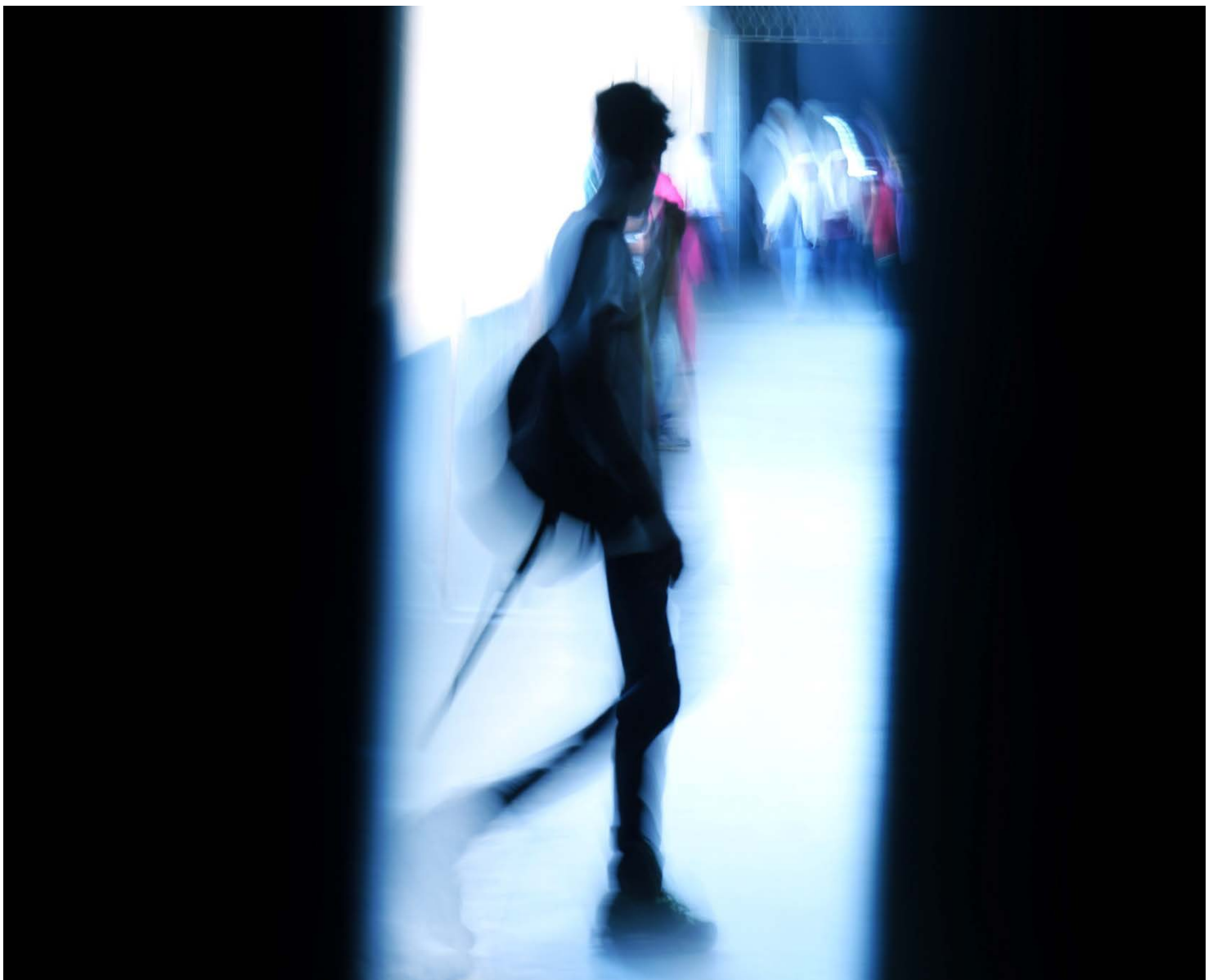


The boundaries and connections between the VET and higher education sectors: ‘confused, contested and collaborative’

Dr Craig Fowler

National Centre for Vocational Education Research



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This document should be attributed as Fowler, C 2017, *The boundaries and connections between the VET and higher education sectors: 'confused, contested and collaborative'*, NCVER, Adelaide.

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COVER IMAGE: GETTY IMAGES/iStock

ISBN 978 1 925173 72 7

TD/TNC 126.14

Published by NCVER, ABN 87 007 967 311

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About the research

The boundaries and connections between the VET and higher education sectors: 'confused, contested and collaborative'

Dr Craig Fowler, NCVET

Internationally, Australia's tertiary education system, comprising the higher education and vocational education and training (VET) sectors, is highly regarded, with both sectors subject to ongoing national review and reforms. This paper explores in detail the multiple issues that lie at what might be termed the 'boundaries and connections' between these sectors.

One marker that delineates the sectoral boundaries is the Australian Qualifications Framework (AQF), in particular AQF level 5 (VET diploma) and AQF level 6 (associate degree/advanced diploma). VET diplomas sit on one side of this boundary, and those financed under the previous VET FEE-HELP program (to be replaced by the new VET Student Loans program) have recently attracted considerable public scrutiny.

The conditions for the operation of the tertiary education system, especially the boundaries and connections between the VET and higher education sectors, are set by national and state/territory policies, embodied in regulations, programs and funding. In exploring the multiple issues that have evolved at the sectoral boundaries and connections, this paper highlights examples that have eroded clear differentiation between the sectors, as well as their mutual value within a coherent tertiary education system. The present situation has been caused by a combination of: differing sector-specific national policies and agreements; differing sectoral financing/funding; and differing sectoral legislation, regulation and standards, as well as overlapping qualification frameworks and different standards for courses and qualifications.

Key messages

- VET participation is declining in relation to higher education participation as a consequence of policy and funding reforms that have travelled along 'different tracks' over the last six to eight years.
- The boundaries and connections between the sectors present examples of significant confusion and of considerable inter-institutional contest, as well as willing collaboration. In aggregate, this imposes an unquantifiable national cost burden.
- The establishment of student 'loans', spanning VET diplomas to degrees, has, by design or not, reset higher education and VET sector policy, program and funding boundaries.
- From the perspective of students, the ability to pick and mix the best from university and vocational education and training, be it skilling, academic study or work experience, can only be beneficial to the needs of employers and to students' future jobs.
- Policy and incentives need to ensure the equitable funding of mid-level professionals, including, for example, associate degrees and higher apprenticeships.
- Improving and systematising cross-sector transfer arrangements for students is a priority, supported by use of common data standards and a system-wide unique student identifier (utilising existing sectoral numbering).

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Introduction

The purpose of this occasional paper is twofold, the first being to provide a brief illustration and commentary on the relative trend change and potential trajectories of Australia's vocational education and training (VET) sector by comparison with the higher education sector. This provides the necessary context for the second objective, which is to explore in detail the multiple issues that lie at what might be described as the 'boundaries and connections' between these two components of the tertiary education sector.¹

The boundaries and connections between these sectors is presented here as a wide canvas with multiple interwoven issues, such as articulation and transfer systems, overlap of VET and higher education qualifications, labour market crossovers, institutional structures and relations, funding and financing, and regulation and governance.

The issue of boundaries and connections has implications for domestic and international students, for educational institutions and their commercial partnering and markets, for employers and industry, and for regulators. The conditions for the operation of the tertiary education sector, especially those that influence the market conditions relevant to the two 'sub-sectors', are established by the collective policy of governments, in particular, policies embodied in regulation, funding and programs.

An assessment of trend data and an evaluation of the expert opinions referenced in this paper lead to the conclusion that the boundaries and connections between the higher education and VET sectors display many examples of *confusion*, *contest* and *collaboration*. If this hypothesis stands, the reasons may lie in the past and recent reforms impacting on these sectors – reforms that travelled 'different paths' – or at least were implemented without deliberately dealing with sectoral intersections.

Without detailing these different paths, which have been explained in other reviews (Department of the Prime Minister and Cabinet 2014; Department of Education and Training 2015), in summary, the historic Bradley Review (Bradley et al. 2008) proposed a more integrated tertiary education sector, but this was neither fully embraced nor since implemented. Part of the Bradley intent was to establish a clear differentiation between the sectors, so preserving the valued character of VET while allowing articulation and greater equity by extending income-contingent loans to diplomas and advanced diplomas. There are a number of salient – though contestable – post-Bradley observations:

- The 'demand-driven' policy for undergraduate higher education has given greater market power to universities post 2009.
- The state and territory VET entitlement arrangements under the National Partnership (NP) for Skills Reform 2012–13 to 2016–17 were never designed to, nor ever going to, match higher education as a national demand-driven system. Arrangements have produced a more 'demand-managed' system, one focused on aligning government subsidies with regional economic need (Bowman & McKenna 2016).

¹ For the purpose of this paper, defined as 'post-secondary', noting 'tertiary' has been suggested as being certificate III and above; see also Dawkins (2014).

- The more recent higher education reform proposals, including extending the demand-driven policy to sub-bachelor programs and non-university providers (Kemp & Norton 2014), stalled, and is policy yet to be resolved.
- The recent market experiences of financing VET diplomas through student loans under VET FEE-HELP has led to the termination of this program; it has been replaced by the new VET Student Loans program (to take effect from 2017).

What of the providers and clients? The factors noted above are driving market share change, as well as provider and institutional reforms, including growth in non-university higher education providers (NUHEPs). Students are making informed choices to fulfil their interests and aspirations (or perhaps are 'taking a punt on' as they might sift through unhelpful information). Employers seek graduates with high educational and skills quality and workplace versatility.

This paper is by no means the first to highlight such issues or grapple with the boundaries and connections between VET and higher education (for example, Dawkins's 2014 reconceptualisation of tertiary education), but events and circumstances indicate it is timely to once again point a deliberate spotlight at this issue. The aim is to examine the potential future improvement (or loss) of economic, labour force, innovation and educational opportunity if policies are reformed (or if policies are left at the status quo).

The narrative to this paper unfolds as follows. Firstly, it sets out high-level details and the context of both the higher education and VET sectors. This provides the platform from which the above 'hypothesis' – that the boundaries and connections between the higher education and VET sectors are filled with examples of confusion, contest and collaboration – is explored. The sections that follow include consideration of:

- AQF levels, programs and courses and regulation
- articulation arrangements between the two sectors
- information about providers – to illustrate both the context for students and institutional market share
- examples of provider collaboration
- the special case of apprenticeships
- evidence of student movement between sectors
- finally and more briefly, funding and financing arrangements and their transparency to students.

Each issue is viewed in the context of being prominent at the boundaries and connections between the higher education and VET sectors. The paper then draws conclusions and makes some comparative observations with the current thinking and policy drawn from the United Kingdom and New Zealand.



Dimensions and key features of the VET and higher education sectors

Some important dimensions and features of the VET and higher education sectors are summarised in table 1.

Table 1 Current key dimensions of VET and higher education sectors 2015¹

Dimension/feature	VET sector ²	Higher education sector ^{3, 4}
Students		
Total	4.5m	1.4m
Australian	4.4m	1.0m
International	0.2m	0.4m
Full-time	20%	71%
Part-time	80%	29%
Providers		
Total	4277 training providers	43 universities
Comprised of	53 TAFE institutes 15 universities 3099 private training providers 468 community education 442 schools 207 enterprise providers	127 non-university higher education providers
Program/course enrolments	3.5m AQF full or part (skill set) program enrolments (~3.2m subject <i>only</i> enrolments)	0.98m undergraduates 0.39m postgraduates

- Notes:
- 1 Numbers may not add exactly to total because of rounding. 86 institutions were registered to provide both VET and higher education.
 - 2 <<https://www.ncver.edu.au/data/collection/total-vet-students-and-courses>>.
 - 3 <<http://www.education.gov.au/selected-higher-education-statistics-2015-student-data>>.
 - 4 <<http://grattan.edu.au/wp-content/uploads/2016/08/875-Mapping-Australian-Higher-Education-2016.pdf>>.

To be clear, the higher education and VET sectors have a very different purpose and character, specifically, higher education students are generally a younger age cohort and mostly full-time, whereas VET students have a wider age spread and are mostly part-time, with many employed at some level. A significant minority of VET students are also undertaking training in subjects only or skill sets, rather than being enrolled in full program qualifications.

A more comparable measure is then to consider government-funded (subsidised) students enrolled in the two sectors. Table 2 shows there were some 1.2 million domestic government-subsidised VET students in 2015 compared with about 1.0 million domestic students in higher education (table 1). Table 2 is useful in illustrating the change in government-funded students over the period 2011–15 and shows an overall rise, followed by a fall in students, approximately over the period 2009–12, which is particularly evident in Victoria and South Australia, as well as a more recent overall general decline.

Table 2 Students by fund source (Commonwealth and state funding) by state/territory, 2011–15

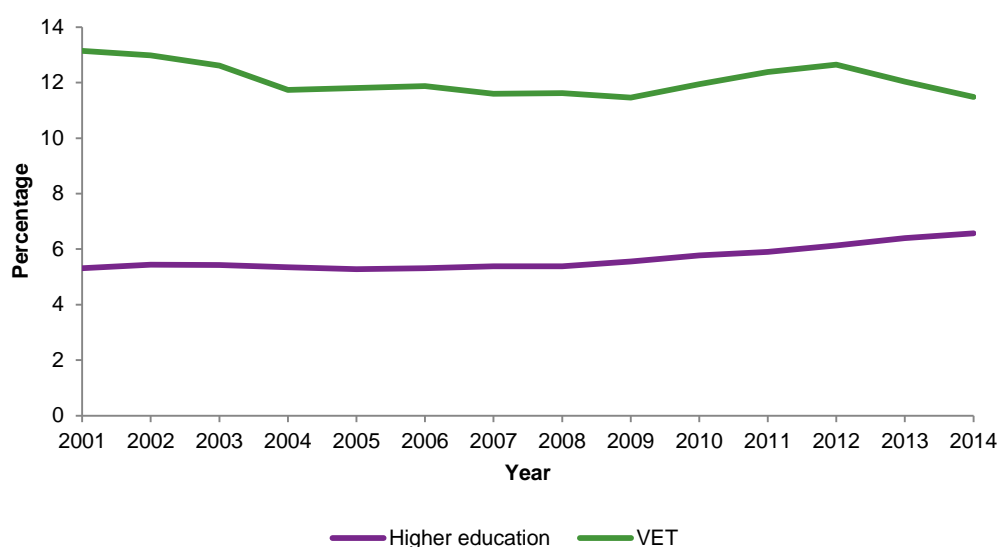
State/territory	2011	2012	2013	2014	2015
New South Wales	464 900	466 000	422 900	407 900	329 000
Victoria	436 000	494 300	498 000	460 500	391 300
Queensland	253 800	236 900	198 200	209 400	223 400
South Australia	101 600	123 300	150 300	107 900	86 300
Western Australia	146 700	145 200	141 300	132 000	127 700
Tasmania	31 600	31 700	29 800	34 100	28 700
Northern Territory	21 900	21 700	20 200	21 800	21 700
Australian Capital Territory	23 900	23 800	21 900	19 600	16 500
Australia	1 480 300	1 542 800	1 482 600	1 393 200	1 224 700

Source: National VET Provider Collection 2015; adjusted to new scope by excluding TAFE fee-for-service.

Trajectory of system change – VET and higher education

Figures 1–4 summarise the trends in VET and higher education participation data (Atkinson & Stanwick 2016). Figure 1 indicates the relative change in VET vs higher education participation as a proportion of the 15 to 64-year-old Australian population since 2001.

Figure 1 Participation in higher education and VET as a proportion of the 15 to 64-year-old population, 2001–2014 (%)



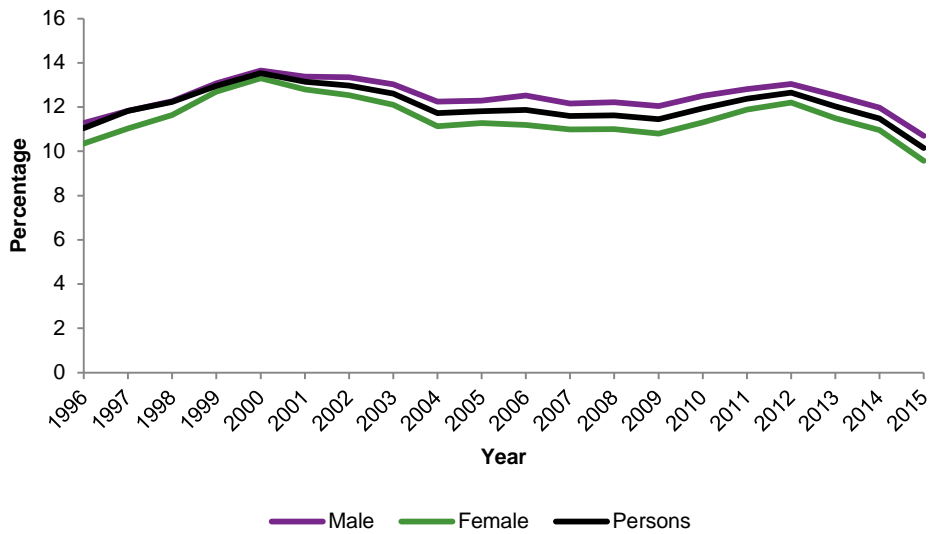
Source: NCVER National VET Provider Collection; Australian Department of Education and Training (2016).

In higher education, student numbers² show trend growth from 1.193 million domestic and international students in 2010 (857 384 domestic) to reach 1.410 million domestic and international students by 2015 (1.047 million domestic), about an 18% increase.

Figure 2 indicates longer-term change in VET participation as a proportion of the 15 to 64-year-old Australian population since 1996, showing recent falls, while figure 3 illustrates this by qualification level.

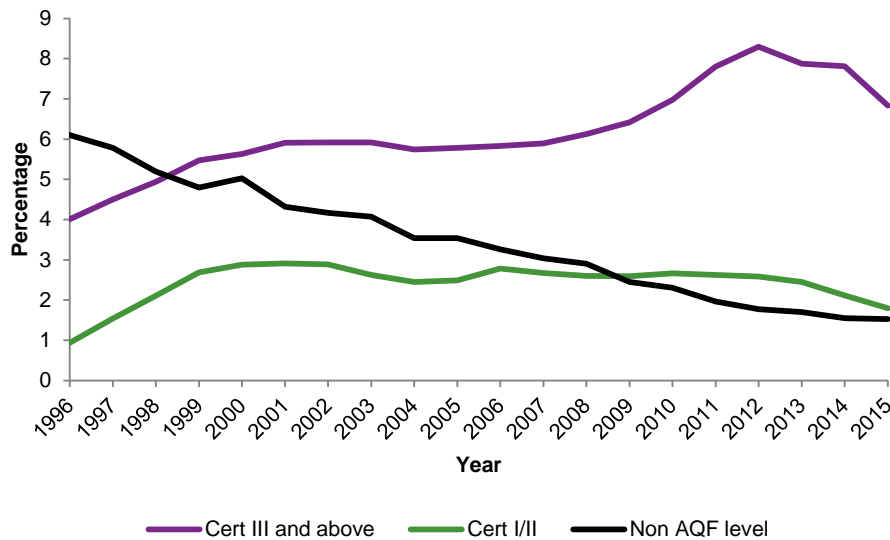
² <<https://www.education.gov.au/higher-education-statistics>>.

Figure 2 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: NCVET Historical time series of government-funded VET, 1996–2015; ABS demographic statistics, cat.no.3101.0, September 2015.

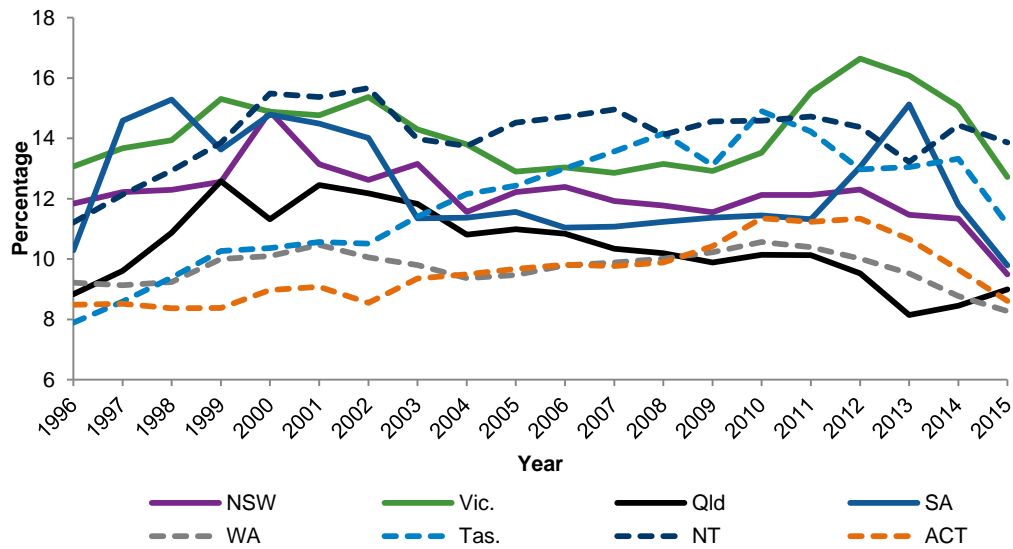
Figure 3 Rates of participation in VET by qualification level, 1996–2015 (%)



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

Figure 4 indicates the change in VET participation as a proportion of the 15 to 64-year-old Australian population since 1996, on a jurisdictional basis.

Figure 4 Rates of participation in VET by state 1996–2015 (%)



Note: The rate is expressed as students as a proportion of the 15 to 64-year-old population in each state and territory.

Source: NCVET Historical time series of government-funded VET, 1996–2015; ABS demographic statistics, cat.no.3101.0, September 2015.

Diploma program enrolments and relationship with VET FEE-HELP

VET diplomas at AQF level 5 sit on one side of the VET/higher education boundary. In 2015, *Total VET students and courses* (total VET activity; TVA) recorded some 566 000 diplomas or about 16% of the total 3.5 million VET AQF program enrolments (NCVER 2016c). There were some 428 000 diplomas reported in 2014 in the first TVA collection, indicating an increase from 2014 to 2015 in the order of 32%.

The *2015 VET FEE-HELP statistical report* (Department of Education and Training 2016a) indicates that around 320 703 course enrolments by 272 026 unique students accessed VET FEE-HELP, all financed by about \$2.9 billion in loans. It follows that about half of the diplomas are then funded by means other than VET FEE-HELP and, in the context of all vocational education and training, such diplomas are about 10% of the 3.5 million VET AQF program enrolments (table 1).

Summary observations

These data indicate the current different growth trajectories of the higher education and VET sectors.

Higher education enrolments have increased, with the latest data (2015) suggesting that growth is approaching a population plateau (Universities Australia 2016a). Commonwealth, state and territory subsidised VET student numbers are presently declining, with one last year remaining in the National Partnership for Skills Reform (2016–17). Under this National

Partnership the jurisdictions implement their own policy and training entitlement models (Bowman & McKenna 2016).

Noonan (2016a) paints a similar longitudinal story and draws conclusions in terms of 'imbalance' and divergence in growth and funding trajectories when comparing higher education and government-subsidised VET enrolments, as well as growth in the uptake of VET diplomas under VET FEE-HELP (Noonan 2016b).

The broad factors contributing to recent declines in government-subsidised VET enrolments (noting that the recent TVA data, of 2014 and 2015, are not yet suited to trend considerations) by comparison with the growth in higher education enrolments include:

- refinements to VET entitlement models, with a sharper focus on government subsidies in support of priority skills to match local job opportunities, evidenced by more selective funded training lists³
- students attending private providers and hence growth in private training, particularly for diploma and above qualifications, largely due to VET FEE-HELP
- decline in apprentice and trainee numbers, especially since 2012
- higher education reforms, particularly since 2009, resulting in expansion under a demand-driven funding model in higher education enrolments
- differential in growth of public funding across education sectors (O'Connell & Torii 2016), with VET worse off.

Higher education–VET boundary issues

Given this context, the next section examines the issues and the available evidence pertinent to the present relationship between the sectors that might shed light on the hypothesis that the intersection between higher education and VET can be characterised as confused, contested and collaborative in various measures.

AQF levels and regulation

The AQF Council (2013) itself provides only limited clarity on the differences between diplomas (AQF 5) and advanced diplomas and associate degrees (AQF 6). To quote Norton and Cakitaki (2016, p.11), 'since there is a continuum of knowledge and skills rather than sharp dividing line between AQF levels, the distinctions between VET and higher education are partly a matter of convention'.

Similar to VET students, most higher education students rate getting a job their highest priority and their prime reason for study. The apparent esteem of the award carries some cachet, so a path that includes higher education can be marketed as more attractive to students.

The utility of higher-level VET qualifications, as well as the blurring of the boundaries between the sectors at AQF levels 5 and 6, has been the subject of past research, for

³ See, for example, <<http://www.education.vic.gov.au/skillsfirst/Pages/fundedcourses.aspx>>, viewed 18 November 2016.

example, in a study commissioned by Innovation & Business Skills Australia (IBSA) in 2010 (Jones, McCluskey & Pardy 2010).

The lead author of this paper now expresses the following, perhaps controversial, point of view, some six years later:⁴

Australia has created a chaotic approach to qualifications in this range evidenced by circumstances such as:

The wastage of [significant] public funding on VET-FEE Help assistance provided with little evidence of return in terms of qualifications, let alone learning, achieved;

Following the uncapping of bachelor degree funding in public universities, the huge increase in enrolments of students ill prepared for higher education and the apparently consequential decline in completions as evidenced by the latest Higher Education Statistics;

The emergence, during the recent Federal election, of two rival policy approaches to sub-degree (AQF 5/6) qualifications either of which has the potential to wipe out up to 25% of higher level VET delivery without any consideration of the impact on VET businesses, especially those public VET businesses which ought to be a concern for their Government custodians.

Chaos has resulted from the absence of an integrated approach to tertiary (AQF 5 and above) qualifications.

We have two dissonant competing sets of qualifications at AQF 5–7. The higher education qualifications at this level generally provide broad based education, incorporating some version of the so-called 21st century capabilities that prepare students for future work and learning as well for work immediately after graduation. Employers and students who choose these qualifications over VET alternatives may be making sensible decisions since this type of education is more likely to produce a graduate with the capability to manage their own uncertain future and adapt to changing workplace needs. The scarce availability of funding for sub-degree qualifications means that learners who are ill prepared to succeed at AQF 7 level enrol in degrees.

On the other hand, VET institutions continue to deliver narrowly-focused, competency-based higher level VET qualifications; NCVET data show that in 2014, 114,500 programs were completed at diploma level or above. A now significant body of research has established that many graduates from these qualifications do not gain employment in the occupations for which they trained (Karmel, various), that many students use diplomas as stepping stones into degrees (Stanwick), that VET diplomas are not currently providing the ladders of success needed by low SES students (Wheelahan). With few exceptions (e.g. Nursing) VET diplomas and advanced diplomas seem to prepare graduates for jobs that they will not get and fail to prepare them to articulate into the higher education qualifications to which many of them aspire. Curricular dissonance between higher level VET and HE qualifications means that students who do transition from RTO to HEP rarely receive block credit for their diploma/advanced diploma qualifications; spending more time and money on their post-secondary education than seems fair.

⁴ Dr Ann Jones (Emeritus Professor, Victoria University, 2016, pers. comm., permission granted to quote email content).

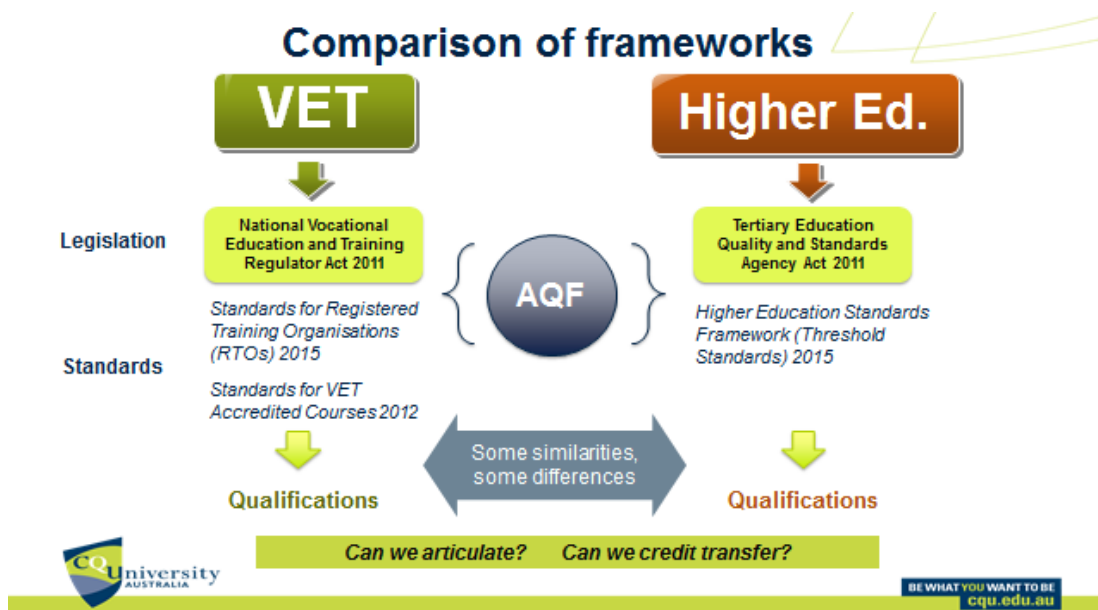
Training products, qualifications and articulation – diplomas/associate degrees

The regulatory edifices of VET provider standards and training package constructs compared with higher education provider standards⁵ and course accreditation stand either side of the AQF levels, with the boundary of their (im)-practical impact being at AQF levels 5 and 6.

The two responsible national regulators, the Tertiary Education Quality and Standards Agency (TEQSA) and the Australian Skills Quality Authority (ASQA), would be expected to constructively engage on such issues (Birmingham 2016b), yet have different legislative regimes to uphold. However, some 86 institutions are reported to be registered to provide both VET and higher education (Norton & Cakitaki 2016, p.12).

The example of Central Queensland University, as described by Bogna (2016) and Huntly et al. (2016) is instructive. Following the merger of the university and CQ TAFE in 2014, staff and various committees undertook diligent work to improve articulation between VET and higher education qualifications, with the aim of enhancing student offerings and 'both-way' entry and exit points for degrees and VET diplomas, within the framework shown in figure 5.

Figure 5 VET and higher education comparison of frameworks



Source: Bogna (2016).

This work painstakingly sought to satisfy accreditation processes and meet the approval of academic boards and regulators to provide training/education suited to student need and work opportunity. The examples offered by Huntly et al. (2016) and Bogna (2016) covered early childhood education and care, and occupational health and safety, respectively. Immense time and effort was consumed in mapping and unpicking the detail of training packages and curriculum to develop practical articulation models. Notably, in 2012, Karmel and Liu had demonstrated similar complexity in regards to understanding the difference between an associate degree and an advanced diploma in engineering.

⁵ A new Higher Education Standard Framework applies 1 January 2017. See <<http://www.teqsa.gov.au/>>.

Such experiences are likely to be common to other institutions faced with the same situation, which begs the question: why is it so difficult to ensure benefits to students when it is acknowledged that 'there is a growing interaction between professional and technical learning, between theory-based, experiential, and competency-based learning, and the blurring of the 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' (Parliament of the Commonwealth of Australia 2015, p.56).

One present opportunity for reform in the VET sector is the ongoing review of VET training products. The intended outcomes of this review include a 'suite of reforms to training packages and accredited courses', including to 'ensure obsolete and superfluous qualifications are removed from the system', and to 'ensure that the training system better supports individuals to move easily from one related occupation to another' (COAG Industry and Skills Council 2015).

While some occupations rightfully require strict attention to competency standards, especially those leading explicitly to licensed trade occupations, an option is to consider removing the requirement of training package usage for certain specified training packages or qualifications at, say, VET diploma and above levels, that is, at AQF 5 and 6 levels. Such an approach would be consistent with the broader arguments in support of 'vocational streams' (Wheelahan, Buchanan & Yu 2015).

Recent NCVET examination of the uptake and utility of training package qualifications across all VET qualification levels indicates that qualifications within the Business Services and Community Services training packages dominated, representing 30% of all enrolments (Korbel & Misko 2016). Examination at the diploma level, using 2015 VET FEE-HELP data (Department of Education and Training 2016a), showed that the top three fields of education were: Management and commerce, Society and culture, and Health, accounting for 74% of all students. The field of Management and commerce includes courses in business and management, and sales and marketing; Society and culture includes human welfare studies and services, and sport and recreation; and Health includes nursing and complementary therapies. Management and commerce has the highest percentage of students (46% of the total). Such qualifications dominated the top 20 VET FEE-HELP courses for 2015.

Contest for market share and student numbers

At least as far as student choice of courses is concerned, there is significant overlap between popular AQF 5 VET diploma courses and those of the AQF 6 associate degrees offered by higher education providers. Both qualification levels are used to cover similar fields of education and vocational purpose. So for students wanting to distinguish the education and work-related benefits from enrolments in vocational diplomas and associate degrees in high-demand courses such as those in, for example, business, management, marketing, human services, hospitality etc., other factors become relevant. The factors that become points of choice for students might include institutional prestige, relative costs of the course, access to funding/loans, and easier articulation to university bachelor study.

As shown in table 1, the number of non-university higher education providers is now some 127, up from 78 private NUHEPs in 1999, and they enrol an estimated 67 550 full-time equivalent students (Norton & Cakitaki 2016, p.12). The enrolment numbers of private university and non-university higher education providers increased by 9.9% from 2014 to 2015 compared with a rise of only 2.1% in public universities (Department of Education and Training 2016c). Non-university higher education providers include some TAFE (technical and further education) institutes delivering higher education qualifications. Courses generally have both academic and vocational purposes and are accredited and regulated by TEQSA. They must meet standards different from those inherent in training package qualifications.

In specific industry sectors requiring higher-level skills training, higher education courses increasingly present as an attractive and more agile alternative to VET training. For industry, the benefits may also lie in negotiating course content with higher education providers, outside the constraints and timeframes of training package qualification development. National professional associations and registration authorities, such as those in engineering and health, may provide the supportive accreditation of such courses.

In addition, educational practices utilising 'work based and work integrated' learning are being claimed as benefits to be gained from both the VET and higher education sectors (Atkinson 2016). Indeed, better alignment between university programs, industry and economic benefit is seen by some as a heightened imperative of future higher education reform (Wells 2016).

Notably, the subsidiary colleges of universities are especially active. Fourteen such institutions, in effect 'pathway' colleges, specialise in diploma-level courses. Their purpose is to prepare students for entry into the second year of a university course, rather than for a qualification leading to employment. Typically, they have a relationship with a particular university, and the diploma curriculum will match that taught in the university in first year. For example, students who successfully complete a Diploma of Business at the South Australian Institute of Business and Technology can enter the second year of a University of South Australia Bachelor of Business (Norton & Cakitaki 2016, p.13).

A further example is seen in the smaller regional economy of Tasmania, with the single university now offering foundational associate degrees⁶, a two-year qualification accepted by industry and seen as a good pathway to work or further university degree level study. The aim of this initiative is to raise educational participation in the state, although at the same time it presents potential competitive pressure for VET students in a limited market.

Foundation programs or associate degree courses therefore provide a qualification for either entry to work or, more likely, higher-level study in bachelor degrees. Universities use similar pathways to support international students, so they are able to leverage this experience. Further, in some professions, such as engineering, a university pathway may allow for easier articulation from an associate degree to a full degree than is possible if the student moves from VET into higher education.

Foundation programs, with built-in supportive student networks, also serve as risk mitigation against rising undergraduate program attrition. Such courses sit within the broader fabric of

⁶ See <<http://www.utas.edu.au/students/pathways/associate-degrees>>, viewed 18 November 2016.

university admission practices. This has raised other issues: the apparent decline in quality of intake; ambiguous use and differing views of ATAR as a measure of university entry standard, and proposals to deal with this (Higher Education Standards Panel 2016); and the increased reported attrition rates in some universities that are enrolling students who are, at least initially, not adequately prepared for university and thus need additional learning support.

The question then normally posed is: would some of these students have been better suited, and advantaged over the long-term, to enrol in VET programs post schooling? However, the more pertinent question seems: why aren't such students able to access opportunities at institutions where they can better 'pick and mix' the skilling, work and academic experience that provides the best of both higher education and VET practices, and what barriers do institutions face in better providing for this?

The present policies create contested ground for students in their choice of either VET or higher education. Client aspirations, apparent attractiveness of learning pathways and fees are likely to dominate in determining students' choice. At present the HELP loan policies differ across both sectors (Dow & Ey 2014), although this may change. If sub-bachelor higher education courses were to gain demand-driven funding status rather than remain in the present situation of negotiated student load, then the momentum towards higher education is likely to continue. With current policy settings left as is, non-university higher education providers (in all category types: for-profit and non-profit and subsidiaries of universities, TAFE institutes offering higher education) are likely to continue to grow in number and size, and in terms of their reputation for attracting students.

Collaboration across institutions

It would be wrong to characterise this space of boundaries and connections as solely a contest between institutions. It is not. There is strong evidence of collaboration between VET providers and universities, where the complexity of training package attainments, and their subsequent recognition in university courses to provide credit transfer and, ideally, guaranteed entry, has been patiently worked through.

A good example is agreements between a number of South Australian tertiary institutions, notably Flinders University and TAFE SA,⁷ where high-level collaborative engagement has existed for many years. Joint ventures concentrate on:

- dual awards, dual offers and the delivery of the Flinders Foundation Studies Program at TAFE SA campuses
- the extension of collaborations to additional areas of mutual benefit.

Approximately 250 articulation and credit transfer agreements for TAFE SA qualifications are available to commencing students. Approximately 70% of matched qualifications have articulation pathways. There are also guaranteed admission arrangements, for example:

- in 2015, over 500 dual offers were made, with year-by-year trend increases.
- TAFELINK provides guaranteed admission to over 80 Flinders University undergraduate courses for students with a certificate IV or higher VET qualification.⁸

⁷ Details provided by Ms Genevieve Haskett, Manager, VET Partnerships, Flinders University of South Australia.

⁸ Refer <<http://www.flinders.edu.au/tafelink>>, viewed November 2016.

Dual Award Partnership Degrees, delivered jointly as integrated degree programs leading to both VET and university qualifications, have been established in various programs.⁹

While these are good examples, past evidence of practices regarding VET students admitted to university (Watson, Hagel & Chesters 2013) shows that, nationally, the proportion of students admitted to higher education on the basis of a VET award was around 10%. However, in the Watson, Hegel and Chesters (2013) study there were substantial differences in institutional policy and practices, leading to wide differences in the rates of admission between higher education institutions and to a lesser extent also differences in admissions across fields of education.

Apprenticeship system

The tertiary education sector is a willing collaborator with industry. Many universities seek to link selected courses to work engagement more definitively, as evident in Universities Australia's Work Integrated Learning strategy,¹⁰ co-badged with industry peak bodies. This builds on industry input into the course curriculum underpinning graduate professional accreditations. Where relevant, universities now claim student benefits akin to those championed in VET, these being education, skills and job-readiness.

In the VET sector the apprenticeship model is an enduring, effective (and legislated) 'industry-partnered collaboration', one in which a student/employee learns both off and on the job.

The national apprentice system is constitutionally and operationally the responsibility of the states and territories (New South Wales Government 2010), albeit working together with the very significant support of the Commonwealth through the Australian Apprenticeship Support Network¹¹ and employer subsidies.

The practicalities of establishing higher-level apprenticeships, encompassing both VET and higher education components and employment – allowing on- and off-the-job training – requires multiple willing actors to navigate jurisdictional systems and AQF levels. The five announced pilot apprentice projects (Andrews 2016) explore new apprenticeships models, including, for example, that between Siemens Ltd and Swinburne University of Technology, to achieve:

the benefits of apprenticeship skills through the delivery of a new Diploma and Associate Degree in Applied Technologies developed in collaboration with Swinburne University of Technology. The qualification will meet the particular needs of industry with a focus on the adoption of high-level technology skills and the tools required for the future workforce. (Lilly 2016)

9 By way of example, Bachelor of Creative Arts (Dance); Bachelor of Creative Arts (Visual Arts); Bachelor of Creative Arts (Fashion); Bachelor of Creative Arts (Costume Design – 2017); Contracted Delivery; Creative Arts; Professional Writing; Foundation Studies; CISCO Vendor Certification training; Translating Short Course; and Engineering Practice Workshop.

10 See <<http://cdn1.acen.edu.au/wp-content/uploads/2015/03/National-WIL-Strategy-in-university-education-032015.pdf>>, viewed November 2016.

11 <<https://www.australianapprenticeships.gov.au/australian-apprenticeship-support-network> >, viewed November 2016.

The ability to swiftly implement and replicate such practices, nationwide, given that the apprenticeship system is legally the domain of the states and territories, will depend on imaginative jurisdictional-level initiatives and require local industry to work with willing VET/higher education providers. Dual-sector providers might be better placed to make this an early reality.

So if the apprentice model, with its inherent excellence, is to be elevated to include levels AQF 5 and 6, then cooperative arrangements to sort all legal, policy, institutional and funding issues need to be put into place to fast-track such initiatives.

Reforms in the United Kingdom have already entrenched such higher-level apprentices in the system and are looking to boost apprentice numbers specifically in degree programs (CFE Research 2016).

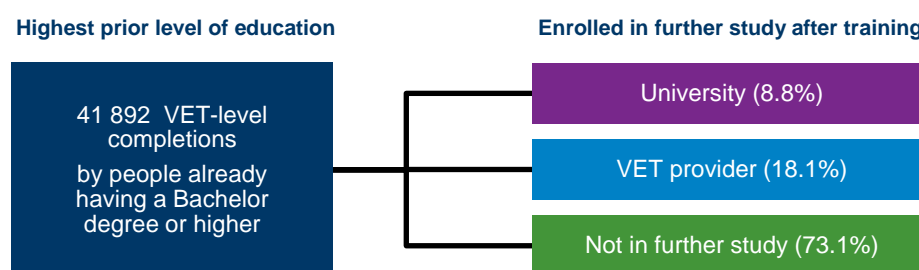
Tracking movement of students between sectors

At present there is no comprehensive metadata connection between the (new) VET unique student identifier (USI) and the higher education Commonwealth Higher Education Student Support Number (CHESSN), although student management systems may provide this within particular institutions. This lack of connection limits the detailed tracking of students moving across sectors, as is indicated below.

Based on ABS Education and Work data, Norton estimated the numbers of students undertaking studies utilising pathways in both directions: he estimated that, in 2015, 4.0% of students with a VET qualification were studying higher education; and conversely some 3.6% of higher education graduates were studying a VET qualification.¹²

Using students' enrolment data in the National VET Provider Collection and information from the National Student Outcomes Survey, it is possible to estimate the percentage of students who migrate between the higher education and VET sectors. The findings confirm student mobility across sectors.

Figure 6 Students with a higher education qualification – further studies



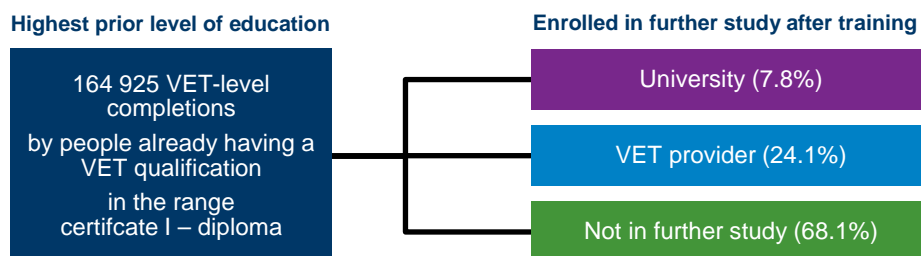
Source: Derived from National VET Provider Collection, 2014, and the National Student Outcomes Survey, 2015.

In 2014, as shown in figure 6, 41 892 students who on enrolment stated their highest prior level of education (at an earlier stage of their learning) was a university qualification, at bachelor or higher level, completed a VET qualification. Having completed this VET qualification, and based on surveys in 2015 of these individuals, typically six months after

¹² In-house NCVET seminar by Andrew Norton, Director, Higher Education Programs Grattan Institute September 2016.

completing this VET qualification, about 8.8% of them said they were enrolled in further study at university, and some 18.1% were enrolled in further study with a VET training provider. About 73% were not in further study when surveyed.

Figure 7 Students with a VET qualification – further studies



Source: Derived from National VET Provider Collection, 2014, and the National Student Outcomes Survey, 2015

Similarly, as shown in figure 7, in 2014, some 164 925 students who on enrolment stated their highest prior level of education (at an earlier stage of their learning) was a VET qualification, at least to a VET diploma, then completed another VET qualification. Having completed this VET qualification, and based on surveys in 2015 of these individuals, typically six months after completing this VET qualification, some 7.8% said they were enrolled in further study at university, and 24.1% were enrolled in further study with a VET training provider. About 68% were not in further study when surveyed.

Relative transparency of costs of education and training to students and industry

In higher education, undergraduates choose courses for which there is public information on costs/subsidies across 17 disciplines, eight different Commonwealth contribution levels and three different capped student contribution rates (Norton & Cakitaki 2016, p.57), with this policy applying nationally. The pricing of foundation/associate degrees is institution-specific; however, these courses are subsidised through Commonwealth funds and supported by universities as their subsidiaries.

The ACIL Allen report on the review of the National Partnership on Skills Reform of December 2015 states 'information on pricing and provider quality ... is generally limited ... including [with exceptions¹³] the level of government subsidy' (ACIL Allen Consulting 2015, p.33).

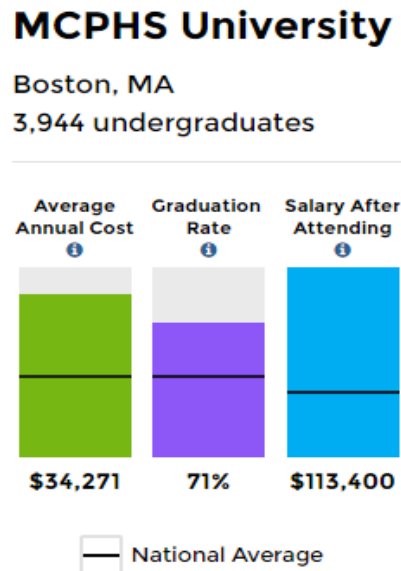
Compared with undergraduates, VET students in the main have less access to information on price and any applicable subsidy and, hence, their out-of-pocket costs, as well as less ability to compare training providers when making choices. This was the case with VET FEE-HELP, with examples of wide variation in student costs for the same course. It is notable that the new VET Student Loans policy adopts an approach similar to that applying in higher education, with disclosures of subsidies; with three levels of funding specific to each of the 347 proposed courses.¹⁴

¹³ Author's own insertion.

¹⁴ <<https://www.education.gov.au/vet-student-loans>>, viewed 18 November 2016.

Of incidental reference is the US college benchmarking system, College Scorecard (figure 8 is an example), which compares US higher education institutions across three key metrics.

Figure 8 Example of metrics on college performance, United States



Source: <<https://collegescorecard.ed.gov/>>, viewed November 2016.

Funding and significance of the financing by loans

In 2015–16 the National Partnership for Skills Reform is worth some \$377 million to states and territories and \$516 million in 2016–17, after which it ends (unless extended). More significant is the Special Purpose Payment for the National Agreement for Skills and Workforce Development, worth about \$1.5 billion per year over the forward estimates, based on the 2016 National Budget.¹⁵

Finance for VET FEE-HELP in 2015 was reported as some \$2.9 billion, a significant increase from prior years,¹⁶ noting uncertainty in students' future repayments of loans. It is not known but it is plausible that the eventual 2015 costs (loans unpaid) will be of similar order to the National Agreement cost per annum, unless loans repayment parameters are changed, or there is greater loan recovery from students, or, more immediately, significant funding is recovered from a minority of providers.

Other than for strategic job-linked reasons (for example, some diploma courses no longer planned to be financed by the Commonwealth), the states and territories will be unlikely to, beyond the life of the present National Partnership, subsidise this qualification level to any extent (also refer to data in Department of Education and Training 2016b).

The new VET Student Loans policy and program,¹⁷ which in 2017 replaces VET FEE-HELP (Birmingham 2016a), could have a different impact on the VET system, by comparison with the closed 'loan' program. If the quality of training and proven job relevance of 'funded'

15 <http://www.budget.gov.au/2016-17/content/bp3/html/bp3_03_part_2a.htm>, viewed November 2016.

16 <<https://www.education.gov.au/vet-fee-help-statistics>>, viewed November 2016.

17 <<https://www.education.gov.au/vet-student-loans>>, viewed November 2016.

VET diploma qualifications¹⁸ gains good traction and the loan conditions are favourable to students and approved providers, this would be a clear positive.

The qualifications that are no longer funded, many of which were reported to have minimal past enrolment under VET FEE-HELP, might then either be offered fee-for-service — or gradually fade away. Alternatively, courses in similar fields of education could be taken up within the higher education sector by non-university higher education providers. The net outcome might be that some providers adjust their course offerings to accommodate students' requirements (VET or higher education courses), or seek to register as dual-sector institutions, or enter into inter-institutional collaborations. Providers would be seeking to optimise opportunities for students and their markets. This makes all the more vital cooperative scrutiny by regulators at the 'boundaries and connections' between the sectors.

The future take-up and financing/repayments under the new VET Student Loans program is expected to reduce the value of new student loans being issued by more than \$2.4 billion per annum by 2019–20 (Parliament of the Commonwealth of Australia 2016).

In summary, the new VET Student Loans policy represents ongoing and significant Commonwealth investment in VET diplomas. It is however unlikely to change the present relative competitive advantage of higher education over VET providers for students. Therefore as a consequence of (a) overall policy settings being advantageous to universities and their colleges, (b) non-university higher education providers marketing and growth (assuming their ongoing access to FEE-HELP for fee-for-service activity), and (c) more targeted Commonwealth financing of VET diplomas under the new VET Student Loans program, qualifications at the AQF 5 and 6 levels have become, and will continue to be in the future, dominated by Commonwealth policy, programs and finance.

Summation and implications

In sum, the present boundaries and connections — these being the operational junctions between the VET and higher education sectors — present evidence of being confused, often contested and sometimes collaborative.

This disorderly state has occurred as the result of a combination of differing national policies and national agreements, which have been constructed and evolved in isolation, or at least without deliberate attention to designing the junction points. The AQF levels and financing policies are two connecting bridgeheads. The policy proposal to include 'associate degrees' (sub-bachelor higher education courses) within a widened 'demand driven' system, if adopted, would further shift present 'boundaries' to benefit universities. By contrast, TAFE institutes argue that, when they conduct higher education programs, they have no access to Commonwealth Supported Places, and so teach such programs via fee-for-service arrangements. This is not advocacy for any position, rather illustration of the types of issues relevant to 'boundaries and connections'.

The intended clients are however students whose aspirations, abilities and labour market destinies broadly coincide.

¹⁸ The proposal is to fund 347 courses and no longer fund 478 other courses, to 'eliminate wasteful borrowing rather than cut funding', as reported in *The Australian*, 12 October 2016,

That a critical analysis of the UK further education (FE) and higher education systems arrived at a similar conclusion in 2015 is significant for the Australian context. This is set out in the analysis, *Heading for the precipice: can further and higher education funding policies be sustained?*, with the author Alison Wolf noting that UK policy/funding settings have aspects in common with Australia.

[UK] Universities are thus well placed to expand their recruitment and the range of their offerings, colonising areas of vocational education and training which were traditionally the preserve of apprenticeship or of vocational schools and colleges.

(Wolf 2015)

Wolf's analysis is that an 'open-ended', demand-driven system in itself is increasingly unsustainable and, as constructed in the UK, is to the competitive advantage of universities over further education.

The overall financial sustainability of HELP policy in Australia is now also a matter of public debate (Universities Australia 2016b). Blunt expressions of the need for budgetary restraint (Knott 2016) foreshadow adjustments to policy settings, for example, to improve the likelihood of loan repayments, noting small inroads to the HECS—HELP scheme already being made in the recent Budget Savings Omnibus Bill 2016.¹⁹ These matters await the future findings of the now appointed higher education advisory panel (Universities Australia 2016c).

Implications for the VET sector

If the VET system at the diploma and above level has now been, as per Wolf's phrasing, 'colonised' by the Commonwealth, it is possible this will become part of a further refined continuum of HELP-style loans for 'higher qualifications' spanning both VET and higher education, with nuanced policy detail at different AQF levels. This financing will only ever be accessible to 'proven quality' providers, including approved registered training organisations (TAFE institutes have been accorded this status for the new VET Student Loans) and non-university higher education providers, as well as the self-regulating universities.

As far as the states and territories are concerned, their operational contribution to the national VET system will remain dominant in spanning the range of offerings, from VET in Schools to certificate IV. This must be recognised as a majority contribution as it comprised some 80% of course enrolments in TVA 2015. While showing a recent decline in government-funded students (table 2) and funding (NCVER 2016a), the states and territories are increasingly strategically targeting courses best linked to local jobs in high-demand enterprise/industry areas, to jobs in regional development, and to pathways for less prepared learners.

Fully fee-for-service private enrolments may increase, as will out-of-pocket fee costs for VET students for whom only part government subsidises apply. Close to half the total 29.4 million subject-enrolments in TVA 2015 were fee-for-service rather than government-funded, so client views of training value for money will also become more acute.

¹⁹ The Bill amends: the Higher Education Support Act 2003 to establish a minimum repayment threshold for HELP debts of two per cent when a person's income reaches \$51 957 in the 2018–19 financial year, <http://www.aph.gov.au/Parliamentary_Business/Bills_LEGislation/Bills_Search_Results/Result?bld=r5707>, viewed 18 November 2016.

Implications for VET and higher education intersections

There is a risk, that, if left to current policy settings, higher education will continue to steadily take over the top levels of VET, and it is arguable that, whether by design or not, the tertiary system has already accommodated this shift. The policy, program and funding boundaries have been reset. If this 'new normal' applies, then implementing initiatives that seek to bolster affordable paraprofessional, vocationally oriented learning might be all the more challenging. Evidence shows that the post-training job prospects for VET graduates (NCVER 2016b), including, and especially, apprentices and trainees, hold up well compared with the present prospects for university graduates.²⁰

This paper has summarised a number of views and some evidence claiming there is insufficient coherence or integration of national tertiary education policies, including in its:

- overlapping and unclear qualification frameworks
- the differing education requirements inherent in training qualifications and educational courses, with these subject of differing legislation, regulation and standards
- financing/funding (Noonan 2016a, refer to diagram in appendix 1, p.15).

The current governance and administration structures present barriers to constructive change and create inefficiencies in both systems, especially at their junction points. At a practical level such issues might be particularly felt by the 86 institutions understood to be registered by both the Tertiary Education Quality Standards Agency and the Australian Skills Quality Authority.

Despite such barriers, it must be emphasised that there are examples of good practice, won 'ground up' by cooperating institutions, in relation to finding solutions to such intersections. Further examples of innovative integrated approaches include:

- Latrobe University partners with Bendigo Kangan Institute, SuniTAFE in Mildura and Wodonga TAFE to deliver co-enrolled diplomas and degrees in nursing, early childhood education and social work to students in regional Victoria.
- The University of New England and TAFE New England have developed dual-sector degree programs in the Bachelor of Health Practice and the Bachelor of Community Services, which allow students to simultaneously study VET qualifications and a university degree with a single enrolment.

There are undoubtedly other examples across the nation, but these experiences appear to be modestly shared, limiting others the opportunity to benefit from the learnings. Such collaborative approaches can touch on complex institutional arrangements and industrial issues, whose resolution might benefit other organisations contemplating these partnerships. It is perhaps because of these examples that future exploration of reform at the higher education – VET 'boundaries and connections' is justified. Introducing a sector-wide USI (utilising existing sectoral numbering) and common data standards and terminology would be helpful steps in the provision of a more accurate picture of student choice and behaviour.

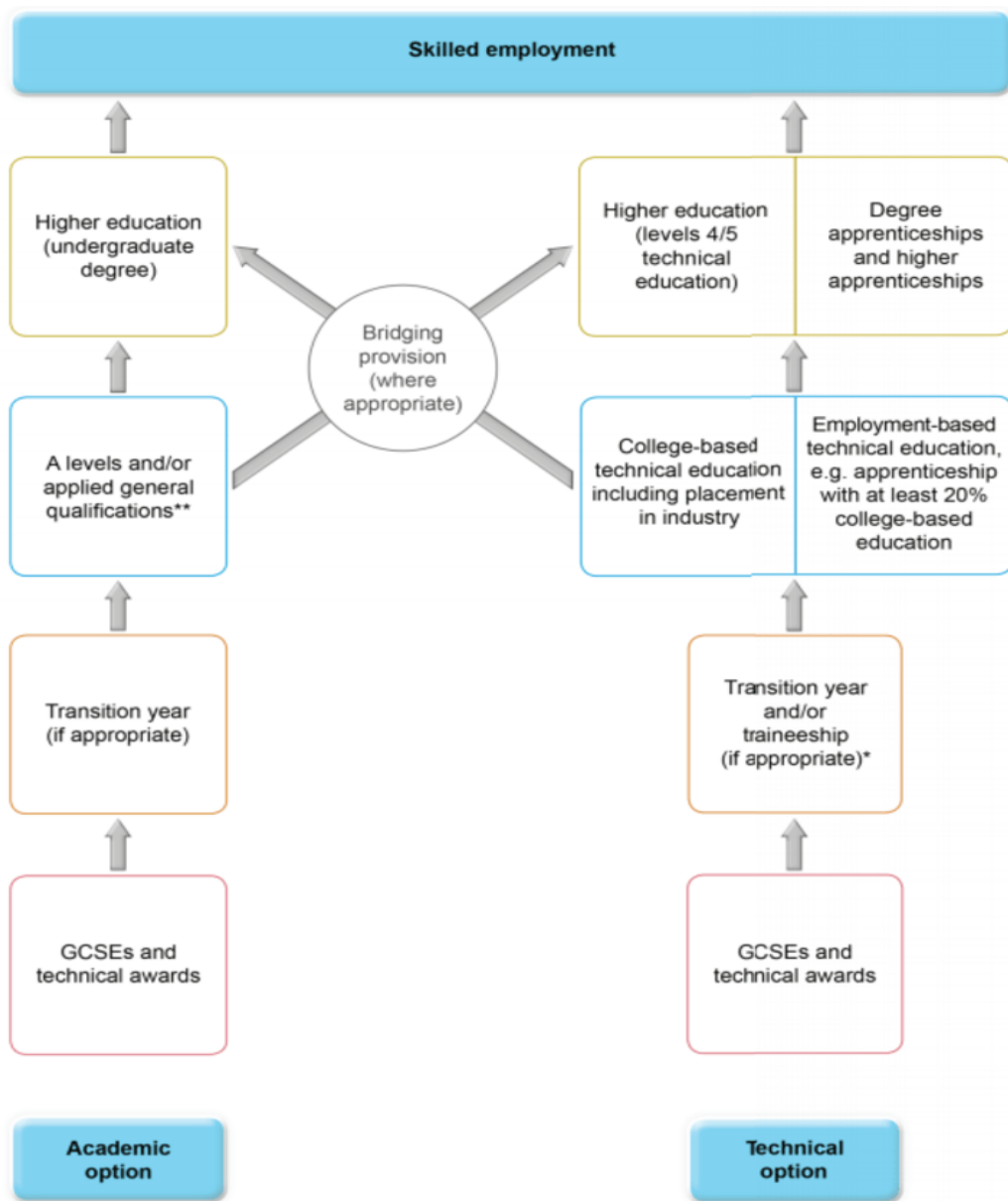
²⁰ <<http://www.graduatecareers.com.au/research/researchreports/gradstats/>>, viewed 18 November 2016.

Any reforms need not and should not lead to unimaginative uniformity but should rather deliver greater clarity of educational and vocational purpose, enabling students to better ‘pick and mix’ their skilling, work and academic experiences.

Recent international models for such reforms also exist, at least expressed as policy intent and not yet experienced in practice. The UK Government’s Post-16 Skills Plan (United Kingdom Department for Business, Innovation and Skills & Department for Education 2016) expressly defines 15 vocational/technical routes – akin to streams or clusters – accessed via two distinct pathways: a college-dominant pathway or an employer and apprentice training pathway, including higher-level apprentices.

The policy also describes discrete crossover points between colleges and universities (figure 9).

Figure 9 Post-16 Skills Plan



* Where a student does both, the traineeship will follow the transition year. Students doing both the transition year and a traineeship may progress directly to employment.

** Some students will move directly from A levels and/or applied general qualifications to degree and higher apprenticeships.

Source: UK Department for Business, Innovation and Skills & Department for Education (2016).

This policy makes no 'parity of esteem' or 'forgotten middle child' arguments in relation to VET; rather, it highlights as a national economic necessity an excellent VET education, one connected to industry.

In the UK it has been argued that the combination of large numbers of and confusing qualifications, competency-based training that has been too narrowly interpreted, and privatisation of the VET market has served collectively as a catalyst for the increasingly poor quality of further education (Crowther & Hager 2016). This appears to have been at least partial impetus for the recent UK reforms.

A further pertinent example is the present debate in New Zealand, being led by the New Zealand Productivity Commission (NCPC) at the request of the government. The Productivity Commission's task is to explore 'new models of tertiary education' at a whole-of-system level. The preliminary findings (New Zealand Productivity Commission 2016) are that, while the country is well served by its tertiary education sector, the system displays inertia, induced by centralised and overly prescriptive governance of regulatory and funding policy, which favours the status quo in the interests of dominant providers, and not students. The total number of domestic student places in the tertiary system is capped, and the proportion of total government funding that shifts between providers year to year is small. While providing tight control on the costs and quality of its tertiary education sector, the view is that this has stifled alternative innovative practices in institutions, practices that could be more flexible to student, industry and national needs.

This is a narrative somewhat different from Australia, given that in New Zealand the tuition subsidies allocated to tertiary providers come with tight specifications on the nature and volume of training delivery. The government also regulates the fees that providers can charge. However, one advantage of the New Zealand system is that this (apparently excessive) control applies sector-wide, under one government, and covers all categories of tertiary education institutions – universities and training providers. There is a unified funding framework across New Zealand's tertiary education sector.

The need for a unified funding framework is the central observation made by Warburton (2016) in regards to resourcing Australia's tertiary education sector. Warburton argues for a more coherent system of support for the financing of students across the tertiary sector, one resourced by all governments and where government subsidies and student tuition fees are openly identified. Where tuition is to be financed by loans, he proposes a coherent single program for income-contingent loans, with loans tiered by way of increasing the levels of maximum borrowings aligned to the level of study across the range of the AQF, with this regime spanning both VET and higher education.

Conclusions

While the VET and higher education sectors are very different in purpose and practice, the mid-ground of AQF 5 and 6 level qualifications are at least as similar as they are different. Higher-level VET qualifications, such as diplomas, are as much concerned with providing students with increased employability skills and technical capabilities (especially digital skills) to enhance their transferability across jobs in an uncertain labour market as they are concerned with training for specific job tasks requiring competency standards.

Why does all of this matter? Particularly, what is the relevance to the operation of the tertiary education sector and the boundaries and connections between VET and higher education? It matters because the boundaries and the connections between the sectors present examples of significant confusion and of considerable inter-institutional contest, as well as willing collaboration. This in aggregate imposes an unquantified cost burden.

It also matters from the perspective of students: providing them with the capacity to pick and mix the best from university and VET – skills, academic study or work experience – can only be beneficial to the needs of employers and to students' future jobs.

It also matters because policy and incentives need to ensure the equitable funding of mid-level professionals, including, for example, associate degrees and higher apprenticeships. Finally, as argued previously (Fowler 2016), it matters because in excess of 60% of the present national labour force of 12.6 million have a certificate III or higher (ABS 2016) and through whom future enterprise innovation – 'better ways of doing things on the job' – is diffused in the economy. It is the quality and adaptiveness of the nation's mid-tier professionals that will greatly determine national productivity in responding to disruption and labour market change.



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