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Dr Peter Shergold AC  
Chancellor, Western Sydney University  
Chair  
The Review of Senior Secondary Pathways into Work, Further Education and Training  
By email: [PathwaysReview@education.gov.au](mailto:PathwaysReview@education.gov.au)

Dear Dr Shergold,

I am pleased to provide the University of Sydney's attached submission in response to the excellent background and discussion papers the Senior Secondary Pathways Review released recently. We have prepared our submission with input from researchers from our School of Education and Social Work and are grateful for their significant input at a very busy time of the academic year.

As the background paper notes, Australia's economy and labour market have undergone profound change over the last three decades, with the transformation in the make-up of the economy and the nature work predicted to gather pace over the next decade.

With 90 per cent of employment growth in Australia expected to be in roles that require a tertiary-level qualification and millions of traditional lower-skilled jobs to be made obsolete, it is imperative that we minimise the numbers of Australian students who do not make the transition successfully from senior secondary school to further study and employment. As our submission highlights, the fiscal and social costs to individual and taxpayers of our young people failing to make the transition from school to work are enormous. A renewed focus on well-designed and resourced, evidence-based strategies, is required to target the complex needs of this group of students who are most at risk of marginalisation due to technological and other disruptions.

We agree with the Review Panel that it is critical that all Australian students leave our senior secondary school system with strong the foundational knowledge, skills and the personal attributes they will need to succeed in further studies, training, employment and life. They and their families also need access to high-quality, accurate and more personalised advice – well before the final two years of secondary school – about their high school subject choices, tertiary-education and training options and key trends and likely directions for the future of work.

Thank you for the opportunity to be part of this important review, which we look forward to engaging with further as it begins to develop its advice and recommendations for the Government.

Your sincerely,

(Signature removed)

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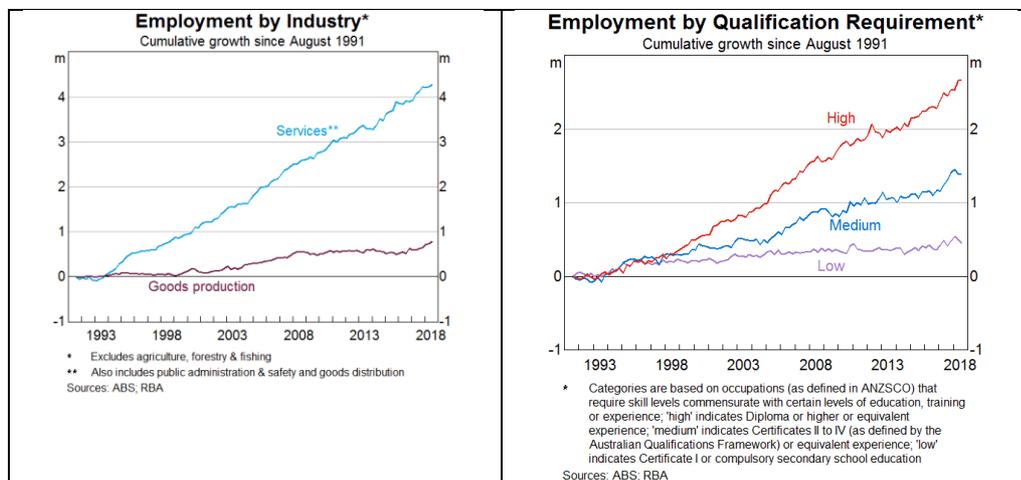
## University of Sydney submission to the Review of Senior Secondary Pathways into Work, Further Education and Training, December 2019

### Responses to the Review's consultation questions

#### 1. What are the essential skills and knowledge with which young people should leave secondary school in order to enhance their lifetime career prospects whilst meeting Australia's future workforce needs? Whose job is it to make sure they acquire them?

Understanding the skills and knowledge our young people will need to enhance their lifetime career prospects whilst meeting Australia's workforce needs is important. However, given what we know about local and global trends in the nature of work, it is alarming that so many young Australians still do not complete secondary school and make the transition successfully to tertiary studies, training and employment. Responsibility for ensuring that secondary school students understand the new work realities – and make well-informed study and career choices – should be shared between governments, schools, teachers, parents and guardians, tertiary education providers and employers. Each has an important and complementary role to play as part of a more integrated and collaborative national strategy and approach.

The Review's background paper notes at page 4 that the role of post-school education is becoming ever-more important in Australia, with predictions that 90 per cent of employment growth to 2023 will be in jobs that require skills levels 1 (bachelor degree or higher) or 4 (Certificate II or III). This will see a continuation of the transformations the Australian economy and labour market have experienced over the last 30 years – from goods production to services industries and to jobs that require higher level qualifications – as illustrated clearly by the following two charts from the Reserve Bank of Australia.



We agree strongly with the Governor of the Reserve Bank's assessment made five years ago that Australia's future competitiveness and prosperity will depend on:

- our national capacity for high-level cognitive skills and the ability to understand and solve complex problems;
- having people who are curious, able to grasp new opportunities, and able to transform and interpret information in new ways using new technology;
- the strength of our workforce's interpersonal skills to provide the premium services that will attract premium prices in the global marketplace; and
- our national capacity to develop a culture that promotes and rewards creativity, flexibility, innovation, excellence, entrepreneurship and risk taking.<sup>1</sup>

<sup>1</sup> Philip Lowe, Deputy Governor, Reserve Bank of Australia (Nov 2014) [Address to the Australian Business Economists \(ABE\) Annual Dinner](#)



Yet far too many young Australian students still do not complete secondary school and transition successfully to tertiary education or employment. The result is enormous financial and social consequences for these young people, their families, governments and society. According to Victoria University’s Mitchell Institute, roughly 25 per cent of Australia’s 19 year-olds (38,000 people in 2014) still do not complete Year 12 or equivalent, with a similar proportion of 24 year-olds (46,000 approx.) not actively engaged in work or study. The Institute points out that this situation is not only at odds with our national goals but represents a major lost opportunity for Australia and the individuals involved. It estimates that the lifetime fiscal cost to the Australian taxpayer of these lost opportunities is more than \$30 billion for each cohort of early school leavers and disengaged young people. It also estimates that the lifetime social costs (attributable to the lower earnings of these young people across their working lives, as well as the economic impacts in terms of crime and marginal tax burden) is more than \$70 billion for each cohort of the two groups.<sup>2</sup>

Like many universities, we are giving much thought and effort to ensuring that we are preparing our graduates to thrive professionally and as members of the community.<sup>3</sup> Based on the comprehensive research we completed when developing our new undergraduate curriculum and graduate attributes, we predict that to contribute effectively in today’s rapidly changing world, our graduates will not only need deep disciplinary knowledge, but well-developed skills for critical thinking, problem solving, communication and teamwork. They will also need the capabilities for independent research and lifelong learning to update their knowledge, and skills for information literacy. Moreover, they will benefit from foreign language acquisition, and from developing the flexibility and breadth of perspective necessary to interact productively and creatively across cultural, disciplinary and professional boundaries. They will need, too, the personal resilience to deal with uncertainty and failure, and the sureness of personal values and clarity of social purpose to make ethical responses to whatever challenges confront them in their workplaces and communities.

To these ends we have developed and are implementing the following new set of qualities for our graduates and are renewing our degree and curriculum framework to yield these qualities:

<b>University of Sydney graduate qualities</b>	<b>Purpose</b>
<b>Depth of disciplinary expertise</b>	To excel in applying and continuing to develop disciplinary expertise
<b>Broader skills:</b> - <b>critical thinking and problem solving</b> - <b>communication (oral and written)</b> - <b>information/digital literacy</b> - <b>inventiveness</b>	To increase the impact of expertise, and to learn and respond effectively and creatively to novel problems
<b>Cultural competence</b>	To work productively, collaboratively and openly in diverse groups and across cultural boundaries
<b>Interdisciplinary effectiveness</b>	To work effectively in interdisciplinary (including inter-professional) settings, and to build broader perspective, innovative vision, and more contextualised and systemic forms of understanding
<b>An integrated professional, ethical and personal identity</b>	To build integrity, confidence and personal resilience, and the capacity to manage challenges and uncertainty
<b>Influence</b>	To be effective in exercising professional and social responsibility and making a positive contribution to society

University of Sydney, *Developing a distinctive undergraduate education, Strategic Planning for 2016-20, Discussion Paper No.1, p.10 June 2015*

<sup>2</sup> The Mitchell Institute, [Costs of lost opportunity in Australian Education](#), Report No. 02/2017

<sup>3</sup> See for example, University of Sydney (June 2015), [Towards a distinctive Sydney education: a discussion paper](#), October 2014 and University of Sydney, *Developing a distinctive undergraduate education, Strategic Planning for 2016-20, Discussion Paper No.1.*



However, the capacity of universities to contribute to Australia's economy depends heavily on the quality of the 'pipeline' of students graduating from our schools and vocational education systems. With an estimated 75 per cent of the fastest growing occupations requiring high-level science, technology, engineering and mathematics skills, we have been very concerned that enrolments in these critical disciplines have been declining while Australia's performance against international benchmarks for school-aged literacy, numeracy and science continues to remain flat or in decline.

It was partly due to the continuing downward trend in secondary school students completing higher level mathematics courses in NSW that we announced in 2016 the introduction of maths prerequisites for more than 60 per cent of our bachelor degrees from 2019. HSC course enrolment data indicate that this move has been associated with a welcome 10 per cent increase from 2016 to 2018 in the proportion of students enrolling in more advanced mathematics units (Mathematics, Mathematics Extension 1 and 2).

Finally, we have many researchers from diverse disciplines who have been examining the challenges facing Australia's students and education system and who have been working closely with policy makers to design solutions. By way of example, in 2018 a multidisciplinary team of our researchers completed work for the NSW Department of Education on the future needs of citizens in a world disrupted by AI and technology, and what this might mean for Australia's system of education. We draw the full report to the Review's attention, but in summary its key findings were:

- Students need to develop more than just 'soft' or 'general employability' skills;
- 21st century skills are best acquired through domain-specific knowledge;
- The historical divide between vocational and academic domains within schools should be narrowed; and
- Education systems and society more broadly needs to consider what change is required to help meet these future challenges.<sup>4</sup>

## **2. Are current arrangements both in schools, at work, and in tertiary education supporting students to access the most appropriate pathways? Are routes sufficiently flexible to allow young people to easily change direction?**

For a range of historical, structural, regulatory and funding reasons, Australia's tertiary education system is highly fragmented, complex and can be difficult for some students to navigate effectively. Choice as a market driver is an inequitable practice as educational research reveals that students from affluent and middle-class families manage choice effectively, whereas students from working class, low SES and other disadvantaged struggle to navigate the system.<sup>5</sup>

Jenny Chesters, in her 2018 research on educational trajectories in ACT senior secondary colleges found that as transitions between education and employment become more complex for young people, the link between parental education and educational attainment becomes stronger. Her research found that highly educated parents successfully guide their children through the complex post school options available.<sup>6</sup>

Post school educational pathways are currently skewed towards higher education options, at the expense of alternative providers including TAFE and Community Colleges. Research by Lisel O'Dwyer and Ian White for the National Centre for Vocation Education Research (NCVER) published in 2019 shows that VET is being 'crowded out' by higher education, a development

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<sup>4</sup> <https://education.nsw.gov.au/our-priorities/innovate-for-the-future/education-for-a-changing-world/resource-library/research-report/future-frontiers-analytical-report-preparing-for-the-best-and-worst-of-times>

<sup>5</sup> Connell, R.W (2003) *Working-class families and the new secondary education*, Australian Journal of Education, Vol.47. No.3, 2003. 235-250

<sup>6</sup> Chesters, J (2018) *Educational trajectories: parental education, pathways through senior secondary college and post school outcomes in the Australian Capital Territory*, International Journal of Training Research, 16:2, 19-33. DOI: 10.1090/14480220.2017.1412992



that may signal overqualification. In a tight labour market, overqualification may reflect credentialism and qualification inflation, yet not in the non-professional fields.<sup>7</sup>

The greatest rise in VET qualifications has been at diploma level, although recent enrolments point to decreasing enrolments in diplomas and certificate IV qualifications – potentially due to the changes to student loans during this period impacting on the relevance of higher-level VET credentials in the workforce. Recommendations from this research on qualifications indicate that future VET provisions will need to be underpinned by certificate-level VET for school students, entry-level roles, trades and non-professional occupations in high-employment growth sectors such as human services.

Although younger workers are more likely to hold higher education qualifications, previous research has suggested that they may benefit from additional VET qualifications to compensate for their lack of experience and industry-specific skills. Future demand for VET may also be driven by the increasing need for workers to reskill and upskill, by undertaking training based on skill sets or micro-credentials, rather than completing full qualifications. Further NCVER research indicates that VET in Schools can be repositioned as a foundational pathway to further education and training – not as an educational end point.<sup>8</sup>

The introduction of the Unique Student Identifier (USI) and rules associated with government supported places in post-secondary education and training options limits the scope of what young people can choose, while the notion of the managed market means that VET providers struggle to provide the flexible programs needed to address student need. The cost to students of exercising choice in the post school learning environment (including changing their minds mid-way through programs) is increasingly beyond the reach of many more marginalised students and their families. It would be valuable to understand and address any unintended adverse consequences of the otherwise very valuable USI.

The recent open market policy in relation to the VET system, in particular TAFE, has eroded public confidence in what was once a comprehensive tertiary option for young people and their families. The TAFE system requires considerable reinvestment to become a sustainable VET pathway option for young people. TAFE and schools share a successful history of effective collaboration (throughout the secondary years) and the development of successful vocational pathways for young people, and especially marginalised students.

Joint School/TAFE programs are mutually beneficial, with staff from both sectors sharing workplace cultures. Supporting students through collaboration rather than competition works in the best interests of young people and their communities. Strengthening recognition pathways between TAFE and universities also offers an essential route for many young people. Identifying experts on recognition content and procedures is crucial for students to navigate this option. A consistent pathways approach is required to help maximise outcomes for students. Career pathways that are embedded in the curriculum earlier in the secondary school experience and delivered by qualified VET practitioners should be considered.

### **3. What are the barriers to allowing all students to have equal access to the pathways that are available?**

**Equal or equitable access?** Equity imperatives require an integrated whole of government, employer and community response to creating equitable access for students from the most marginalised backgrounds. Equal access as a policy objective suggests the creation of a uniform service for all students, not necessarily an integrated effort to address inequity

<sup>7</sup> O'Dwyer, Lisel & White, Ian (2019) The dynamics of qualifications: implications for VET NCVER Research report 22 November 2019 <https://www.ncver.edu.au/research-and-statistics/publications/all-publications/the-dynamics-of-qualifications-implications-for-vet>

<sup>8</sup> Clarke, Kira (2013) Entry to vocations: strengthening VET in Schools National Vocational Education and Training Research Program Research Report, <https://www.ncver.edu.au/data/assets/file/0015/8052/entry-to-vocations-2678.pdf>  
Clarke, K & Polesel, J (2013) Strong on retention, weak on outcomes: the impact of vocational education and training in schools, *Discourse: Studies in the Cultural Politics of Education*, 34:2, 259-273, <https://doi.org/10.1080/01596306.2013.770251>



experienced by students due to their individual and community circumstances. The barriers to equitable access for many students would remain entrenched.

These barriers have been widely researched and require an integrated public, industry and education policy framework to work towards true equity of access or effective access and equity. Marginalised students, particularly those students on income support, face complex barriers to accessing and participating effectively in VET, higher education or work. These students, their families and communities can share the characteristics of complex disadvantage that impact on their pathways to further education and training.

Local communities have identifiable characteristics in their complex needs and multiple dimensions of disadvantage. For example, in the Sydney region:

- Some areas have an over representation of people who are homeless and at risk of homelessness. This includes people sleeping rough, people living in crisis accommodation and boarding houses, people with disabilities, ex-offenders, people with chronic drug and alcohol issues, youth at risk, women at risk of domestic violence and the isolated social housing residents.
- Other areas identify intergenerational disadvantage where families may have experienced welfare dependency and unemployment for generations. Their disadvantage is complex and entrenched and costly in terms of community safety, welfare payments, drug and alcohol misuse, health and mental health costs.
- Yet others communities socially isolated and excluded, with markedly high numbers of people living alone. Many of these can be men who have mental illnesses, drug and alcohol issues, poor health, are unemployed and welfare dependent.
- While some have high concentrations of refugees recovering from trauma. These people are highly literate to non-literate in their own languages and have often experienced interrupted schooling. Some have high level spoken English language but little written English proficiency.

For marginalised communities like these across Australia, where VET provision is critical, policy responses must be flexible enough to contextualise programs in a meaningful and productive way to ensure the most effective social, cultural and economic outcomes for students and their families. Don Zoellner highlighted further barriers to equitable access to VET in his recent research on student choice and lifelong learning:

- despite the advent of new delivery technologies, VET delivery is increasingly concentrated in fewer training packages;
- the introduction of market forces has shifted training (and RTOs) into major cities and out of regional and remote localities, removing training completely for some residents;
- VET delivery is being shifted from the most disadvantaged to the most advantaged; and
- access, equity and the support for lifelong learning have not been achieved despite the stated policy intentions.<sup>9</sup>

Continued research to inform effective policy responses is required to address these barriers, especially in relation to enabling the architecture of senior schooling to explore effective ways of transforming these learning contexts.

We note that the discussion paper proposes more educational rigour in VET provision. There needs to be a recognition of the need for professionally qualified VET educators. For VET delivery to be more rigorous there is a need to support educators gaining higher (university) level teaching qualifications, alongside professional development programs designed to support

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<sup>9</sup> Zoellner, D (2019), *Student choice and lifelong learning: who you gonna call?* Paper delivered at the National Vocational Education and Training Research Conference, <http://hdl.voced.edu.au/10707/512116>



students more effectively. More rigour should not equate to more onerous teaching, learning and assessment practices.

Finally, not all VET learning needs to be aligned to the job market. Notions of critical inquiry and mindful learning, creating engaged citizens, require more than learning for assessment, testing and standards. Community-based learning opportunities provide a non-linear pathway for student engagement and pathways. For many disadvantaged students, learning success can happen through community based social enterprises and local community building programs. However, for such approaches to succeed, they need to be carefully planned, well-resourced and governed.

#### **4. What is being done well to help students make effective and well-informed choices? We wish to examine career education; different schooling models; vocational and work-related learning in schools; and industry-education partnerships.**

The quality of career education and counselling in Australian schools varies. It can tend to be very process oriented: informing students of resources to navigate information and databases; helping students identify interests, job descriptions and related courses; and perhaps teaching decision-making models that rely on outdated notions of linear education and training pathways that can be followed towards a standard career outcome.

The work that the Foundation for Young Australians (FYA) and leading researchers like Professor John Buchanan and colleagues at the University of Sydney have undertaken on skills and job clusters and unconventional career pathways is compelling and we commend it to Review. For example, FYA's *New Work Mindset* report of 2016 found that when a person trains or works in one job, he or she acquires skills that are relevant to many other roles, identifying seven job clusters (informers, carers, artisans, designers, generators, coordinators and technologists) where people acquiring skills in one job can readily apply their skills and knowledge to jobs that may be located in a completely different sector.<sup>10</sup>

These approaches signal a new data-informed approach to understanding career preparation, career development, and the non-linear dynamics of the labour market. Indeed, this work pushes towards new ways of characterising the many forms that a 'working life' might take. There are therefore exciting opportunities to provide students with better information on the changing demands for capabilities in the labour market and on recent trajectories from study to work so they can make better informed choices. These data can also underpin more sophisticated models for advising students on how to understand and articulate their strengths, aspirations and options for building the capabilities to realise them. For example, at the University of Sydney, we have worked with a labour market analytics firm to understand the career pathways of graduates of our various undergraduate degrees, including labour market outcomes for specific skills clusters. These data will underpin our approach to supporting career development throughout a student's period of study with us.

The core abilities required for informed career decision making are the "executive functions" of working memory, cognitive flexibility and impulse inhibition, which generally develop in late adolescence and early adulthood. These abilities empower students to engage in planning, prioritising, problem solving, verbal-reasoning, sustaining and switching attention – all involved in both decision-making and learning. These functions also contribute to optimism and future orientation.

Those who have difficulty with these capacities include some young people with slower development, people with learning difficulties, those with learning, other neurological or intellectual disabilities/disorders and people dealing with chronic stress, anxiety or worries (including the chronic stress of social disadvantage).

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<sup>10</sup> Foundations for Young Australians/Alpha Beta, *The New Work Mindset: 7 new job clusters to help young people navigate the new work order*, November, 2016 <https://www.fya.org.au/wp-content/uploads/2016/11/The-New-Work-Mindset.pdf>



This type of learning context 'has a clear and demonstrable negative effect upon executive functioning and ..... ability to learn, make decisions and plan'.<sup>11</sup>

Chronic stress impacting students' cognitive functioning can arise from homelessness, problems with drug or alcohol dependency, domestic violence, sexual assault, torture/trauma, refugee detention, bullying, depression, anxiety, and other mental health problems or disorders which impact on both cognitive functioning and interpersonal behaviour/relationships. Students who left school early or missed significant portions of schooling may not have developed these critical executive functions, regardless of whether they have a disability.

As noted above, effective careers advice needs to focus on not only the end pathway but needs to encompass the talents, aspirations, learning styles, capacity for creativity, learner maturity, capabilities and access to diverse learning opportunities. This style of learning needs inclusive environments where students are challenged, stimulated, nurtured, encouraged, discuss their learning and also have any physical and psychosocial barriers professionally addressed.

"Taster courses" in vocational areas offer students the opportunity to try different areas but crucially connect them with TAFE, for example, giving them a 1:1 connection with a teacher or co-ordinator who can assist them to navigate the system, reflect on career areas and link with appropriate equity and support people.

At the University of Sydney, we have introduced an Open Learning Environment, comprising shorter form courses on foundational concepts and skills with broad application (e.g. coding and aspects of data science, disability awareness and inclusivity, intercultural communication, foundations of quantum computing, digital influence through social media). Courses are open to all students in an assessed and recognised but not-for-credit form, as well as in a more deeply assessed and for-credit form. The aim of the OLE is to broaden students' knowledge and skills while also preparing them for a future in which knowledge and skills will continually need to be broadened.

There is already a plethora of online vocational tools such as the Self-Directed Search, Career Voyage and others. However, online platforms are not effective for all students, especially those who require skilled guidance to identify talents, skills, aspirations and future projections.

The [TAFE NSW Careers Counselling Service](#) is an exemplary career support model. These Careers Counsellors are trained psychologists and careers specialists who work with prospective and enrolled students on careers advice/pathways and incorporate personal counselling as a fundamental process. It is a highly cost-effective approach to working with career pathways, keeping students engaged and career-aware, and ensuring the most marginalised students are effectively case managed (in partnership with a cohesive network of equity education specialists, including specialists in disabilities and community-based learning). Learning and psychosocial barriers can be identified and addressed.

TAFE Counsellors are part of a cohesive network within TAFE and develop a depth of knowledge about career pathways as they liaise closely with vocational teachers who understand vocational pathways and can identify which areas of the training curriculum are challenging for students. Equity education specialists further identify aspects of training which can be challenging for students with particular disabilities. This is crucial to being well informed and supported. There are many new online and emerging career support agencies that could benefit with being mentored by experienced and professional services such as the TAFE Careers Counselling Service. This service merits further investigation as a national benchmark for effective career education and advice provision for students.

For some students who have limited social resources, mentors are extremely helpful. The "How Big are Your Dreams?" program involved linking mentors with Indigenous students throughout Years 10-12.

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<sup>11</sup> Westell, M. and Panizzon, D. (2011), *Cognitive neuroscience: Implications for career development strategies and interventions*, Flinders University. Retrieved from <http://foi.deewr.gov.au/documents/cognitive--neuroscience--implications--career--development--strategies--and--interventions>



This involved a 1:1 relationship with mentors encouraging students to remain engaged in education and training, taking a personal interest and assisting students with social difficulties. Community and industry-based learning opportunities provide a non-linear pathway for student engagement and pathways. For many disadvantaged students, learning success can happen through well-planned and supported community-based social enterprises and local community building programs.

For example, the University of Sydney's [Poche Centre for Indigenous Health](#) has longstanding and deep partnerships with the TAFE sector, as part of its work to improve health outcomes in Aboriginal and Torres Strait Islander communities through the delivery of evidence-based health services. The Poche Centre runs a scholarship program in collaboration with industry and community partners to provide Indigenous students the opportunity to earn a VET qualification to then work in health care. The program partners with local health services and state and federal health councils/associations to ensure students have employment opportunities and support during their studies, and career pathways afterwards. The Centre co-designs educational pathways for Aboriginal students in regional and remote communities. The scholarship program aims to maximise students' successful engagement with, and completion of, vocational qualifications offered by TAFE NSW providers. To date more than 200 scholarship students have gained 380 TAFE qualifications, with an average course completion rate of 96% (for 2015-2018 enrolments). This completion rate is three times the national rate for the same cohort studying at TAFE.

#### **5. How can we collect and disseminate the data we need to understand young peoples' choices and help governments to make informed public policy decisions?**

We agree that good data is vital for informed public policy solutions and we encourage support for the creation of databases and the research they make possible into young peoples' choices and pathways.

In addition, the following suggestions draw on advice provided by experts based in our School of Education and Social Work:

- Create data reporting frameworks in schools, TAFEs, other VET providers and universities incorporating broader qualitative analysis of student pathways, case studies, links to industry and community, case management strategies etc.
- Create collaborative communities of research practice with schools, TAFEs, other VET providers, local government, industry and community support groups. Make these local and regional, in partnership with nominated universities as the lead research sponsor/mentor.
- Research the issues arising for students making choices in VET and/or higher education, including the scope of vocational pathways, financial considerations, navigating the plethora of online course information portals, the value of short, fast pathways to work, and consideration to the value of a slow study movement.
- Research the impact of recent changes in VET provision focus on the value of short, fast pathways to work to serve the needs of industry. Consideration needs to be given to the value of a 'slow study' movement, where learning and pathways are carefully planned/adjusted, and students embark on a lifelong learning trajectory.
- Track the multidimensional pathways of students as they move in and out of education, training and work, to understand connections between the VET qualifications they take in schools and their post school destinations.
- Consider the further research recommendations of Josie Misko and colleagues for the NCVET including:
  - investigating how VET programs in secondary schools operate on a number of functional levels, especially with respect to meeting the needs of students who may be at risk of leaving school;



- exploring the reasons for the higher participation rates in VET programs delivered to secondary school students, including school-based apprenticeships and traineeships;
- investigating non-linear pathways taken by VET students in secondary schools, tracking the multidimensional pathways of students as they move in and out of education to understand connections between the VET qualifications they take in schools and their post school destinations;
- understanding the trajectories of students in secondary schools in VET to higher education; and
- understanding the institutional barriers to curriculum transformation and change.<sup>12</sup>

**6. Is there anything else you would like the Review Panel to consider?**

We would be pleased to discuss any of the issues raised in this submission further with the Review Panel if that would be of interest and assistance.

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<sup>12</sup> Misko J, Ackehurst M, Polvere R, Erzinger T and Korbel P, (2019) *VET for secondary school students: acquiring an array of technical and non-technical skills*, National Centre for Vocational Education Research, [https://www.ncver.edu.au/\\_data/assets/pdf\\_file/0041/5579465/VET-for-secondary-school-students.pdf](https://www.ncver.edu.au/_data/assets/pdf_file/0041/5579465/VET-for-secondary-school-students.pdf)