Realising Potential

Solving Australia's tertiary education challenge

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The Australian Industry Group

Ai GROUP

CONTENTS

Acknoweldgement

This document was researched, developed and written by Michael Taylor, National Policy and Projects Manager, Education and Training, The Australian Industry Group.

EXECUTIVE SUMMARY

This latest Ai Group report closely examines our tertiary education system which includes all post-secondary education arrangements. It sets the challenge to create an effective education and training system that is both more coherent and more connected. Importantly, it makes a number of recommendations for policy makers including a call for the development of a longer-term vision and policy framework for tertiary education rather than a reliance on short-term reviews of elements of the system.

Tertiary education is vitally important to Australian society and the economy. From an industry perspective the sectors within tertiary education provide both the skilled and qualified entrants to the workforce as well as the re-skilling or up-skilling of the existing workforce. If the Australian economy is to continue to prosper and remain internationally competitive, it is vital to have access to a highly skilled and qualified workforce. Indeed, with the rapid advance of technology and digitalisation, a higher level of skills for the workforce is more important than ever.

This statement highlights that we have now entered an era of mass tertiary education and the achievement of higher level qualifications. Today, 85 per cent of young people complete secondary education and most proceed to some form of tertiary education. In the decade to 2015 the proportion of the workforce without post-school qualifications fell from 42 to 32 per cent. There has been significant expansion of participation in the higher education sector and Australia is very close to achieving the Bradley Review target of 40 per cent of 25 to 34 year-olds having a degree by 2020. The VET sector is the largest education sector with over 4.2 million students.

Despite this impressive growth in recent decades, the sectors are beset with a range of challenges. Chief among these is the development of a binary system characterised by seriously unbalanced participation between the sectors. The recent dramatic falls in VET participation have also been accompanied by declining funding levels which seriously jeopardise the sector.

The education and training landscape needs to be broadened to include institutional differentiation that takes account of diverse student needs. And given the reality of rapidly changing workplaces and the need for agile skill development, there needs to be a much more effective system of learner mobility and recognition between institutions and sectors.

There is a lack of overall policy direction and governance of the system. Consideration needs to be given to the formation of a central and independent coordinating agency to provide common approaches across the sectors and levels of government. While more effective methods of governance require more than addressing funding levels, a more equitable funding strategy needs to be developed. The VET sector is in need of immediate attention in this area. In this context, demand-driven funding models need to be retained but improved to be more equitable than current practice.

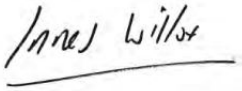
The current situation concerning student loans is discriminatory and unacceptable. A way needs to be found to introduce a loans scheme with common characteristics across the sectors, initially for diploma level courses and above.

In the area of regulation, a more effective approach is required to strengthen the quality of education and training provision. Tertiary Education Quality and Standards Agency (TEQSA) and Australian Skills Quality Authority (ASQA) should be maintained while developing common or joint functionality in particular areas to strengthen national consistency. Work based learning is becoming increasingly important and more innovative ways need to be found in both sectors to expand the participation of industry in the delivery of tertiary qualifications.

The review of the Australian Qualifications Framework is timely as this provides a key opportunity to reconsider whether our current qualifications structure is adequately meeting our needs into the future.

These are formidable challenges, but we can find solutions. We need to rise to the occasion for a comprehensive reconsideration of the state of tertiary education in Australia. This report identifies those challenges and will hopefully contribute to making our tertiary education system deliver better outcomes for the benefit of the community and the economy.

Innes Willox



Chief Executive, Australian Industry Group

KEY FINDINGS

- Tertiary education in Australia is a mass education and training system reflecting the reality that most young people now participate in this level of education before entering the workforce.
- Tertiary education is characterised by a highly unbalanced binary model with no coherent policy and funding framework.
- There is a need to establish a long-term policy view for tertiary education rather than short-term attempts to address components of the overall system.
- While recognising the distinctive features of higher education and VET, there is a need for a more coherent and connected tertiary education system to be established.
- Given the increasing diversity of learner needs it is desirable to have a greater variety of provider types within the tertiary education system.
- Given the low volume of student transfer between higher education and VET there is a need for a model that includes more systematic methods to facilitate movement between the sectors.
- Establish an independent coordinating body charged with the responsibility of delivering government policy in a more coherent manner.
- A key function of an independent coordinating body would be to establish equitable funding arrangements across the sectors and between levels of government.
- Given the more effective responsiveness to the labour market, demand-driven funding mechanisms need to be retained and improved in tertiary education.
- Establish a universal tertiary education student loan scheme, initially for diploma and above courses, to create a more equitable and cost-effective system.
- Maintain both TEQSA and ASQA as respective regulators for their systems while establishing joint functionality in appropriate and agreed areas.
- There is a need for greater and more equitable policy and funding coherence for mid-professional learning where the higher education and VET sectors overlap.
- Promote workplace learning as a recognised key delivery component in all tertiary education.
- The qualifications structure in Australia needs to be reviewed to consider the emergence of micro-credentials and any other developments impacting on the key outcomes of tertiary education.

1. INTRODUCTION

For the purposes of this statement tertiary education refers to all post-secondary education and includes education and training currently provided by both the higher education and the vocational education and training (VET) sectors. The statement is particularly focused on the education and training requirements for entry to the workforce and subsequent upskilling provided by these sectors.

The economy is irresistibly moving towards a knowledge society and increasingly requiring higher levels of knowledge and skills for the workforce. Is tertiary education in Australia able to provide the necessary knowledge and skills for the emerging workforce? What are the challenges faced by the sector in the achievement of this?

What does a set of key characteristics for an effective tertiary education and training system look like? One of the most significant reviews of higher education, the 2008 Bradley Review, identified the following:

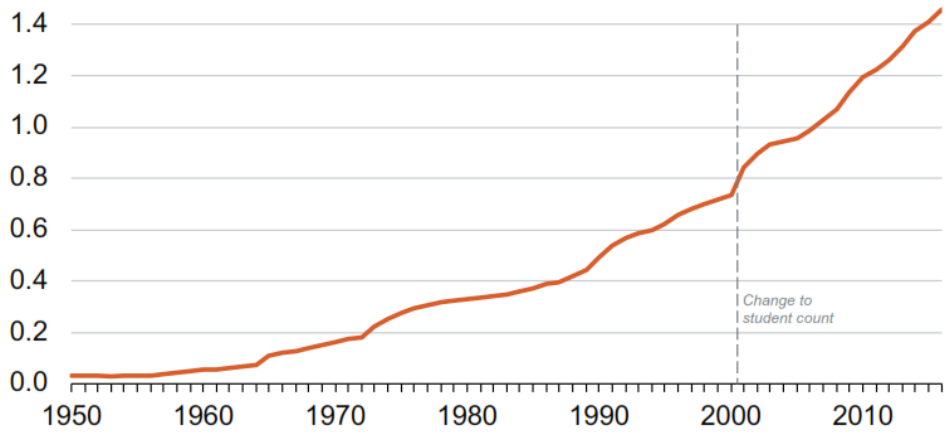
- Equal value is given to both VET and higher education, reflecting the importance of their different roles in the development of skills and knowledge and their contributions to the economy and society
- Recognition that institutions may have a primary mission in one sector, but should still be able to offer qualifications in the other sector
- A shared and coordinated information base and approach to anticipating future labour market needs, industry needs and demographic trends
- A capacity for the whole system to provide integrated responses to workforce needs for industries and enterprises, including those in specific localities and communities like outer metropolitan and regional areas where there is significant population growth, low levels of educational attainment and participation and uneven provision
- An efficient regulatory and accountability framework
- Clearer and stronger pathways between the sectors in both directions.[1]

[1] *Review of Australian Higher Education, Final Report, December 2008, page 179.*

2. PARTICIPATION

In consideration of the level of participation in tertiary education it is clear that the growth in both sectors has been significant in recent decades.[2]

Chart 1: Higher education enrolments, 1950 – 2016 (millions of students)

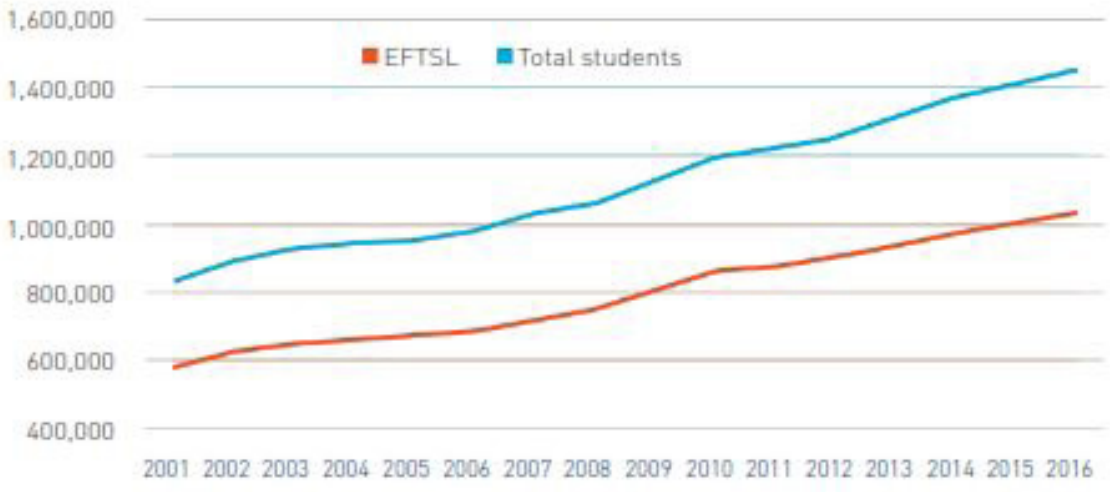


Note: Figures from 2001 onwards are based on enrolments at any time throughout the year; prior years are based on enrolments as at 31 March.

Sources: Department of Education and Training (various years[a]), Department of Education and Training (2014) and Department of Education and Training (2018a).

The most recent data shapshot provided by Universities Australia provides enrolment data from 2001 to the later year of 2016 which indicates the total enrolment now exceeds 1.48 million domestic and international students.[3]

Chart 2: Student Enrolments and Equivalent Full-Time Student Loads, 2001 - 2016

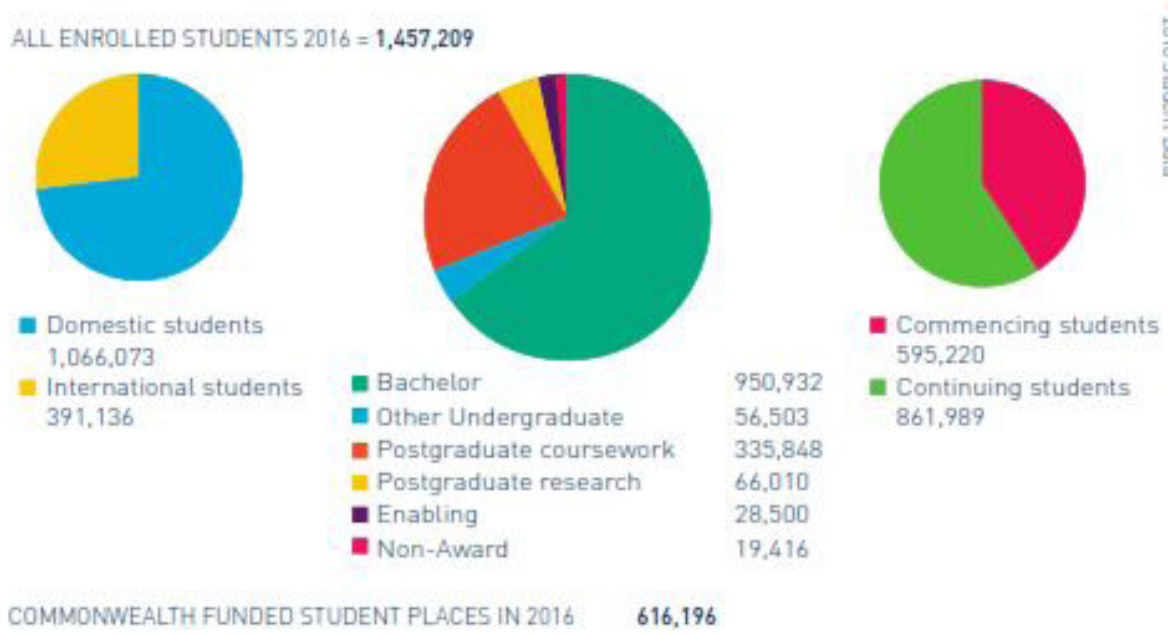


[2] *Norton A., Mapping Australian higher education 2016, Grattan Institute.*

[3] *Universities Australia, Data Snapshot, 2018.*

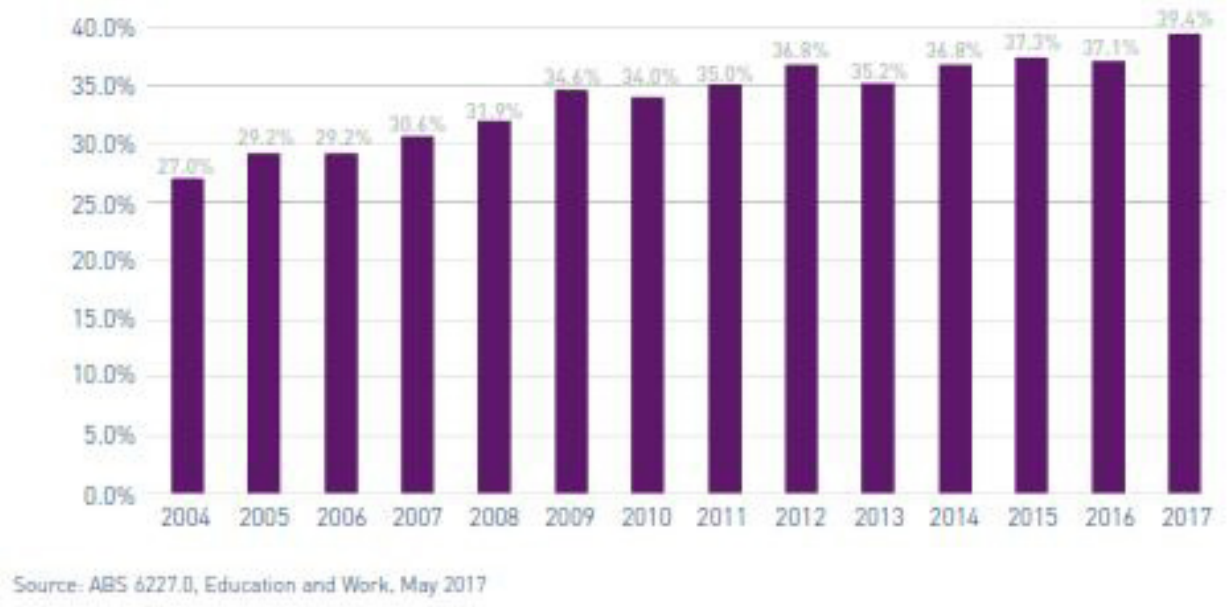
A breakdown of this data indicates that there are now over a million domestic students while international students are approaching 400,000.[4]

Chart 3: Student enrolments by category, 2016



This significant expansion of participation in higher education now means that Australia is very close to achieving the Bradley Review target of 40 per cent of 25 to 34 year-olds to have a degree by 2020.[5] According to the ABS, 39.4 per cent of this age category have achieved this outcome.[6] The Grattan Institute's latest data indicates that in 2016 41 per cent of Australian 19-year-olds were enrolled in higher education institutions.[7]

Chart 4: Proportion of Australians aged 25 to 34 with a bachelor degree of higher



[4] *Universities Australia, Data Snapshot, 2018.*

[5] *Review of Australian Higher Education, Final Report, Commonwealth of Australia, December 2008.*

[6] *Australian Bureau of Statistics 6227.0, Education and Work, May 2017 cited in Universities Australia, Data Snapshot, 2018.*

[7] *Norton A. and Cherastidtham I., Mapping Australian higher education 2018, Grattan Institute, 2018.*

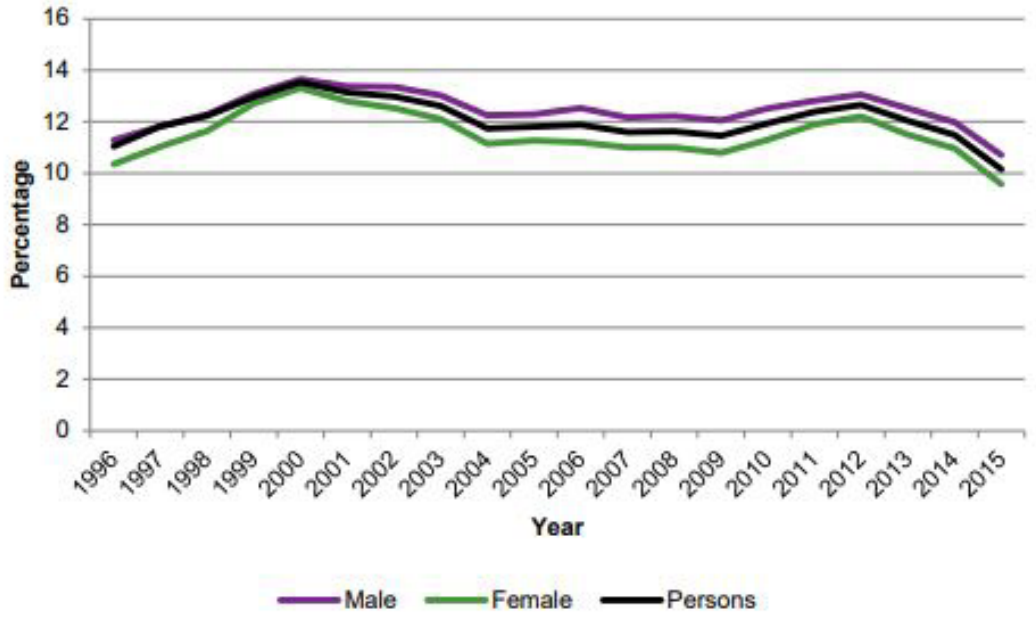
In the VET sector the level of participation is very high. The most recent indication of total VET activity by the NCVER indicates that over 4.2 million students were enrolled in VET with an Australian training provider in 2017. This amounts to 3.4 million program enrolments.[8]

Table 1: Training providers by type and state or territory, 2017 ('000)

Provider type	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Overseas	Other	Total
TAFE	281.5	149.3	84.1	49.9	56.1	18.3	2.1	12.9	23.4	2.6	680.2
University	0.1	37.2	5.5	0.0	0.4	0.6	8.7	0.0	3.6	0.0	56.2
School	33.8	14.9	26.6	0.6	1.7	2.0	0.5	2.3	-	0.1	82.6
Community education provider	146.1	102.9	38.2	36.1	47.8	0.8	6.2	6.0	0.0	0.2	384.3
Enterprise provider	20.9	7.4	21.9	7.2	14.8	0.4	2.0	0.2	0.3	0.3	75.5
Private training providers	741.5	644.2	651.0	112.8	207.6	27.0	21.3	50.1	6.9	87.1	2 549.4
Attending more than one provider type	106.2	66.8	77.3	24.3	45.0	5.1	4.7	4.9	0.0	73.3	407.5
Total estimated students	1 330.2	1 022.8	904.6	230.8	373.4	54.1	45.5	76.4	34.3	163.6	4 235.6

The VET sector is the largest education sector in Australia. There were about 1.6 million students in the publicly funded system in 2015 and training is undertaken by people of all ages, with the largest proportion aged 24 years and under. Over the last 20 years the number of students initially participating increased, but in recent years has started to fall.[9]

Chart 5: Rates of participation in VET, 1996 – 2015 (%)



Note: The rate is expressed as students as a proportion of the 15 to 64-year-old population.
Source: NCVER Historical time series of government-funded VET 1996–2015; ABS demographic statistics, cat.no.3101.0, September 2015.

This data from both sectors indicates that Australia has entered an era of mass tertiary education. Eighty-five per cent of young people now complete a full secondary education and most proceed to gain tertiary qualifications.[10]

[8] *Total VET students and courses 2017, NCVER, Commonwealth of Australia, 2018.*
[9] *Atkinson G and Stanwick J., Trends in VET: policy and participation, NCVER, 2016.*

"There is an expectation from young people, parents, government and employers that most young people will go into tertiary education before entering the workforce." (Business Council of Australia)[11]

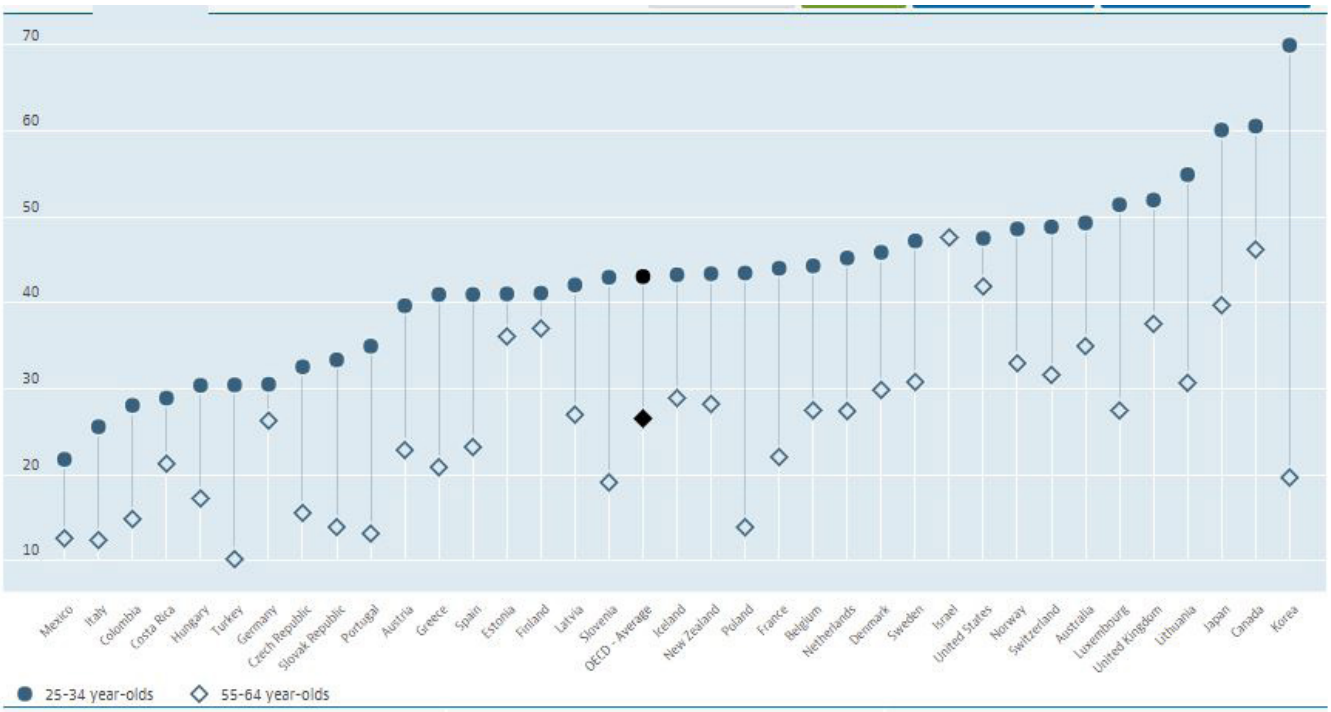
Another way of expressing this is that there is a movement towards universal participation in tertiary education. School completion, while necessary, is no longer considered sufficient for effective participation in the economy and society. Between 2005 and 2015 the proportion of the workforce holding a bachelor degree or higher qualification increased from 23 to 31 per cent while the holding of VET qualifications increased from 26 to 32 per cent. In the same decade to 2015 the proportion of the workforce without post-school qualifications fell from 42 to 32 per cent.[12]

KEY FINDING

Tertiary education in Australia is a mass education and training system reflecting the reality that most young people now participate in this level of education before entering the workforce.

Australia compares well with other OECD countries in this respect. On average across OECD countries, the share of 25-64 year-olds with a tertiary degree has increased by 14 percentage points since 2000 to 36 per cent in 2016. The increase is even higher among younger adults (25-34 year-olds) as the share increased by 17 percentage points to 43 per cent in 2016. Australia has achieved better than the OECD average and is only behind six other countries: Korea, Canada, Japan, Lithuania, the United Kingdom and Luxembourg.[13]

Chart 6: OECD population with tertiary education 25 – 34 years/55 – 64 years, % in same age group, 2016



[10] *Noonan P and Pilcher S., Participation in tertiary education in Australia, Mitchell Institute, April 2018.*

[11] *Future-Proof: Protecting Australians through education and skills, Business Council of Australia, October 2017.*

[12] *Noonan P., A new system for financing Australian tertiary education, Mitchell Institute, September 2016.*

[13] *OECD, At a glance, 2017.*

3. RECENT DEVELOPMENTS IN TERTIARY EDUCATION

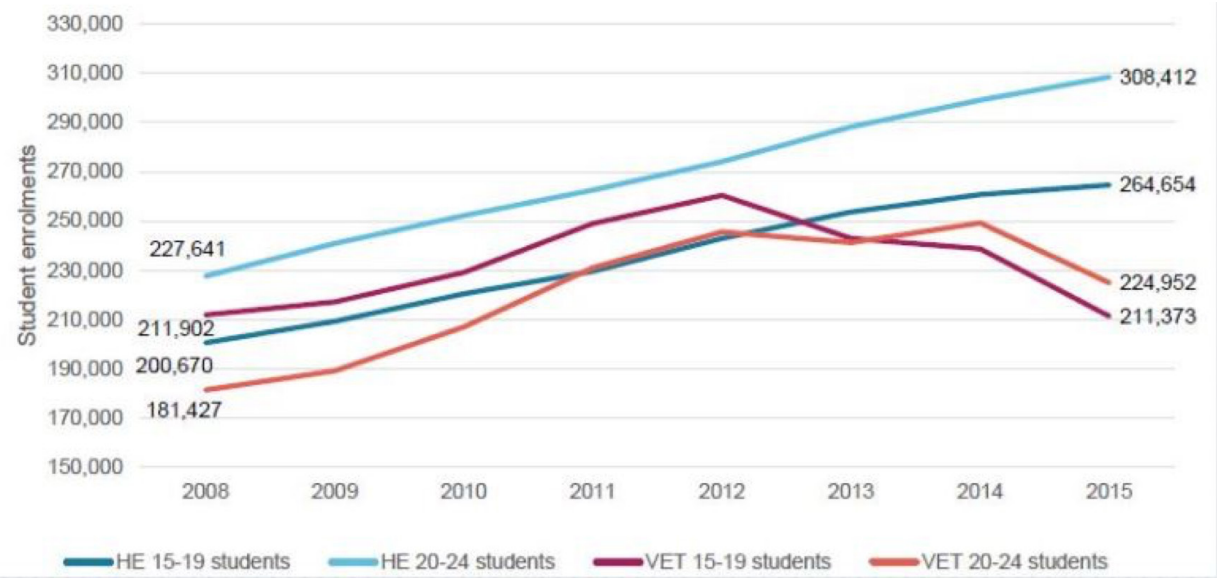
While the increases in the level of participation in recent decades represent a significant achievement, there are several challenges confronting the sectors.

In recent years there has been a significant shift by young people into higher education rather than VET. Participation has been growing significantly in higher education for both the 15 - 19 year-old students and the 20 – 24 years of age students, especially since 2008. In the VET sector both of these age cohorts grew until around 2012, but they have been in decline since thus creating a significant imbalance.[14]

The Productivity Commission has raised concerns about this enrolment pattern and the lack of confidence and stability in the VET sector.

"Given the current enrolment growth rates following the move to a demand-driven university model, it will not be too long before the university sector is the key vehicle for skills formation in the economy." (Productivity Commission)[15]

Chart 7: HE and VET student enrolments 2008 - 2015

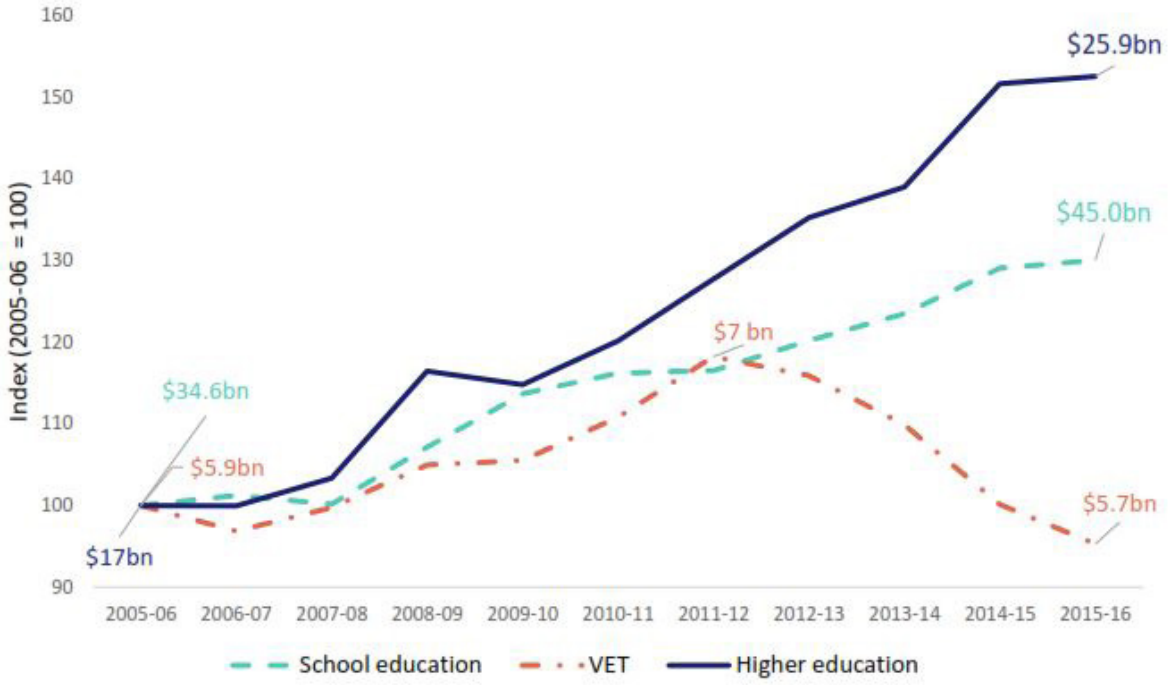


Analysis of the trends in real expenditure across the various sectors reveals a highly imbalanced situation. Higher education expenditure has grown very rapidly with a 52.6 per cent increase over the ten-year period from 2005-6 to 2015-16, despite some levelling off in the final year. Similarly, school sector expenditure has increased by 30 per cent over the same period with some slowing in the final year. In the VET sector, the situation is the reverse. Expenditure has fallen by 4.7 per cent over this period. The level is now lower than at the beginning of the period. Not only is overall VET expenditure in decline but the gap with higher education expenditure is increasing.[16]

[14] *Noonan P., A new system for financing Australian tertiary education, Mitchell Institute, September 2016.*
[15] *Shifting the Dial: 5 year productivity review, The Productivity Commission, 2017.*
[16] *Pilcher S and Torii K., Expenditure on education and training in Australia 2017, Mitchell Institute, December 2017.*

"The obvious disjuncture between VET and higher education in particular, reflects an ongoing failure to conceptualise the two as part of a more coherent tertiary education system. This lack of policy coherence continues to act as a barrier to the creation of the responsive, integrated education and training system many have argued Australia needs." *(The Mitchell Institute)* [17]

Chart 8: Expenditure on education by sector 2005-06 to 2015-16 (base year 2005-06 = 100)



Source: Mitchell Institute analysis of Australian Bureau of Statistics data (custom request)

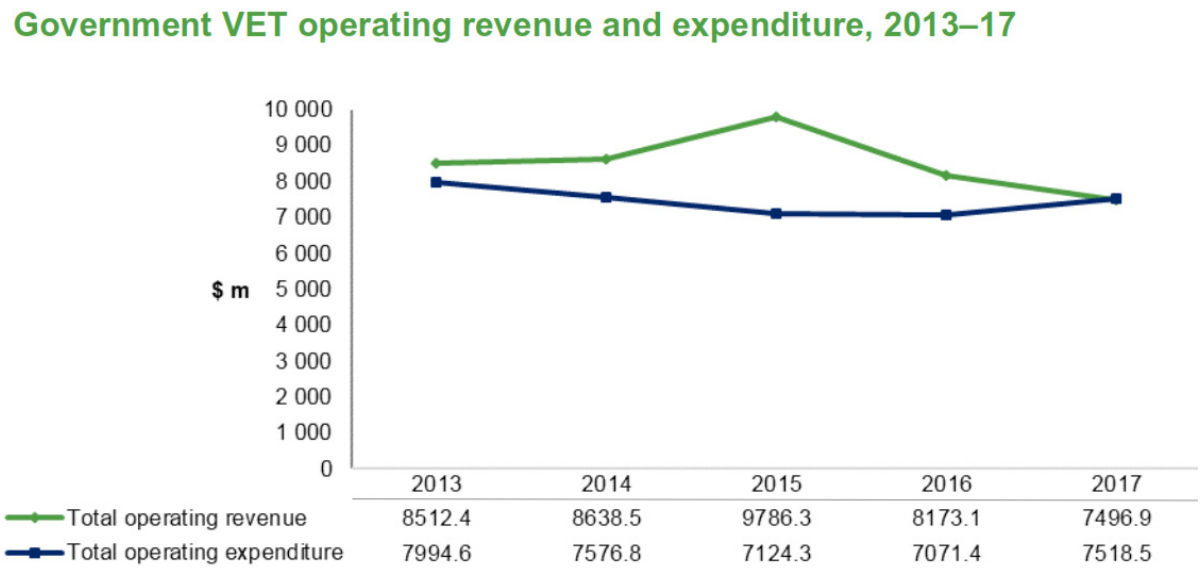
This lack of funding coherence has not been addressed in any of the various reviews of higher education and of VET. The most recent significant review, the 2008 Bradley Review, argued for closer links between the sectors with equal value to the different roles of each. This included recommending a national tertiary funding framework and warning of the dangers of a growing funding gap between the sectors.[18]

A further consideration is the composition of public funding for VET, or more precisely, the shared contributions of the Commonwealth and the States/Territories. The funding by the jurisdictions is falling in absolute terms and also relative to Commonwealth expenditure. The relative funding shares between the Commonwealth and the jurisdictions vary significantly and have been aggravated by the progressive introduction of differential student training entitlement funding models by all states and territories. The jurisdictions have used in-built flexibility parameters resulting in differences in the eligibility requirements, the courses eligible for an entitlement, course subsidy levels, the quality requirements of providers, and the information provided to students.[19]

A recent finance report from the NCVER highlights a decline in government expenditure between 2013 and 2016. There has been an increase from 2016 to 2017. Revenue has experienced an 11.9 per cent decline over the period.[20]

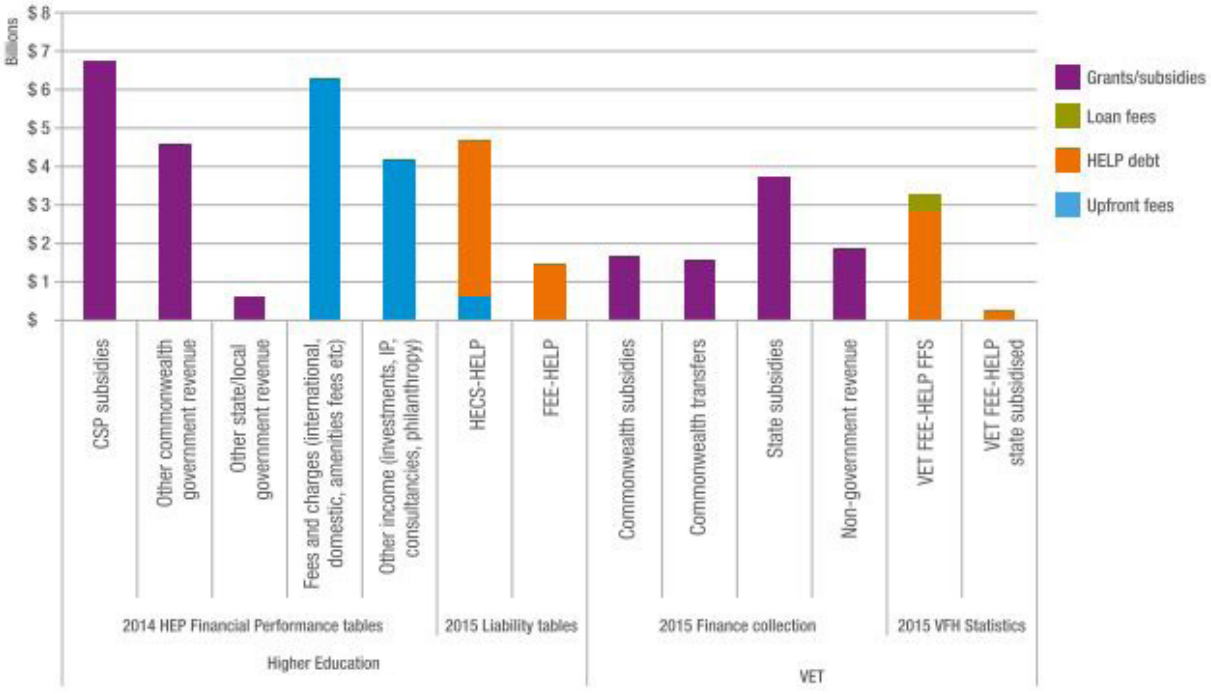
[17] *Pilcher S and Torii K., Expenditure on education and training in Australia 2017, Mitchell Institute, December 2017.*
[18] *Review of Australian Higher Education, Final Report, December 2008.*
[19] *Kaye Bowman and Suzy McKenna, NCVER, Jurisdictional approaches to student entitlements: commonalities and differences, 2016*
[20] *Financial information 2017, NCVER, 2018.*

Chart 9: Government VET operating expenditure and revenue, 2013 – 2017



The lack of funding policy coherence has led to a lack of clarity about the basis of the contributions by the Commonwealth and States and Territories. Currently the Commonwealth has a major funding role in both higher education and VET, whereas the States only have a role in the funding of VET.[21]

Chart 10: Funding for higher education and VET in Australia, 2014/2015



Source: Department of Education and Training, Finance Statistics, 2016

[21] *Croucher G., Noonan P. and Chew J., Funding an expanded tertiary system: designing a coherent financing architecture in Visions for Australian Tertiary Education, Melbourne CSHE, February 2017.*

The Mitchell Institute has highlighted a number of anomalies in the financing of tertiary education including:

> Differential treatment of students,

> Inconsistency in the eligibility for fees and subsidies,

> Inconsistent access to income contingent loans and student income support,

> The widening investment gap between higher education and VET,

> A growing gap in per student funding levels, and

> Potential distortion of student choice.[22]

In addition to these significant issues facing the VET sector, the higher education sector is under increasing pressure.

"The current model of Australian higher education – basically 39 public universities – is dissolving as it faces the unrelenting push for greater productivity, the introduction of a demand-driven funding model and the emergence of new providers, both private and TAFE institutes, as well as heightened discussion about contemporary occupational requirements and persistent concerns about the system's quality." (Beddie) [23]

Within higher education there are further pressures on universities. Historically universities have research as a distinctive feature in addition to teaching. Indeed, to be a full Australian university a higher education provider must be active in research across at least three broad fields of study. [24]

This research requirement makes it difficult for new universities to commence and universities cannot be solely dedicated to teaching. Teaching and research functions compete for time, attention and resources.

In addition to this issue is the reality that higher education has become a significant export industry. The education of international students is now Australia's third largest export. The ABS estimates that international student fee revenue earned by all Australian higher education providers totalled $7.6 billion in 2016 and $9.3 billion in 2017. [25] International student fees are the single largest source of university revenue. Once again this requires higher education providers to devote attention and resources to this key area of their operations.

KEY FINDING

Tertiary education is characterised by a highly unbalanced binary model with no coherent policy and funding framework.

[22] *Noonan P., Building a sustainable funding model for higher education in Australia, Mitchell Institute, January 2015.*

[23] *Beddie F., A differentiated model for tertiary education: past ideas, contemporary policy and future possibilities, NCVER Research Report, Commonwealth of Australia, 2014.*

[24] *Norton A., Mapping Australian higher education 2016, Grattan Institute.*

[25] *Norton A. and Cherastidtham I., Mapping Australian higher education 2018, The Grattan Institute, 2018.*

4. THE WAY FORWARD

4.1 Establish a long-term view

It is necessary to adopt a long-term view, say a vision to 2030+, to reset post-secondary education as a platform for knowledge-era nation-building.[26] There has been a series of reviews into policy and funding issues pertaining to higher education in the last two decades. These include:

- 1988 Higher Education: a Policy Statement (Dawkins)
- 1998: Learning for Life: review of higher education financing and policy (West Review)
- 2002: Review of Higher Education in Australia (Nelson Review)
- 2008: Review of Australian Higher Education (Bradley Review)
- 2011: Higher Education Base Funding Review (Lomax-Smith Review)
- 2015: Report of the National Commission of Audit
- 2014: Review of the Demand Driven Funding System (Kemp-Norton Review).[27]

These reviews provide background to the current Government's discussion paper, Driving Innovation, Fairness and Excellence in Australian Higher Education. This is not a review as such, but rather a consideration of the 2014 – 15 budget proposals and some other reform options. It attempts to address higher education funding rather than the overall system and its place in the broader policy landscape.[28]

While all of these reviews achieved reforms, it is clear that none of them developed a long-term strategic view of the system of tertiary education.

In the VET sector reviews have been less frequent. Apart from the occasional VET reform in the State jurisdictions, the last full review of the national VET system was the Kangan Report of 1974.

What is required is a comprehensive vision for both sectors that stretches well into the future to provide long-term direction and stability to tertiary education.

KEY FINDING

There is a need to establish a long-term policy view for tertiary education rather than short term attempts to address components of the overall system.

[26] *Sharrock G., Six thing's Labor's review of tertiary education should consider, The Conversation, May 25, 2018.*
[27] *Higher Education in Australia: A review of reviews from Dawkins to today, Commonwealth of Australia, 2015.*
[28] *Driving Innovation, Fairness and Excellence in Australian Higher Education, Australian Government, May 2016.*

4.2 Create a more coherent and connected system

The current uneven approach between VET and higher education in particular reflects an ongoing failure to conceive of the two as part of a single tertiary education system. Governments have been reluctant to make definitive decisions about whether an integrated system is the best way to support quality provision.

A Business Council of Australia report noted preparation for the jobs of the future requires all of the education and training sectors to operate as one system.[29] This continues to act as a barrier to the creation of the responsive, integrated education and training system required to sustain economic growth in a changing world.[30]

The Bradley Review highlighted that the efforts to strengthen the connections between higher education and VET have only had limited success. This is due to structural rigidities and differences in curriculum, pedagogy and assessment.[31]

Given the wide range of learner needs it is necessary to provide diversity in tertiary provision. This means that the two sectors need to remain distinct given their different educational offerings and roles. What is required is a better connection between the sectors rather than actual integration. As the Bradley Review reported:

"it is also vital that there should be better connections across tertiary education and training to meet economic and social needs which are dynamic and not readily defined by sectoral boundaries."[32] (Bradley Review)

In addition to increased coherence, there is a need for greater flexibility to meet the increasing demand for higher-order skills, to be more responsive to the needs of students and to accommodate providers operating across state or sectoral boundaries.

To achieve this there needs to be parity of esteem across the sectors. This is the notion that higher education and VET are different but equal. Australia has been down this path before at the time of the establishment of the Committee on the Future of Tertiary Education (Martin report) in 1964. [33] At that juncture, tertiary education was defined by qualification level, specifically, diploma and above. The binary structure consisted of universities and colleges of advanced education, the latter providing more vocationally oriented programs. This was in a sense, the first step towards mass tertiary education. However, this approach soon dissolved. There is a new binary system today with a dominance by higher education over VET in terms of expanding levels of participation and funding. It is very much a case of different but unequal. This lack of parity of esteem is also driven by the perception that VET is lower than higher education due to the status of occupations that the sectors largely serve.[34]

KEY FINDING

While recognising the distinctive features of higher education and VET there is a need for a more coherent and connected tertiary education system to be established.

[29] *Future-Proof: Protecting Australians through education and skills, Business Council of Australia, October 2017.*
[30] *Pilcher and Torii, The vocational education and training sector is still missing out on government funding*
[31] *Review of Australian Higher Education, Final Report, December 2008.*
[32] *Review of Australian Higher Education, Final Report, December 2008.*
[33] *Committee on the Future of Tertiary Education in Australia 1964 – 65, Tertiary education in Australia: report to the Australian Universities Commission (the Martin Report), Commonwealth of Australia, Melbourne.*
[34] *Beddie F., What next for tertiary education?, NCVER, Commonwealth of Australia, 2014.*

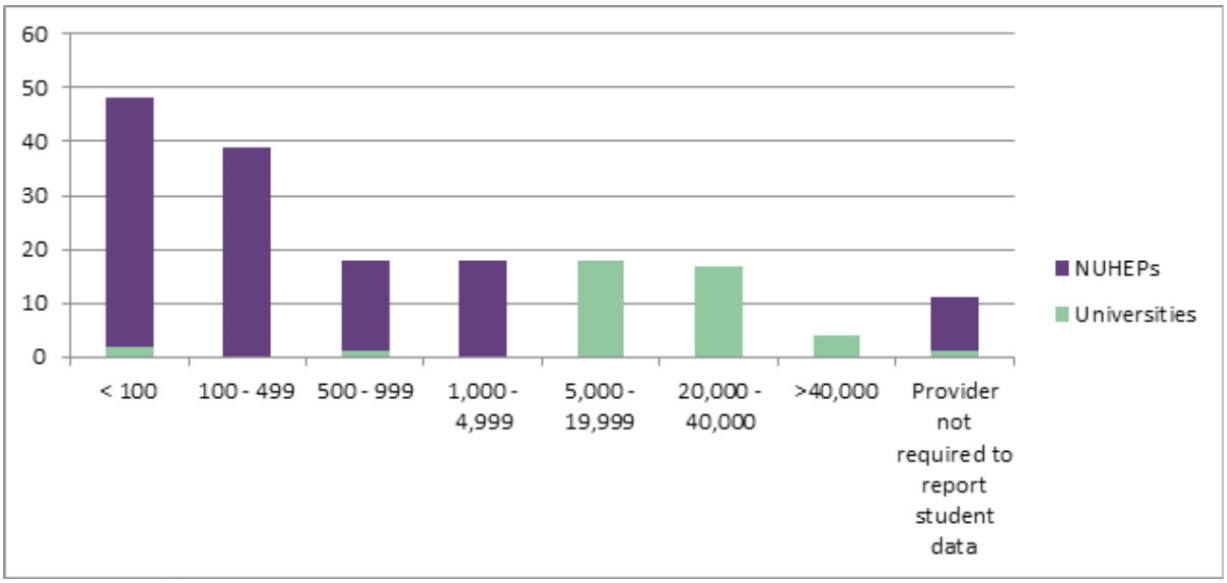
4.3 Adjust the shape of tertiary education

There is a general consensus that institutional differentiation is desirable as more diverse systems:

- Are required for the diversity of student needs;
- Are better equipped to encourage social mobility;
- Are better linked to labour markets that increasingly require different types of graduates; and
- Enable more cost effective delivery of education and research.[35]

On the surface it appears that Australia has substantial institutional diversity. There are over 5,000 Registered Training Organisations offering VET, some of these are classified as dual sector operators and there are over 170 public and private higher education providers. Universities have the most higher education students but are in a minority of higher education providers. In addition, there is a growing number of Non-University Higher Education Providers (NUHEP) although the majority of these have less than 500 students. However, in practice there is little diversity. Over 90 per cent of higher education students study at one of the 40 Australian research universities.[36]

Chart 11: Higher education providers by size and student load (EFTSL), 2013 [37]



In a sense it is necessary to consider that notion of a mass higher education system organised to distinguish between the education for the workforce on one hand and the encouragement of excellence in research on the other.[38] There is a need for an agreed definition of higher education that takes account of the advanced level of skills and analytical thinking typically associated with VET and increasingly required by all Australians.

There may well be a need to break away from institutional legacies. Perhaps the provision landscape needs to be broader to embrace options such as non-research based universities, polytechnic universities and other categories.[39]

[35] *Goedegebuure L, Massaro V, Meek L and Pettigrew A: A Framework for Differentiation, in Visions for Australian Tertiary Education, Melbourne CSHE, February 2017.*

[36] *French S, Lelly P and James R: Future for Australian Tertiary Education: Developing an Integrated, Coherent Policy Vision, in Visions for Australian Tertiary Education, Melbourne CSHE, February 2017.*

[37] *Higher Education in Australia: A review of reviews from Dawkins to today, Commonwealth of Australia, 2015.*

[38] *Beddie F., A differentiated model for tertiary education: past ideas, contemporary policy and future possibilities, NCVER Research Report, Commonwealth of Australia, 2014.*

[39] *Griew, R.; Three Lessons from a decade of higher education policy stalemate, The Nous Group, 2018.*

In Canada, for example, post-secondary education includes an extensive college system producing graduates of non-university education. This former group of trade and vocational oriented colleges now provides professional education comparable to what in Europe would be applied universities.[40]

The necessary landscape can be viewed as an ecosystem.

"Rather than the present bifurcated, incoherent model, imagine Australia with a tertiary education ecosystem where the student is able to self-organise an ensemble of modular courses and experiences integrated across the vocational and higher education spectrum, tailored to their needs and desires. Boundaries between vocational and higher education would need to become increasingly porous."[41]

There are many factors indicating the need for structural change. Some of these are historically familiar but there are also new ones. These include the way information is disseminated and knowledge is produced, the global employment market and the international education industry.[42] Another consideration is the need for both higher education and VET institutions to develop partnerships with industry to ensure fast changing skill needs are met.

There has been a blurring of boundaries between school, VET and universities but this has not resulted in real institutional diversity in the tertiary education system. Some of this blurring is the result of competition over funding as universities encroach on the diploma market and some TAFE institutes and other providers now offer degrees.[43]

KEY FINDING

Given the increasing diversity of learner needs it is desirable to have a greater variety of provider types within the tertiary education system.

[40] *Usher, A.; What makes Canada unique in post-secondary education? Higher Education Strategy Associates, 27 April 2018.*

[41] *Gallagher S. Future of tertiary education: across a spectrum of learning, The Australian, March 14, 2018.*

[42] *Beddie F., A differentiated model for tertiary education: past ideas, contemporary policy and future possibilities, NCVER Research Report, Commonwealth of Australia, 2014.*

[43] *Beddie F., What next for tertiary education?, NCVER, Commonwealth of Australia, 2014.*

4.4 Facilitate movement between institutions

It has been long recognised that an important feature of a post-secondary education system is the ability of students to move from one sector to another.[44] This transfer can occur in both directions although the most commonly referenced direction is from VET to higher education. Student transfer is the enrolment of a student in a program in one tertiary sector after having been enrolled in the other.[45] It is important in this context to not view the role of VET as a feeder for higher education – VET has a much broader role than this.

There are persistent barriers to transfer between higher education and VET. These include:

- Incompatibilities in curriculum;
- The lack of enforceable policies on credit transfer; and
- Suspicion about the standards of TAFE colleges and other non-traditional tertiary education providers. [46]

The inability to achieve successful movement between sectors once again raises the issue of the parity of esteem. A significant cause of the problem remains the institutional structures. While recent data is difficult to obtain it is clear that there is relatively little movement by students between the two sectors. In 2005 the Ministerial Council on Employment, Education, Training and Youth Affairs provided guidelines to promote VET to higher education transfer and commissioned national research into ways of improving credit transfer and articulation.[47]

The transition from VET to higher education is often complicated despite the fact that policies – such as credit transfer, articulation arrangements and recognition of prior learning – have been put in place to facilitate transitions between the two sectors.[48] NCVER reported that in 2010 around 7 per cent of commencing domestic equivalent full-time students had completed a VET course prior to commencing higher education. An additional 1.4 per cent had an incomplete VET course.[49]

There are two main periods of transfer: during the initial transition from education to work (up to 25 years of age) and later life transfer. In the first period it has been estimated that 9 per cent of university commencers subsequently enrol in VET qualifications and 10 per cent of VET commencers transfer to university.[50] In the second period university graduates account for 7 – 10 per cent of VET students aged over 25 years. The proportion of VET students with a university degree (10 per cent) was smaller than the proportion of university students with a VET qualification (16 per cent) in 2007. Given the VET system enrols many more students the total numbers of VET students with a university degree is greater than the number of university students with a VET qualification.[51]

There is further difficulty for disadvantaged students seeking access to higher education from VET. Some research indicates pathways between the sectors had deepened the participation of social groups that were already well represented, but it had not widened the participation of those groups who are underrepresented. It was therefore suggested that articulation in its current form is not an effective mechanism for increasing the participation of students with low socioeconomic status backgrounds.[52] Regardless of the quantum movement in either direction, it is clear that the movement is small and that there are barriers to overcome.

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[44] *Beddie F., A differentiated model for tertiary education: past ideas, contemporary policy and future possibilities, NCVER Research Report, Commonwealth of Australia, 2014.*
[45] *Curtis, D, Student transfer: at a glance, NCVER, Adelaide, 2009.*
[46] *Beddie F., A differentiated model for tertiary education: past ideas, contemporary policy and future possibilities, NCVER Research Report, Commonwealth of Australia, 2014.*
[47] *Curtis, D, Student transfer: at a glance, NCVER, Adelaide, 2009.*
[48] *Griffin T; Disadvantaged learners and VET to higher education transitions, NCVER, 2014.*
[49] *Australian vocational education and training statistics: tertiary education and training in Australia 2010, NCVER, Adelaide, 2012.*
[50] *Curtis, D, Student transfer: at a glance, NCVER, Adelaide, 2009.*
[51] *Curtis, D, Student transfer: at a glance, NCVER, Adelaide, 2009.*
[52] *Wheelahan, L, 'What kind of access does VET provide to higher education for low SES students? Not a lot', University of South Australia, Adelaide, 2009.*

Research indicates that although Australia has a set of national policies to promote student pathways from vocational to higher education, there are substantial differences between universities in the proportion of undergraduate commencing students they admit on the basis of a VET award. While the proportion of students admitted on the basis of a VET award nationally is now around 10 per cent, some universities admit VET award holders at well over twice this rate, whereas others admit negligible numbers. Twelve universities enrol 68 per cent of all students admitted to undergraduate programs on the basis of a VET award. In other words, one-third of Australian universities provide two-thirds of the VET to higher education pathways. These differences are due primarily to the policies and practices of universities rather than to the characteristics of VET award holders or differences between fields of study.[53]

In order to make a successful transition from VET to higher education students require access to support. Enablers to assist this process have been identified as the inclusion of articulation as part of the program design, access to consistent and accurate promotional material, easier and fairer processes of articulation and recognition of prior learning and university staff understanding vocational education and training and vice versa.[54]

KEY FINDING

Given the low volume of student transfer between higher education and VET there is a need for a model that includes more systematic methods to facilitate movement between the sectors.

[52] *Wheelahan, L, 'What kind of access does VET provide to higher education for low SES students? Not a lot', University of South Australia, Adelaide, 2009.*

[53] *Watson L., Hagel P. and Chesters J; A half-open door: pathways for VET award holders into Australian universities, NCVWR, 2013.*

[54] *Aird, R, Miller, E, van Megen, K & Buys, L, Issues for students navigating alternative pathways to higher education: barriers, access and equity: a literature review, Queensland University of Technology and Griffith University, Brisbane, 2010.*

4.5 Establish new governance arrangements

The key challenge in relation to the governance of the tertiary education system is to determine the respective roles of the levels of government and the place of industry. There is a range of views in relation to this. It has been argued that central planning approaches are rigid and cumbersome and that tertiary education best thrives in a decentralised and autonomous environment.

This should not be equated with an absence of responsibility and accountability and that this can be achieved through a series of performance agreements.[55]

Consideration needs to be given to the issue of an independent co-ordinating agency. In tertiary education this role was formerly performed by the Commonwealth Tertiary Education Commission (CTEC) from 1942 to 1988 and then a more Commonwealth Department style model through the National Board of Employment, Education and Training (NBEET). Ultimately NBEET was compromised by current government policy and placed the Commonwealth Minister too close to the operational elements of the system.

For policy coherence an independent co-ordinating agency is required to engage in consistent, continuous and longer-term strategy development. This would need to be led by a board comprising representatives from key industry and societal sectors to ensure the articulation of views needed for the effective development and monitoring of a national tertiary education strategy.

An independent co-ordinating agency and any resulting national strategy requires the inclusion of both higher and vocational education.

"It is impossible to envision a cost-effective system focused on delivering knowledge and skills to increasing numbers of Australian and international students without considering regional delivery, thin markets and the increased blurring of the higher-vocational education divide." [56]

Any governance arrangements need to take account of the current differing responsibilities of Federal and State governments. In addition to potential policy roles, this involves consideration of funding and regulation issues. The Bradley Review recommended that the Australian government take primary responsibility for the broad tertiary education and training system in Australia.[57] More recently a key response to this was the call by the Business Council of Australia to establish a single funding model that was sector neutral and a split of funding responsibilities according to qualification levels.[58] This was to be supported by the establishment of a post-secondary education and skills system funding and market information institution. The Council has subsequently confirmed that post-secondary education and skills should be a shared responsibility but with greater clarity about these responsibilities.[59]

Another view is that administrative and governance arrangements need to be managed within the context of a COAG level agreement with the establishment of an expert advisory body to provide advice at arm's length from governments.

This body would have responsibilities for:

- advising on resourcing to meet changing demand,
- maintaining neutrality of provider and student choice between higher education and VET,
- monitoring delivery profile against changing demographics and labour market needs.[60]

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[55] *Goedegebuure L, Massaro V, Meek L and Pettigrew A: A Framework for Differentiation, in Visions for Australian Tertiary Education, Melbourne CSHE, February 2017.*

[56] *Goedegebuure L, Massaro V, Meek L and Pettigrew A: A Framework for Differentiation, in Visions for Australian Tertiary Education, Melbourne CSHE, February 2017.*

[57] *Review of Australian Higher Education, Final Report, December 2008.*

[58] *Future-Proof, Protecting Australians Through Education and Skills, Business Council of Australia, October 2017.*

[59] *Future-Proof, Australia's Future Post-Secondary Education and Skills System, Business Council of Australia, August 2018.*

[60] *Croucher G., Noonan P. and Chew J.: Funding an expanded tertiary system: designing a coherent financing architecture, in Visions for Australian Tertiary Education, Melbourne CSHE, February 2017.*

Within this context it is important to avoid assumptions that the VET and higher education sectors are the same and to avoid approaches that encourage homogeneity. It is also important that financing systems do not encourage sector drift and, in particular, the States and Territories should not diminish VET where they hold ultimate responsibility. This would not mean the establishment of a single funding formula but rather that "financing decisions and mechanisms across VET and higher education should share a common logic and approach where appropriate."[61]

The issue of the governance of the system is heavily influenced by funding considerations. With the introduction of demand-driven funding mechanisms in both VET and higher education clear policy direction is often lost in the highly competitive chase for funding dollars. The governance structure needs to be more than a vehicle for distributing finance if it is to avoid the errors of the past.

KEY FINDING

Establish an independent coordinating body charged with the responsibility of delivering government policy in a more coherent manner.

[61] *Melbourne CSHE, February 2017.*

4.6 Establish equitable funding arrangements

The development of a binary model with significant increased expenditure for higher education on the one hand and decreasing expenditure for VET on the other, is now well established. In addition, the configuration of the Commonwealth education and training portfolios at ministerial and department level also reflects this divide. This makes it difficult to maintain a more integrated oversight of tertiary education policy, funding and programs.[62]

While the Commonwealth has become the dominant funder of tertiary education there is little likelihood that the Commonwealth would assume full responsibility for funding VET. Similarly, the prospect of a unified funding system for both sectors, regardless of its particular merits, has little prospect of success. Accordingly, a national tertiary funding system will need to incorporate the states and territories in a shared funding model. This needs to be a more effective model than what currently exists. To govern this there is an argument for an independent overarching body to address whole of sector functions. These include:

- Assessment of need and demand including the balance of growth between the two sectors,
- Advice to government on future resourcing needs flowing from this assessment,
- Monitoring of advice on fiscal sustainability,
- Pricing principles and methodology, and
- Administration of student loan schemes.[63]

Other bodies would be able to administer more sector specific requirements. In the higher education sector this would include making adequate provision for the distinctions between teaching and research.

The first priority is to address the decline in participation and funding in the VET sector and to restore a better balance between higher education and VET. There have been some indications that there may well be an oversupply of some higher education graduates in some fields. The demand-driven funding system has been more responsive to the labour market than previous mechanisms. Skills shortages for professional occupations have been reduced to only five occupations. On the other hand, there are thirty technical and trade occupations currently in skill shortage which could be addressed by a re-invigorated VET system.[64]

In higher education there is the further complication of public funding for research. It would not be desirable to establish funding models that elevate research above teaching and so a differentiated funding model is required. Some of the increase in research funding has been the result of subsidies through the expansion of student numbers. The Commonwealth Grant Scheme currently provides universities with flexibility in this regard. While separating teaching and research funding may seem appealing, a significant number of staff and facilities support both. Splitting the main university grant to target funds at two ostensible outcomes may cause a loss of university effectiveness.[65] There is a need to explicitly support research infrastructure without deepening any teaching – research divide.[66]

KEY FINDING

A key function of an independent coordinating body would be to establish equitable funding arrangements across the sectors and between levels of government.

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[62] *Noonan P., A new system for financing Australian tertiary education, Mitchell Institute, September 2016.*

[63] *Noonan P., A new system for financing Australian tertiary education, Mitchell Institute, September 2016.*

[64] *Norton A., To fix higher education we also need to fix vocational education, The Conversation, September 5, 2018.*

[65] *King C., Towards a tertiary future, IRU Discussion Paper, November 2018.*

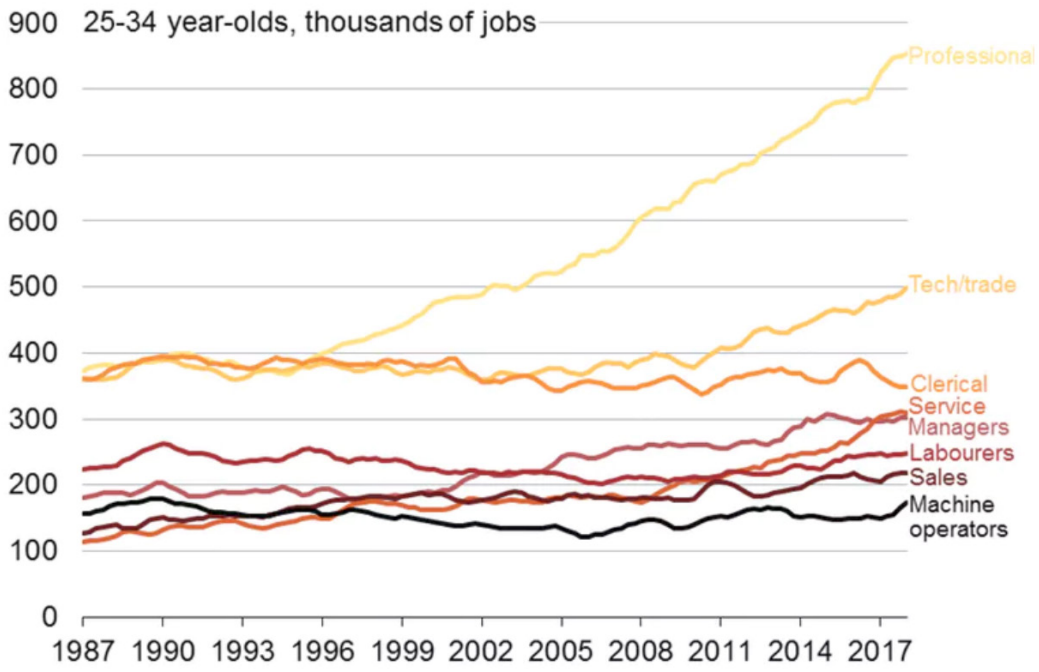
[66] *Beddie F., What next for tertiary education?, NCVER, Commonwealth of Australia, 2014.*

4.7 Improve demand-driven funding mechanisms

The move to the demand-driven system for higher education was announced in 2009. This enabled universities to enrol and receive funding for unlimited numbers of bachelor degree students. Enrolment grew at 6 per cent in the initial transition years up to 2012. After the full introduction of demand-driven funding government supported places grew by 5.2 per cent in 2013, 3.6 per cent in 2014, 1.6 per cent in 2015 and 1.5 per cent in 2016.[67] The Government's decision to freeze Commonwealth Grants Scheme (CGS) funding at 2017 levels has effectively ended the demand-driven system even though the growth in the number of student places had already plateaued.

One of the criticisms of the demand-driven funding system was that it produced an over-supply of graduates who subsequently experienced difficulty finding employment. In 2014 short-term graduate employment outcomes were the worst on record with nearly a third of graduates unable to find full employment.[68] Nevertheless the long-term ABS data indicates significant growth by young people in professional occupations. In the last decade the employment of professionals has increased by 35 per cent in the context of an overall employment growth of 17 per cent.[69]

Chart 12: Employment of 25 – 34 year olds by occupational category 1987 – 2017 ('000)



Occupational trends, 1987-2017. ABS

The demand-driven funding system is more responsive to the labour market than the system of fixed annual grants. The skills shortage data provided by the Commonwealth indicates that there were 40 professional occupations listed in 2008 prior to the introduction of demand-driven funding. By 2016 – 17 this had reduced to five occupations.[70]

State and Territory governments developed various entitlement arrangements as part of the National Partnership for Skills Reform from 2012-13 to 2016-7. These arrangements were not designed to be able to match the national demand driven funding system for higher education and have settled on a more demand-managed system approach.[71]

KEY FINDING

Given the more effective responsiveness to the labour market demand-driven funding mechanisms need to be retained and improved in tertiary education.

[69] *The Skilled Labour Market 2016 – 17 at www.employment.gov.au/skill-shortages*
[70] *The Skilled Labour Market 2016 – 17 at www.employment.gov.au/skill-shortages*
[71] *Bowman K and McKenna S., Jurisdictional approaches to student training entitlements: commonalities and differences, NCVER, November 2016.*

4.8 Create equitable student contributions

"There is a strong argument for a common loans scheme across higher education and upper level VET qualifications to remove distortions in decisions by students about what and where to study and to minimise the disincentive effects of up-front fees." (Bradley Review)

This admirable aim was followed by a loans scheme for the VET sector, but different to the higher education scheme. This became the much-maligned VET FEE HELP scheme which was extensively rorted and subsequently replaced by the VET Student Loans scheme from the beginning of 2017. Accordingly, the opportunity to introduce a common scheme has been missed to this point in time. Although the new approach is similar given the disclosure of subsidies into three levels of specific funding.[72]

There is universal agreement that students need to contribute to the cost of tertiary education. The issues relate to the extent and form of this contribution. In terms of higher education, students pay on average 40 per cent of the course fee which means a university receives this from the student for a Commonwealth Supported Place and the remainder is funded by government.

The amount varies considerably according to the discipline studied. This total amount does not cover the full cost of delivering a university degree, as the government contributes funds through additional schemes.

The current government has proposed a set of reforms including reducing the proportion of the government contribution and raising the amount that a student would pay.[73] Indeed, the 2014 Report of the National Commission of Audit recommended to the government that the proportion of costs paid by the Commonwealth through the Commonwealth Grants Scheme be reduced from 59 per cent to 45 per cent and the cost paid by students increase from 41 per cent to 55 per cent.[74]

There are inconsistencies in eligibility criteria for a student loan across the two sectors. All undergraduate students at Australian public universities have access to stable Commonwealth subsidies and HELP. In the VET sector, students undertaking advanced diplomas may or may not have access to an often variable State subsidy or VET student loan. Similarly, VET students in Certificate courses face upfront fees and cannot access the VET Student Loans program. The different levels of public subsidy and access to student loans programs have made accessing higher education loans more attractive.[75]

The significant expansion of higher education following the introduction of demand-driven funding has led to an increase in the HELP debt. The value of the outstanding HELP debt has increased from

$12.4 billion in June 2006 to over $47.8 billion in June 2016. Projections to 2025 indicate a total of nearly $200 billion.[76]

[72] *https://www.education.gov.au/vet-student-loans*

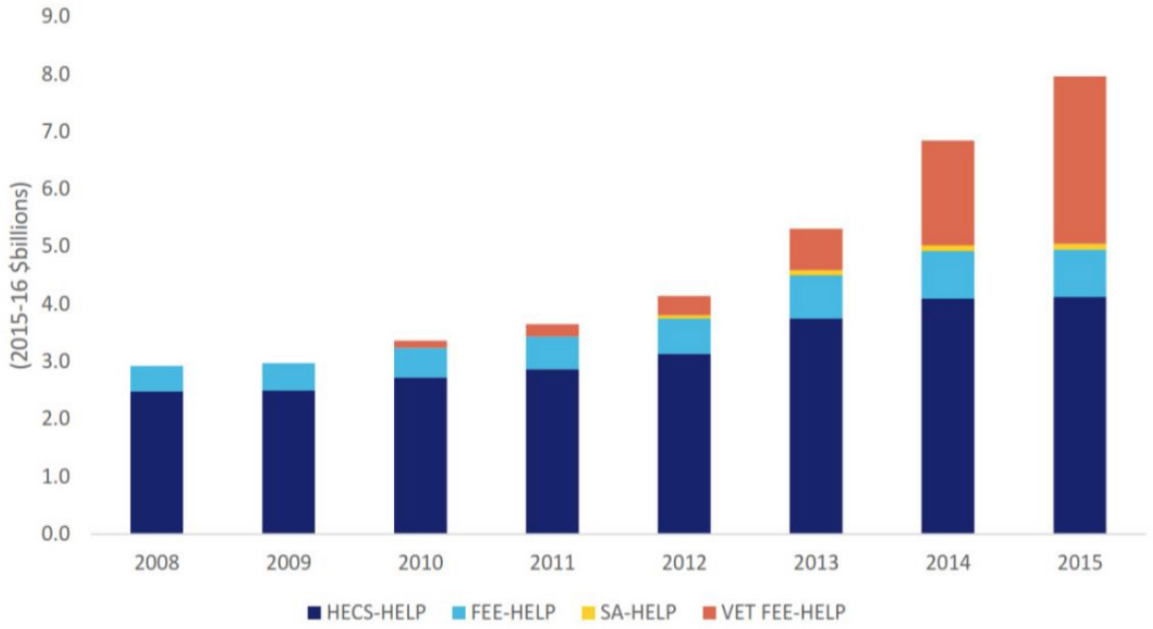
[73] *https://theconversation.com/fact-check-what-do-students-contribute-to-their-own-degrees-27280*

[74] *Higher Education in Australia: A review of reviews from Dawkins to today, Commonwealth of Australia, 2015.*

[75] *Croucher G., Noonan P. and Chew J.: Funding an expanded tertiary system: designing a coherent financing architecture, in Visions for Australian Tertiary Education, Melbourne CSHE, February 2017.*

[76] *Shifting the Dial: 5 year productivity review, The Productivity Commission, 2017.*

Chart 13: Higher Education Loan Program (HELP) payments 2008 - 2015

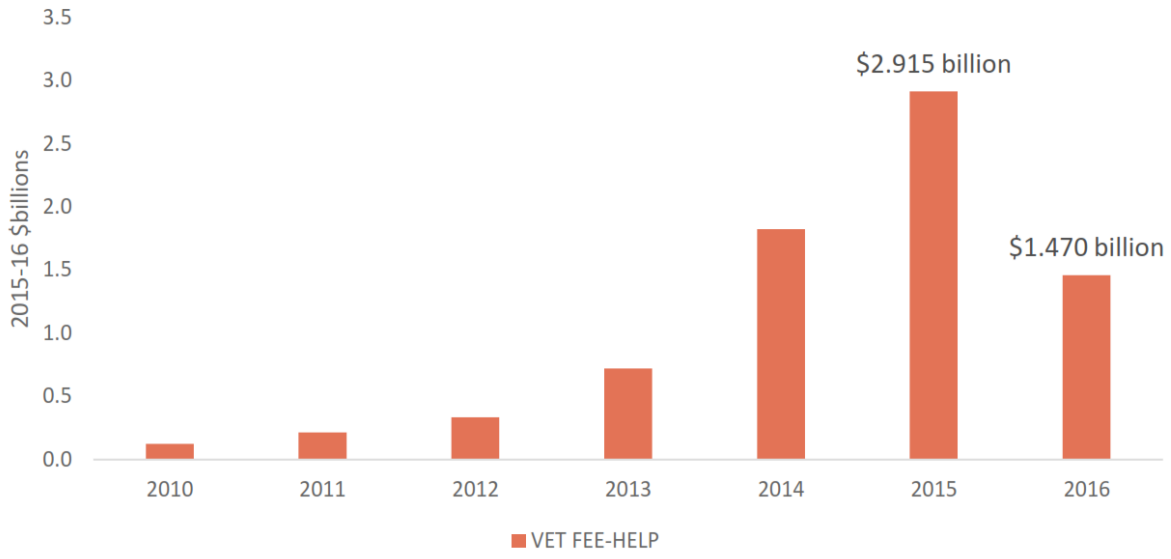


Source: Commonwealth Department of Education and Training 'Financial Reports of Higher Education Providers' (multiple years) and 'VET FEE-HELP Statistical Report' (multiple years)

In addition to the level of the debt there is the concern about expenditure for bad or doubtful debts. The 2017 – 2018 Federal Budget lowered the repayment threshold in an attempt to reduce costs.

The VET FEE-HELP scheme was introduced in 2009 and grew sharply until 2015. Quite apart from the misuse of the scheme by some providers the cost of the scheme to the government reached $2.915 billion in 2015. As a result of changes and reforms this expenditure was reduced to $1.470 billion in the following year.[77]

Chart 14: VET FEE HELP payments 2010 - 2016



Source: 'VET FEE-HELP Statistical Report' (multiple years)

[77] *Pilcher S. and Torii K., Expenditure on education and training in Australia 2017, Mitchell Institute, December 2017.*

The creation of the Skilling for Australians Fund includes targets for the provision of higher apprenticeships.[78] There is a potential opportunity for the off-the-job higher level VET (AQF levels 5 and 6) apprenticeships being financed under the VET Student Loans scheme. This would provide a potential point of differentiation for those providers approved to deliver VET Diplomas and Advanced Diplomas via apprenticeship mode and so support growth in this area. This arrangement would demonstrate an example of integrated policy, practice and funding that would benefit the VET sector.[79]

KEY FINDING

Establish a universal tertiary education student loan scheme, initially for diploma and above courses, to create a more equitable and cost-effective system.

[78] *https://www.education.gov.au/skilling-australians-fund>.*

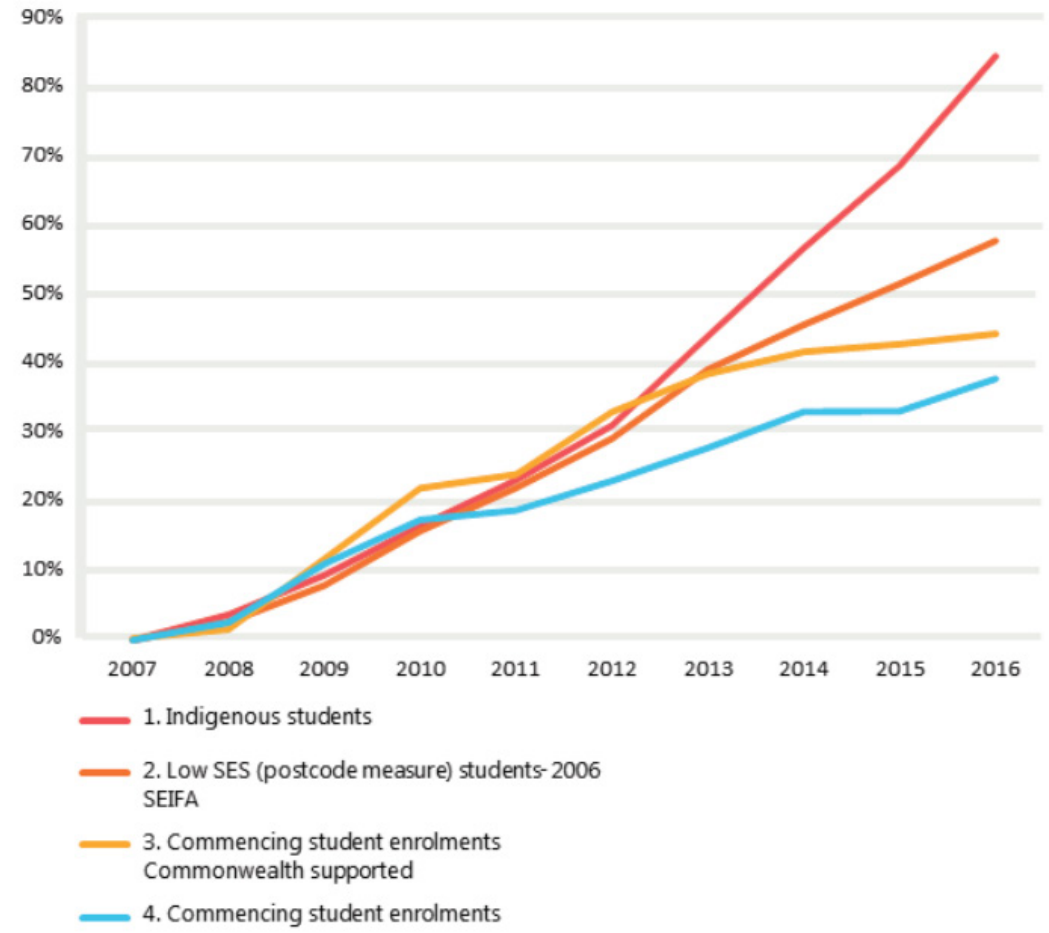
[79] *Fowler C and Korbel P, Exploring higher level VET apprentices and VET student loans, unpublished paper.*

4.9 Improve nationally consistent quality

The Bradley Review recommended the formation of a national regulator for higher education. Since the Tertiary Education Quality and Standards Agency (TEQSA) was introduced it has played a key role regulating against explicit industry standards and has become a strong presence in the sector.

The rapid expansion of the sector has led to issues around the maintenance of quality provision. Increased participation has fuelled concerns that new entrants will be under-prepared and under-informed students which could add to attrition rates.

Chart 15: Rapid rise in low SES and Indigenous student numbers (2007 – 2016) [80]



Source: Commonwealth Department of Education and Training, 'Selected Higher Education Statistics – Time Series Data 2016', 25 October 2016

The majority of Australian VET providers are regulated through the national VET regulator, the Australian Skills Quality Authority (ASQA). However, there are two other regulators: the Victorian Registration and Qualifications Authority (VRQA) and Western Australia's Training Accreditation Council (TAC). This complicates the achievement of a simplified governance structure.

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[80] *Cited in Robert Griew, Three lessons from a decade of higher education policy stalemate, nous, 2017.*

[81] *See for example Callan and Bowman, Lessons from VET providers delivering degrees, NCVER, 2015.*

[82] *NCVER Submission to Business Council, 19 January 2018.*

[83] *Future-Proof, Australia's Future Post-Secondary Education and Skills System, Business Council of Australia, August 2018.*

The existence of different regulators for both sectors is problematic for providers operating in both systems because of the increased regulatory burden. This does little to promote diversity of providers across the sectors. As a consequence, there have been advocates for a single regulatory body for Australian VET and higher education to decrease this burden and to enable a more diverse training market.[81] While this appears to be a neat solution there are several difficulties and challenges associated with this, including pedagogical and industry relations challenges. Perhaps a more effective approach is to retain TEQSA and ASQA while developing common or joint functionality in data standards, ICT systems, a national unique student identifier and staff exchanges.[82]

The Business Council in its paper addressing post-secondary education states that both ASQA and TEQSA should continue to regulate their respective sectors and should have powers to suspend operations where warranted to protect consumers.[83]

Concern about transparency issues is currently being addressed through the introduction of the Quality Indicators for Teaching and Learning (QILT). Measures such as these mean that there is a growing focus on accountability, transparency and quality assurance as a central feature of the system in the future. [84]

KEY FINDING

Maintain both TEQSA and ASQA as respective regulators for their systems while establishing joint functionality in appropriate and agreed areas.

[84] *French S, Kelly P and James R: Future for Australian Tertiary Education: Developing an Integrated, Coherent Policy Vision, in Visions for Australian Tertiary Education, Melbourne CSHE, February 2017.*

4.10 Resolve tension at the borders of the sectors and training for para-professional occupations

The tension between both sectors is fully realised at the borders between the two – specifically, VET diplomas at AQF level 5 and advanced diplomas and associate degrees at AQF level 6.

The demand-driven policy for higher education undergraduates has provided universities with greater market power. While the jurisdictions have introduced various kinds of VET entitlement arrangements they do not match the national demand-driven system implemented for universities. This situation will be aggravated further if the proposed higher education reform of extending the demand-driven policy to sub-bachelor programs and non-university providers is introduced as recommended by the 2014 Review of the Demand Driven Funding System (Kemp – Norton Review). This review found that private universities and NUHEP play an important role in the provision of sub-bachelor courses and this exclusion from access to demand driven funding inhibits competition.

The NCVER has noted that "policy and incentives need to ensure the equitable funding of mid-level professionals, including, for example, Associate Degrees and the newly emerging higher apprenticeships."[85] While the new VET Student Loans program represents a Commonwealth investment in VET Diplomas this is unlikely to challenge the competitive advantage held by higher education for diplomas.[86]

What is required for para-professional qualifications and occupations is a coordinated structure that does not encourage competition but rather rewards partnerships within the system. There are examples of cooperation and partnerships by providers from both sectors, but the arrangements are typically difficult to establish. As noted in parliamentary debate:

"there is a growing interaction between professional and technical learning, between theory-based, experiential, and competency-based learning, and the blurring of boundaries between them. Businesses have a requirement for both university-educated professionals and VET-trained technicians. It is no longer helpful to see stark contrasts between higher education and VET in the level and types of learning and qualifications they deliver."[87]

This is the type of thinking that led to the establishment of the Ai Group managed pilot program for higher apprenticeships in concert with Siemens Ltd and Swinburne University of Technology. This innovative model meets a specific emerging business need by combining a VET Diploma with a higher education Associate Degree in Applied Technology delivered in apprenticeship mode. It is interesting to note that the provider is a dual sector provider which makes the necessary collaboration easier to achieve.[88]

KEY FINDING

There is a need for greater and more equitable policy and funding coherence for mid-professional learning where the higher education and VET sectors overlap.

[85] *NCVER Submission to Business Council, 19 January 2018.*

[86] *Fowler, C., The boundaries and connections between the VET and higher education sectors: confused, contested and collaborative, NCVER,2017.*

[87] *Cited in Fowler, C., The boundaries and connections between the VET and higher education sectors: confused, contested and collaborative, NCVER,2017.*

[88] *https://cdn.aigroup.com.au/Reports/2018/Industry_4_Higher_Apprenticeship_Program_July_2018.pdf*

4.11 Promote workplace learning as a key delivery component in all post-secondary education

The benefits of workplace learning have been known for some time[89], including the link to productivity.[90] Education and training programs that include workplace learning are well regarded by employers. The European Commission's twenty guiding principles for WBL, provide a solid framework for workplace collaboration in all education and training sectors.[91]

The most structured of these arrangements, apprenticeships and traineeships, are accordingly highly valued by employers in many economies. What is required is a world class apprenticeship system that delivers quality technicians and trade workers with expanded coverage into para-professional occupations and delivery of higher-level skills including degree qualifications.

The value of Work Integrated Learning in higher education courses has achieved more momentum since the introduction of a national strategy to promote the practice. [92] There has been a national mapping exercise to examine good practice and identify issues related to the expansion of work integrated learning.[93] Employers are interested in such programs notwithstanding some of the difficulties to achieve engagement.[94]

The apprenticeship system in the VET sector and Work Integrated Learning in the higher education sector provide a solid basis for workplace learning. What is required is an expansion of these systems and in the case of the VET sector, an expansion to other non-apprenticeship programs.

The proposed Higher Education Reform Package advocates new policy and funding for universities to offer more degrees that include work integrated learning to be up to one sixth of a student's total load.[95]

A further issue relates to the capacity of individual learners to have workplace learning experiences recognised between the different sectors. In order to do this there is a need to "lift the reputation for applied learning by ensuring that all competency-based education embraces conceptual thinking and equips learners to move between the different institutions in the system."[96]

KEY FINDING

Promote workplace learning as a recognised key delivery component in all tertiary education.

[89] *See for example http://www.oecd.org/education/skills-beyond-school/46673531.pdf*

[90] *Kis V.: Work, train, win: work-based learning design and management for productivity gains, OECD Working Paper 135, May 2016.*

[91] *Twenty guiding principles for effective WBL, European Commission, 2015.*

[92] *http://cdn1.acen.edu.au/wp-content/uploads/2015/03/National-WIL-Strategy-in-university-education-032015.pdf*

[93] *Sachs J and Rowe A.; 2016 Good Practice Report – Work Integrated Learning, Australian Government Department of Education and Training, September 2016.*

[94] *PhillipsKPA; Engaging Employers in Work Integrated Learning; Current State and Future Possibilities, September 2014.*

[95] *Fowler C and Stanwick J: A chance to be bold and ambitious: make apprenticeships the lynchpin to a better integrated tertiary education sector, NCVER, 2017.*

[96] *Beddie F., A differentiated model for tertiary education: past ideas, contemporary policy and future possibilities, NCVER Research Report, Commonwealth of Australia, 2014.*

4.12 Reconsider qualifications

The major outcome from the tertiary education system is the award of qualifications, the recognition of skill and knowledge achievement. Given the rapidly changing nature of the workplace and the subsequent implications for skilling, it is important to reconsider whether Australia is well served by the current qualifications framework. In this sense it is timely that a review of the Australian Qualifications Framework has commenced and may lead to qualification and institutional reforms across the sectoral boundaries of VET and Higher Education.[97]

Preliminary work associated with the review has identified recent developments such as the trend towards micro-credentials and flexible delivery options and mechanisms to assist learners to construct their own programs, sometimes across sectors, to meet individual learning needs. In international terms, some countries are altering the way they view qualifications frameworks. In Europe, for example, there is a movement towards considering qualifications frameworks as a tool to facilitate an agile workforce suited to rapid technological, industrial and social change. [98]

A key issue is whether full qualifications should remain as the main or the only means of recognising skill achievement. This particular issue has been brought into sharp focus by the emergence of micro-credentials mainly in the higher education sector. However, the VET sector has also experimented with sub-qualifications through skill set programs. The impetus behind both of these initiatives is the need for more rapid achievement of skills to reflect change in the workplace. Highly competitive workplaces increasingly require methods of agile skill acquisition.

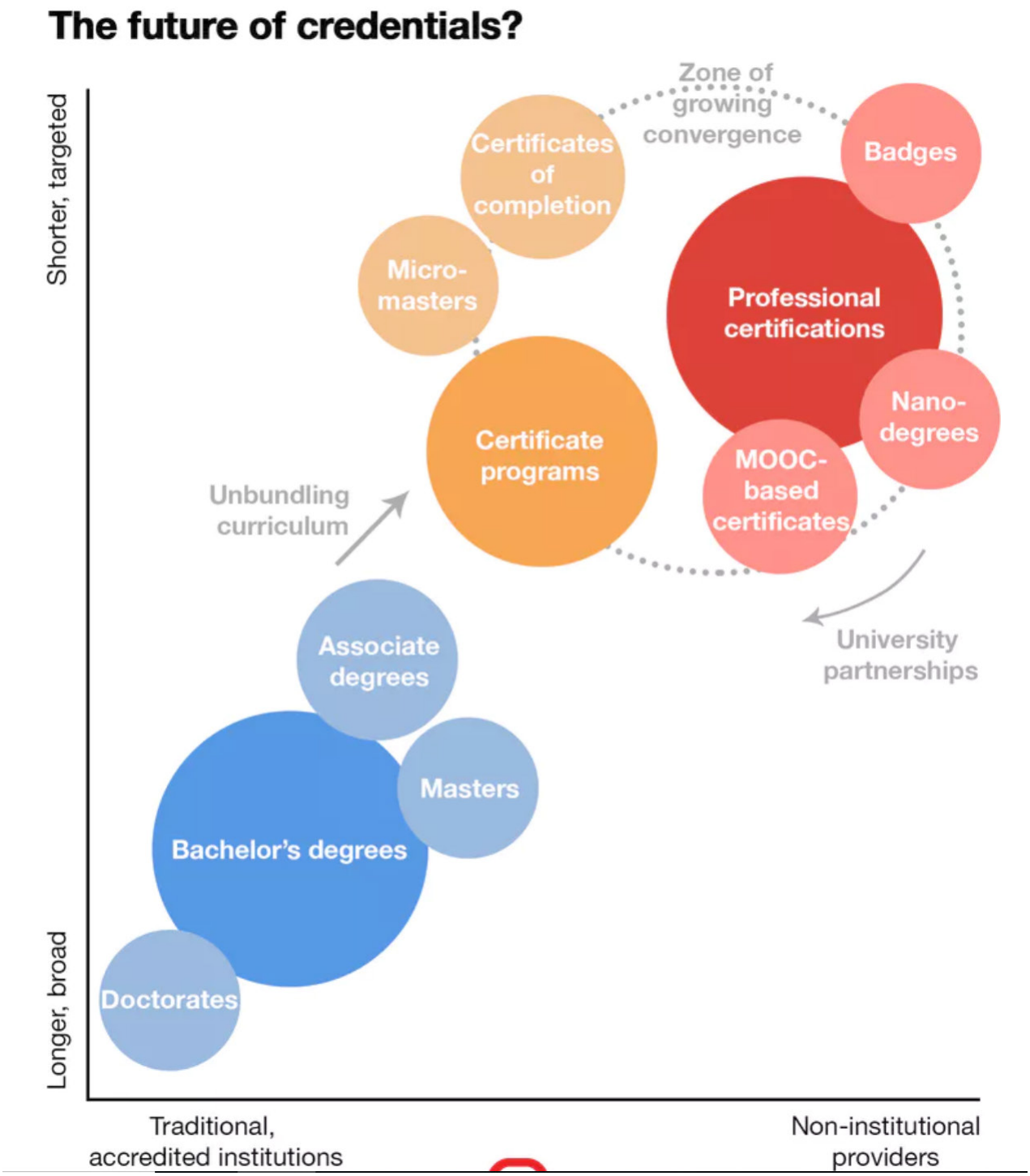
There is some growing mistrust of the degree as an adequate indicator of suitability for employment.

"An ecosystem of micro-credentials is emerging as an alternative or supplement to the degree, perhaps in tune with employers who have dispensed with degrees as prerequisites for employment on the grounds that degree transcripts are not particularly useful, and that university records are not good predictors of employment success."[99]

This emerging trend is depicted in the following diagram.[100]

next page

[97] *Fowler C and Stanwick J: A chance to be bold and ambitious: make apprenticeships the lynchpin to a better integrated tertiary education sector, NCVER, 2017.*
[98] *Contextual Research for the Australian Qualifications Framework Review, PhillipsKPA, April 2018.*
[99] *Milligan S. and Kennedy G.; To what degree? Alternative micro-credentialing in a digital age, in Visions for Australian Tertiary Education, Melbourne CSHE, February 2017.*
[100] *Sharrock G., Six thing's Labor's review of tertiary education should consider, The Conversation, May 25, 2018.*


The future of credentials?
Shorter, targeted
Longer, broad
Traditional, accredited institutions
Non-institutional providers
Zone of growing convergence
Certificates of completion
Badges
Micro-masters
Professional certifications
Nano-degrees
Certificate programs
MOOC-based certificates
Unbundling curriculum
University partnerships
Associate degrees
Masters
Bachelor's degrees
Doctorates

This ecosystem is possible due to the available digital communications technologies which can be applied for a number of purposes. These include:

- The provision of credentials that can be aggregated or 'stacked' over time,
- A mechanism for the general application of the Recognition of Prior Learning,
- A means of breaking the nexus between teaching and assessing or credentialing,
- A more effective means of recognising graduate attributes,
- The provision of a method of professional learning and professional development, and
- An effective means of learning to maintain various forms of currency.[101]

Micro-credentials have a number of advantages. "Non-institutional credential programs tend to be highly professionally focused, shorter-term, or 'bite-sized' – and as a result, substantially less expensive and more directly connected to job competencies compared to a degree."[102]

There has been substantial growth in the range and number of providers. Continuing on from the web-based providers of Massive Open Online Courses (MOOC), there is a broader range of providers than tertiary institutions. These include for example, new commercial education providers such as Udacity, corporate giants such Google, IBM and Microsoft, and a range of cultural and commercial organisations.[103] Some university providers are also partnering with external companies to enter this market.[104]

This is not to dismiss a number of challenges associated with the introduction and growth of micro-credentials. There is also the issue of how best to recognise this form of learning. In Europe the European Transfer and Accumulation System and the European Credit System for VET are considering portability arrangements for micro-credentials.[105] Closer to home, the New Zealand Qualifications Authority has established a credit mechanism for micro-credentials within their framework following the completion of some pilot programs.[106]

KEY FINDING

The qualifications structure in Australia needs to be reviewed to consider the emergence of micro-credentials and other developments impacting on the key outcomes of tertiary education.

[101] *Milligan S. and Kennedy G.;To what degree? Alternative micro-credentialing in a digital age, in Visions for Australian Tertiary Education, Melbourne CSHE, February 2017.*
[102] *Gallagher S., Innovative Credentials: Turning a drop in a bucket into a transformative tidal wave, The Evolllution, September 2016.*
[103] *Milligan S. and Kennedy G.; To what degree? Alternative micro-credentialing in a digital age, in Visions for Australian Tertiary Education, Melbourne CSHE, February 2017.*
[104] *Gallagher S., Innovative Credentials: Turning a drop in a bucket into a transformative tidal wave, The Evolllution, September 2016.*
[105] *Milligan S. and Kennedy G.; To what degree? Alternative micro-credentialing in a digital age, in Visions for Australian Tertiary Education, Melbourne CSHE, February 2017.*
[106] *www.nzqa.govt.nz/about-us/consultations-and-reviews/recognising-micro-credentials-in-New-Zealand*

5. CONCLUSION

As Australia enters a period of mass tertiary education there are several challenges to provide a highly skilled workforce. These challenges include:

- Long-term vision and policy: establish a longer-term vision and policy framework for tertiary education rather than a reliance on short-term reviews of elements of the system.
- More coherent and connected system: while acknowledging differences between higher education and VET it is important to view developments in either sector from the perspective of the whole.
- Diverse range of effective institutions: reflecting the wide range of learner needs a more genuinely diverse tertiary education landscape is required that features a variation in the types of providers.
- Learner movement between institutions: to facilitate more agile acquisition of skills and knowledge a more effective system of learner transfer between institutions within the overall sector is required.
- Improved governance arrangements: new governance arrangements are required to enable sector oversight and the more consistent development of policy.
- Equitable funding arrangements: funding arrangements across the sector need to be more equitable and support a more comprehensive and coherent funding platform.
- Demand driven funding mechanisms: these need to be implemented in a collaborative manner that is responsive to industry skill needs and without favouring any particular sector.
- Common student loans scheme: current student loan schemes are inequitable across the full sector and a universal scheme needs to be introduced.
- Improved nationally consistent quality: the system needs to move to a single regulator for each of VET and higher education and seek to establish areas of joint functionality.
- Resolve border tension: there is a need to address inequitable participation and funding arrangements at the intersection of VET and higher education.
- Promotion of workplace learning: workplace learning needs to be promoted as a vehicle for industry engagement with the system and as a key component of delivery.
- Reconsideration of qualifications: there is a need to review qualifications as the sector product to determine whether the current framework and arrangements are responding to emergent needs.

This is a formidable list. The need for considered and consolidated change is essential if Australia is to achieve the tertiary education system necessary for skill and knowledge acquisition in the 21st century.

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