delivery is variable and this can affect its acceptance by employers.
- Better maths skills are an essential ingredient in the delivery of VET programs, especially in the building and automotive trades, but not only in those occupational areas.
- Some disruption may be needed for VET programs to improve their impact. The recently released interim report of the NSW Curriculum Review may provide some impetus for this disruption.

APPENDIX D – REFERENCES

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