

Programs and Pathways

A report prepared for the Pathways Project

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Disclaimer

The Hon Julia Gillard, Deputy Prime Minister asked the Australian Qualifications Framework Council in April 2009 to provide advice on how to improve qualifications and recognition arrangements that would lead to more seamless pathways between the vocational education and training (VET) and higher education sector which would benefit students. This work became known as the Pathways Project.

Four separate research papers were commissioned by the Pathways Project Steering Committee to provide comprehensive information on existing practices and arguments for future reform. The research papers examine:

- *Funding for Tertiary Education and Training*
- *Policy and Regulatory Analysis*
- *Programs and Pathways*
- *Data Collection.*

The findings of this research and the views expressed in this report (*Programs and Pathways*) are those of the author of the report. The views and opinions expressed herein do not necessarily reflect the views of or have the endorsement of the Australian Qualifications Framework Council or any of its members or staff. The Australian Qualifications Framework Council accepts no responsibility for the accuracy or completeness of the contents and accepts no liability in respect of the material contained in the report.

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Introduction

A modern, economically competitive, tolerant and socially inclusive society is also a society where everyone has access to tertiary education. The complexity of society, work and technology now means that the whole population needs higher levels of education, and not just the few. Exclusion from tertiary education exacts a much higher social, cultural and economic cost for individuals and for society than it did in the past when only a minority finished school and went to higher levels of education. This is because access to, and the capacity to succeed in, tertiary education mediates access to a much wider range of jobs than in the past, and to the lifestyle and culture associated with high levels of education.

The Australian Government has set ambitious targets for participation in education and attainment of educational qualifications to ensure access to education is provided for all and not just the few, and to raise the skills of the workforce so that Australia remains competitive in the international economy. The Deputy Prime Minister and Minister for Education, Julia Gillard, has, as part of a broader strategy to achieve these objectives, asked the Australian Qualifications Framework Council (AQFC) to provide advice on how qualifications and educational pathways between the vocational education and training (VET) and higher education sectors can be improved and lead to better outcomes for students.

This project is one of six established by the AQFC so it can provide advice and recommendations on the way this purpose can be achieved. The focus of this project is on the way programs and pathways can facilitate increased student articulation and credit-transfer within and between the VET and higher education sectors. It examines the outcomes of pathways for disadvantaged students, how pathways support occupational progression, the way they are structured to provide students with credit-transfer and entry to higher education, and how they are developed and managed within educational institutions, between institutions, and between sectors.

The paper is structured in two broad sections. The first discusses why pathways are important and the level of student articulation between VET and higher education that we need. It evaluates current outcomes from pathways and programs to determine if they are meeting their intended purposes and it includes a discussion of the extent to which they provide opportunities for social mobility and higher levels of education for disadvantaged students. It argues that diplomas and advanced diplomas are central to pathways and that policy must be just as concerned with access *to* diplomas and advanced diplomas from lower level VET qualifications as it is with access *from* diplomas and advanced diplomas to higher education. The second section discusses the way that pathways are currently constructed, how they are related to programs, and how they are being used to support credit-transfer and student articulation between qualifications, institutions and sectors. It discusses the way we should consider structuring pathways so they contribute to occupational progression and so they support disadvantaged students to access education and achieve educational qualifications, and it discusses the policy, institutional, programmatic and curricular implications if pathways are to achieve these objectives. The paper provides propositions for consideration at the end of each major section on the way pathways

can be developed and supported to lead to better outcomes for students and to assist government in meeting its targets.

Why are pathways important & what are the outcomes?

Pathways are designed to achieve two purposes in modern tertiary education systems. The first is to increase the effectiveness and efficiency of education systems and to align educational outcomes with national economic priorities. Individuals need to be able to move between different types of qualifications and different occupational sectors with credit for prior learning, so reducing the time and costs to them and to governments. The second purpose is as an equity measure which is designed to promote social inclusion. Pathways aim to provide opportunities for disadvantaged groups in society by mediating access to higher levels of education with appropriate credit for prior studies (OECD 1998; Raffe 1998; Young 2001).

The development of pathways has been a concern of government since the late 1980s and early 1990s when it modernised our higher education and VET systems by creating a unified university system and a national VET system. Indeed, a key reason for the establishment of the Australian Qualifications Framework in 1995 was to support educational pathways between educational sectors and between education and work. However, pathways take on renewed importance now because they are central to achieving the current government's targets for participation in education and attainment of educational qualifications. These targets are to:

- increase the proportion of the population aged 25-34 years with a degree from 32% in 2008 to 40% by 2025;
- halve the proportion of Australians aged 20 to 64 years without a certificate level III qualification by 2020;¹
- double the number of VET higher qualification completions (diplomas and advanced diplomas) by 2020;²
- raise the proportion of young people achieving Year 12 or an equivalent qualification from 74% in 2007 to 90% by 2015;
- increase the percentage of students from low socio-economic backgrounds in universities from around 15-16% in 2007 to 20% by 2020; and,
- halve the gap for Indigenous students in Year 12 or equivalent attainment by 2020 (Commonwealth of Australia 2009: 12).³

Each target is important in its own right because it contributes to social inclusion and the skills of the Australian workforce, but they are also related because achieving the targets for higher level qualifications requires successful fulfilment of the targets for lower level qualifications. This is because there needs to be a bigger pool of qualified applicants for these higher level qualifications. Pathways are fundamental to the achievement of these targets in two ways: first, they provide an effective and efficient way of increasing the skill levels of the Australian workforce by linking educational progression with occupational progression. Second, they underpin and support educational progression for those who do not have qualifications and they can contribute to widening participation in education by students from disadvantaged backgrounds.

Pathways consequently provide the basis for lifelong learning and are a key component of government lifelong learning policies. Putting pathways at the centre of tertiary education policy brings the sectors into a direct relationship with each other by requiring each to consider the way that their qualifications and curriculum provide the basis for educational progression and support for students' transition between qualifications, institutions and sectors. The Organisation for Economic Development and Cooperation (OECD) (1998: 10) explains that:

The issue is not simply co-ordination across sectors, institutions and programs and greater recognition of the value of different forms of learning, but unified and coherent policies which treat the first years of tertiary education as one element in a much longer cycle, stretching back to schooling and forward to advanced study and continuing education over the life cycle. As yet, policy development has not proceeded as far as it needs to in these directions.

Developing a comprehensive pathways framework that is able to support lifelong learning will require a new level of collaboration between the sectors and between educational institutions. We also will need to rethink the way that qualifications are designed if we are to achieve these goals.

What level of student articulation will help achieve government objectives?

What is an appropriate level of student articulation between VET and higher education? In 2007, about 10% of domestic students who were admitted to undergraduate studies in Australia's public universities were admitted on the basis of a prior VET qualification (Wheelahan 2009), up from about 7% in 2001 (Moodie 2007).⁴ The two purposes that pathways serve provide us with the criteria that we can use to think about this, while the government's targets for educational participation and attainment provide the measure we can use to determine our progress. The first criterion is the way in which pathways efficiently and effectively contribute to the skills of the workforce and the second is the way they contribute to equity and social inclusion. Pathways must support educational and occupational progression if they are to contribute the first criterion, and they must provide social and educational opportunities for students from disadvantaged backgrounds if they are to contribute the second.

Pathways and the workforce

Qualifications are often used by governments as a proxy for its level of skills and this is reflected in the government's targets for educational achievement in Australia. However, while this may be a preoccupation by governments, it is not necessarily as important for employers or workers who are more interested in acquiring specific skill sets. As will be discussed later, there are additional reasons why qualifications are important for employers, workers and society more broadly that go beyond the specific skills that are needed to perform particular tasks and roles. More importantly for this discussion here is the observation that increasing the percentage of the population that have qualifications does not automatically mean that educational

pathways are necessary. There are specific circumstances in which pathways take on importance.

Moodie (2003b: 2) argues that low student articulation rates are a problem when the sectors of education are not so specialised and clearly differentiated and where VET has a 'formal and significant role in providing short-cycle higher education'.⁵ However, low rates of transfer may not be a problem if the sectors are highly differentiated between VET and higher education and are designed to suit different purposes. In the case of differentiated or tracked systems, low rates of transfer may indicate that the systems are working efficiently. Differentiated systems are effective if graduates enter relatively stable labour market destinations, and tracked systems are able to effectively allocate graduates to job vacancies and to careers that draw from the differentiated knowledge base in each sector. In contrast, 'unified' systems are designed to meet the needs of more fluid labour markets where knowledge and skill requirements change more often in response to changes in markets and processes of production and technology. While industry-specific knowledge still matters, workers also need broader knowledge and skill and employers need graduates with these capacities (Moodie 2003b).

The differentiated and tracked systems of education describe many countries in Northern Europe, while the unified systems describe many systems in Anglophone countries (Young 2005b). This reflects differences in the way each organises their economies. The economies of Northern Europe use social partnerships between employers, business, and labour to match graduates to jobs in relatively stable labour markets, whereas Anglophone liberal market economies use the market as the mechanism for matching graduates and jobs in more volatile labour markets (Hall and Soskice 2001). Australia is unusual among Anglophone countries because it has a liberal market economy, while also having a differentiated tertiary education system that is similar to Northern Europe (Wheelahan and Moodie 2005).

There is, however, increasing overlap in what the Australian VET and higher education sectors do 'in the middle'. Both offer vocational and general education, and both seek to prepare students for work. Both seek to provide students with the capacities they need as citizens and to participate in their communities. Both seek to engage students in learning and provide individuals with the opportunity to develop their potential. Distinctions remain so that VET has responsibility for apprenticeships, traineeships and second-chance education, while higher education has responsibility for research and research training.

The 'blurring in the middle' is arising because each sector is preparing students for similar kinds of occupations. The labour market destinations of VET and higher education graduates have become less differentiated with graduates from VET advanced diplomas/diplomas often competing with bachelor degree graduates for the same positions, and diplomas are being replaced by degrees as the entry level qualification in many industries (Foster *et al.* 2007; Karmel and Cully 2009). The 'fit' between qualifications and occupations is quite loose, except for the trades and other regulated occupations (such as electrician and physician) (Karmel *et al.* 2008). Overall, when specific rather than broad occupational areas are considered, 30.3% of VET graduates in 2008 reported that they were working in the occupation associated with their VET qualification (NCVER 2008a: Table 7).⁶ A further 33.8% reported that

they were employed in other occupations, but found their training relevant, while 16.8% were employed in other occupations, and did not find their training relevant. This suggests that low rates of student transfer in Australia should be regarded as problematic despite the formal differentiation of our tertiary education sectors because of graduates' relatively undifferentiated labour market destinations. Low rates of transfer are also problematic because pathways provide the basis for occupational progression in an economy such as ours because educational progression is often associated with occupational progression. For example, nurses often undertake further graduate programs to develop the skills they need to work in different areas using higher levels of skill and knowledge, and in many cases this is a requirement for being able to work in these new areas.

Social inclusion

Access to education is important not just because of its contribution to the labour market, it is also important because it contributes to social inclusion. Of course, the two are related because a socially inclusive society makes better use of the talents and capacities of its citizens, but social inclusion is more than this. A socially inclusive society helps to develop social capital and communities that are tolerant, inclusive, and resilient and able to accommodate change. It provides fair opportunities for all to develop their potential and supports those who are disadvantaged to gain their share of these opportunities. So, an educational system must be judged by the opportunities it provides for its citizens, how these opportunities are distributed and the way they support social mobility. An educational system must also be judged by the extent to which it engages its citizens, particularly the most socially disadvantaged, in learning so they can take advantage of these opportunities.

Education policy in many countries is based upon the assumption that pathways contribute to social inclusion and social mobility (Santiago *et al.* 2008: 49). However, this is not necessarily the case. While pathways may provide further educational opportunities, they do not necessarily support social mobility. We need to distinguish between measures that *deepen* participation in education by providing more opportunities and access for particular social groups already represented in education, and those that *widen* participation for under-represented groups (Stuart 2002).

While broad policy is important because it helps shape institutional practices, the nature of students' learning experiences in VET will contribute to shaping their aspirations to go to higher education. In a now famous article, Burton Clark in 1960 argued that community colleges in the United States can contribute to 'cooling out' students' aspirations to go to four year colleges so that they are diverted from their original goals and instead embrace more 'realistic' outcomes. This process occurs through 'substitute achievement, gradual disengagement, denial, consolation, and avoidance of standards' (Clark 1960: 569). Grubb (2006: 33) argues this need not always be so, and he says that students' aspirations can be 'heated up' as well as 'cooled out'. In an English study, Morris and Rutt (2003) provide evidence that senior school students' aspirations can be influenced by strategies and interventions in schools in partnership with universities so that they consider higher education as an option. We need to explore the extent to which similar approaches may work in VET in Australia. If we are to do so and help students develop aspirations to use pathways

from VET to higher education we will need to understand their motivation for studying, the nature of their experiences and the factors that contribute to their educational success. This is an intrinsic part of developing pathways, and is addressed later in this paper.

What are the outcomes from programs & pathways?

This section examines the extent to which pathways provide educational opportunities and support social mobility. The key argument is that diplomas hold the key to increasing student articulation to higher education, and to providing more equitable outcomes from VET for disadvantaged students. Diplomas and advanced diplomas are important for three reasons. First, they are the lynchpin of pathways because they are the main VET qualification used by students to access higher education (Karmel and Nguyen 2003; Moodie 2003a; Stanwick 2006b). Second, as explained earlier, the government wants to double the number of diploma and advanced diploma completions by 2020. Third, diploma and advanced diploma graduates are better placed in the labour market compared to those with lower level VET qualifications (Karmel 2008b). Consequently, the following components in this section examine:

- the extent to which VET provides a pathway to further study for VET students in general and for young people in particular;
- whether diplomas and advanced diplomas provide access to higher education for VET students in general and students from a low socio-economic (SES) background in particular;
- the participation rates of disadvantaged groups in higher education and VET, and the extent to which disadvantaged groups have equitable access to high level VET qualifications; and,
- given that disadvantaged groups are over-represented in lower level VET qualifications, the extent to which these qualifications provide access to higher level VET.

VET as a pathway to further study

Table 1 shows the employment and further study outcomes for all TAFE government funded VET graduates from 2003 – 2007. In 2007, some 77.7% of VET graduates said they were seeking an employment outcome from their VET studies, 4.7% said they were seeking a further study outcome, and 17.7% said they were seeking a personal developmental outcome (DEEWR 2008: 46). Table 1 shows that there has been a decline in employment and further study outcomes for all graduates, and for all categories of graduates. However, employment outcomes have increased for the group seeking an employment and the group seeking a further study outcome and the overall decline for these groups appears to be because fewer VET graduates proceeded to further study. The strong labour market over this period of time may help to explain this outcome. The outcomes are somewhat different for those seeking a personal development outcome, which is 17.7% of all graduates. Their employment outcomes have remained relatively stable, while the further study outcome has declined.

Further study outcomes dropped by around 9 – 10% for all graduates from 2003 to 2007. Of those who were in further study after graduating, the percentage of graduates who went to university remained relatively constant, but this is from a smaller pool. The decline in the percentage of this group who went to further study in TAFE seems to be as a consequence of the growth in the group who undertook further study at a private registered training organisation (RTO) or other RTO. There is greater variability in the outcomes for graduates seeking a further study outcome and there is greater ‘elasticity’ in the percentages reported for this group (see the notes for Table 1 in Appendix one), possibly because it is only a small group, however there still seems to be a substantial decline in the percentage of this group who went on to further study, even though this was their stated intention.

Table 1: Employment & further study outcomes for government funded TAFE graduates 2003 – 2007 # ^

	2003 %	2004 %	2005 %	2006 %	2007 %	% difference 2007-2003
All graduates						
Employed or in further study after training	92.3	85.7	87.8	86.7	88.3	-4.0
Employed after training **	73.9	74.6	76.5	77.4	78.8	4.9
In further study after training & where	43.3	32.4	35.1	32.8	32.8	-10.5
At TAFE	69.4	64.4	61.9	65.7	63.1	-6.3
At university	20.7	22.7	23.0	19.8	21.2	0.5
At private or other RTO	9.9	12.9	15.1	14.5	15.7	5.8
Graduates seeking an employment-related outcome						
Employed or in further study after training	93.2	87.4	89.8	89.8	90.7	-2.5
Employed after training **	79.2	79.0	81.9	83.7	84.0	4.8
In further study after training & where	39.0	28.6	30.9	28.6	29.6	-9.4
At TAFE	73.3	67.9	66.7	68.0	67.5	-5.8
At university	15.9	17.3	16.7	16.3	16	0.1
At private or other RTO	10.8	14.8	16.5	15.7	16.5	5.7
Graduates seeking further study outcome						
Employed or in further study after training	92.7	89.0	92.7	88.7	88.6	-4.1
Employed after training **	48.6	55.1	58.5	57.7	59.6	11.0
In further study after training & where	80.4	68.4	77.0	71.8	69.7	-10.7
At TAFE	53.2	49.7	40.4	51.2	43.9	-9.3
At university	42.2	48.1	53.6	44.5	50.9	8.7
At private or other RTO	4.5	2.1*	6.0	4.3	5.2	0.7
Graduates seeking a personal developmental outcome						
Employed or in further study after training	87.3	77.1	77.8	74.4	77.4	-9.9
Employed after training **	61.1	63.4	60.1	59.8	62.7	1.6
In further study after training	45.1	33.5	38.0	37.4	34.9	-10.2
At TAFE	67.1	63.9	61.7	67.4	62.3	-4.8
At university	22.4	21.7	21.2	15.2	19.1	-3.3
At private or other RTO	10.5	14.4	17.1	17.4	18.6	8.1

See Appendix one for notes on Table 1

While the strong labour market may account to some extent for the decline in TAFE graduates who proceed to further study, the decline has been substantial nonetheless and it does not fully explain these changes. For example, it does not explain the decline in further study for those seeking a personal development outcome. This suggests that there has been some ‘cooling out’ of students’ aspirations to further study, even though the reasons for this are undoubtedly complex. Moreover, while the

attainment of VET qualifications would have contributed to improving employment outcomes for graduates, at least some of this increase would be as a consequence of strong demand for labour. Indeed, of those graduates seeking an employment outcome, 75.6% were employed prior to training in 2007, compared to 72.7% in 2003 – a rise of 2.9% (DEEWR 2008: Table A2.2). This means we cannot just wait until student demand for qualifications and pathways increase as the economy worsens, because this will also have an impact on employment outcomes. The decline in the percentage of graduates proceeding to further study needs to be addressed as part of the response to the worsening economy and if government targets are to be met. Further, in-depth research is needed to understand the decline in those proceeding to further study, particularly in understanding students' complex motivations and experiences if students aspirations to further study are to be 'heated up'.

Further study outcomes for young people

The further study outcomes of young people aged under 25 years in VET are particularly important. As with young higher education students, VET needs to provide young people with an education that will prepare them for work, for further learning, and for their broader development as the basis of their participation in society. This is why it is important that young people complete their VET qualification. Participation rates in VET for those aged under 25 years in VET are high – higher than in universities.⁷ Karmel (2007b: 12) concludes that early school leavers use VET as an alternative to school, while those who complete school use VET as an alternative to university. He draws this conclusion because a higher proportion of school completers who go to VET study higher level qualifications compared to early school leavers. Of those students in VET who left school in 2003, some 42.3% of those who completed year 12 were studying at certificate IV or above in 2004, compared to 7.4% of those who left at year 11, and 4% of those who left at year 10.⁸

According to Sherman (2006: 26), around 21% of young people who completed a VET qualification in 2001 completed a higher-level qualification by September 2004. This is likely to rise at least to some extent because there may not have been sufficient time for diploma graduates to have completed degrees as their next highest qualification. Certificates II graduates were more likely to have completed a higher level qualification than other graduates (at around 24%), but as we will see, this is from a small base because of low graduation rates from these qualifications.

How are we to evaluate the outcomes for young people? Here we need to distinguish between employment outcomes and study outcomes. Karmel (2007b: 20) explains that, on the whole, employment outcomes for young people after studying in VET are positive, but:

it must be remembered that young people are in a period of transition, so that increased levels of employment would be expected, even without training. However, it is noticeable that the outcomes for graduates are better than those of module completers, and this provides direct evidence that the training itself is assisting the transition process.

Karmel (2007b: 25) explains that student outcomes in terms of completing a VET qualification are mixed even though participation is high. Only a minority of young people in VET complete a qualification, and he says:

Completion rates are variable, and 12% of students have no recorded achievement at all.⁹ Relatively few young people graduate at certificate III or higher, and only a small proportion of people undertaking certificates I and II complete the qualification and move on to further training. (Karmel 2007b: 25)

The outcomes for young people undertaking Certificates I and II are particularly poor, and these are discussed in a later section. About 40% of young people who graduated from VET in 2004 proceeded to further study in 2005. Of these, 25% went to university, around 53% went to TAFE, and a further 20% went to other VET providers (derived from Karmel 2007b: Table 18). It is concerning that the employment rate for graduates aged 15-19 years went up only marginally from 2003 – 2007 (1.6%), while the percentage who were employed or in further study declined by 7.8% over the same period (DEEWR 2008: Table A2.12, p.222). While other age groups also experienced a decline in those who were employed or in further study, they generally had stronger growth in the percentage employed after training.

Educational opportunities: diplomas to degrees

As explained earlier, about 10% of domestic students were admitted to undergraduate programs in public universities in 2007 on the basis of a VET qualification compared to almost 7% in 2000 (Wheelahan 2009; Moodie 2007).¹⁰ Generally speaking, VET students who apply for place in a university are offered places at a similar rate to other categories of non-school leaver applicants, at least up until 2008 (Wheelahan 2009: 8).¹¹ Stanwick's (2006b: 31-32) work shows that young people are using diplomas and advanced diplomas as pathways to university. In 2003, around 32% of diploma and advanced diploma graduates aged between 15-24 years went on to study at university. These rates were higher in the sub-fields of banking and financing (54% and 53% respectively). In the same year, 14% of VET diploma and advanced diploma graduates aged 25 and over went on to study a degree (Stanwick 2006b: 31-32). This percentage is lower for older students, but it must be remembered that the VET sector has more older students than younger students, and overall VET has many more students than the higher education sector. The result is that, in 2003, just over 30% of students commencing degrees aged 25 years and over had a diploma or above,¹² which shows that older students are using diplomas as a stepping stone to higher education, as are younger students.

While these levels of articulation show that diplomas and advanced diplomas can be used to access higher education, overall the percentage of students in higher education with diplomas and advanced diplomas as their prior highest qualification has declined. In 2003, almost 14% of students commencing under-graduate higher education had a prior completed TAFE qualification, compared to just over 10% in 2007.¹³ This may in part reflect increased access by other types of applicants to higher education, but it may also be because student enrolments in VET diplomas and advanced diplomas have remained static (at around 10% of all VET students) or declined from 2003, and

this is particularly marked in some states and some fields of education (Karmel 2008b).¹⁴ VET diplomas and advanced diplomas can only act as a mechanism for transfer to higher education if students undertake them. This shows that it will be difficult to fulfil the government's target for doubling the number of diploma and advanced diploma completions by 2020 without policies that are designed to encourage students into them. Karmel (2008b: 10) argues that:

The policy challenge is to ensure that the position of diplomas and advanced diplomas is consolidated, by building up articulation arrangements with degrees where appropriate, and by improving the attractiveness of diploma and advanced diploma graduates for employers.

The other policy challenge is to ensure that access for VET graduates to universities does not decline as a consequence of the worsening economy as this is usually associated with increasing demand for higher education places. It is important that this be monitored to ensure that VET graduates gain equitable access to higher education in universities.

Higher education to VET articulation – the role of diplomas

Estimates of student transfer from higher education to VET vary, but it is becoming clear that diplomas are also important for higher education to VET student articulation (Curtis 2009; Moodie 2008). It is important to distinguish between different groups of students who move from higher education to VET, and to recognise that pathways between VET and higher education are not always linear and in one direction (Moodie 2004; Harris *et al.* 2005; Harris *et al.* 2006). Harris *et al.* (2006) explain that students move in and out of education and between sectors for a variety of reasons as they juggle work, their personal lives, study and their aspirations.

Curtis (2009) explains that just over half of higher education to VET student transfers are by students who did not finish their university program. University non-completers are likely to be younger (aged under 25 years), and they often enrol in a program in the same field of study as their university course. In contrast, older students who move from higher education to VET, particularly university graduates, are more likely enrol in a different or complementary field of study, sometimes years after their initial degree. There is no policy focus on younger students who move from higher education to VET, yet there needs to be to ensure that these students experience good outcomes. In particular, there needs to be coherent pathways for these students into diplomas that give them credit for their prior higher education studies, particularly if students are studying within the same field of education.

Diplomas & advanced diplomas & low SES students

VET diplomas and advanced diplomas can support social and educational opportunities by providing access to higher education only if students from disadvantaged backgrounds are able to access these qualifications. Unlike higher education, students from low SES backgrounds are over-represented in VET and they are not formally designated as an equity group as a consequence. We have, generally

speaking, assumed that diplomas and advanced diplomas have been acting as an equity mechanism to support low SES students in gaining access to higher education. However, Table 2 shows that the socio-economic composition of VET students undertaking diplomas and advanced diplomas is similar to commencing undergraduate students in public universities.¹⁵ This, in turn, is reflected in the socio-economic profile of VET articulators to higher education, which is also similar to undergraduate students in public universities. If the socio-economic composition of students in these qualifications represented the population as a whole, there should be 25% low SES, 50% medium SES and 25% high SES students. Table 3 shows each SES group's share of VET qualifications from certificates I – diploma and above, and it shows that low SES students are most over-represented in lower level VET qualifications. The conclusion is that VET diplomas and advanced diplomas play a modest role in opening educational and social opportunities for low SES students through pathways to higher education.

Table 2: Socio-economic background of commencing under-graduate students in universities in 2007, & percentage share of low SES students in dips/adv dips & all AQF qualifications in 2001

	Low	Medium	High	Total
Undergraduate commencing students in public universities**	17.4%	48.0%	33.1%	98.5%*
Profile of VET articulators to universities in 2007 **	20.0%	51.8%	27.0%	98.8%*
Profile of students in VET diplomas & advanced diplomas ***	19.4%	53.4%	27.2%	100.0%
Profile of students in all AQF qualifications ^	28.6%	52.2%	19.2%	100.0%
Profile of Australian population	25.0%	50.0%	25.0%	100.0%

See Notes on Table 2 in Appendix one

Table 3: Socio economic groups' share of each vocational education qualification level, 2001

SES	Cert I	Cert II	Cert III	Cert IV	Dip & higher	Total AQF qualifications
Low	33.8%	32.8%	28.2%	26.2%	19.4%	28.6%
Medium	51.9%	51.0%	53.0%	51.5%	53.4%	52.2%
High	14.3%	16.2%	18.8%	22.3%	27.2%	19.2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

See Notes on Table 3 in Appendix one

Diplomas & advanced diplomas & other equity groups

Table 4 compares the participation rates for students from other equity groups in higher education and VET, and it shows the proportion of each group in the population.¹⁶ All equity groups are under-represented in higher education with the exception of students from a non-English speaking background. In contrast, most equity groups are over-represented in VET, with the exception of students with a disability.¹⁷ However, as with students from a low SES background, this belies considerable complexity.¹⁸ Table 5 shows that, other than students from a non-English speaking background, all other equity groups are under-represented in higher level VET qualifications and they are over-represented in lower level qualifications. If equity groups had their proportionate share of VET qualifications, around 10% of students in each group should be studying in diplomas or above, and around 11% should be studying certificate IVs. This is also applicable for lower-level VET qualifications where just over 22% of all VET students are enrolled in certificates I and II. In contrast, 32% of all low SES students are enrolled in these qualifications as

are 28% of all rural/remote students,¹⁹ 31% of all students with disabilities, and 40% of all Indigenous students.

Table 4: Participation rate of equity groups in HE in 2007 & VET in 2008 & proportion in general population

Equity	2007 participation rate % in HE	2008 participation rate % in VET	Proportion % in general population *
Non-English speaking background ^	3.8	14.6	3.7 HE/15.6 VET^
Students with disabilities ^^	4.1	5.9	8.0 HE/20.0 VET ^^
Rural/Regional#	18.1	38.3	25.4
Remote#	1.1	4.6	2.5
Low SES	15.0	n/a	25.0
Indigenous	1.3	4.3	2.2

See Notes on Table 4 in Appendix one

Table 5: Share of qualification level by VET equity group in 2008

	Dip or higher	Cert IV	Cert III	Cert II	Cert I	Other
Low SES in 2001 *	6.8	9.2	19.5	22.9	8.9	32.6
Non-English speaking background	16.8	11.5	24.6	15.1	9.2	22.8
Rural/Remote **	4.6	9.4	32.6	21.0	6.4	25.9
Students with disabilities	8.3	9.5	22.2	18.9	11.8	29.3
Indigenous students	3.6	7.2	26.0	25.4	14.2	23.5
All VET students	10.1	11.2	30.6	16.9	5.4	25.9

See Notes on Table 5 in Appendix one

The designation of equity groups over-simplifies the structure and experience of disadvantage, most so for those who are members of one or more designated equity group. This is particularly the case for Indigenous students, students from a low SES background, and students from a rural and isolated background in higher education. Around one third of students from a rural background and students who have a disability are also members of at least one other equity group and most of this overlap is with low SES (James, Baldwin *et al.* 2004: 55). Although John (2004a, 2004b) does not undertake an analysis in this way, he shows that there is considerable overlap in membership of equity groups in VET, and that these students are more likely to achieve poorer outcomes. There are also groups that constitute sub-groups in these categories or are not included at all who experience high levels of disadvantage. This includes early school leavers, the long-term unemployed, those in correctional institutions, women who are re-entering the workforce (as opposed to all women), older workers who have been retrenched, older men in smaller rural and regional towns, some people from non-English speaking backgrounds, and refugees (Bowman 2004; Miralles 2004; Volkoff 2004).

Lower level VET qualifications – do they open opportunities?

If diplomas are the key to accessing higher education, then lower level qualifications are the key to accessing diplomas, particularly for disadvantaged students. Karmel and Woods (2008) define ‘second chance’ students in VET as early school leavers and adults between 25-49 years without a non-school qualification. They estimate that 50% of early school leavers will access VET within four years of leaving school, as will around three quarters of those aged between 25-49 years at some point during those years. However, only approximately 10% of early school leavers will complete a certificate III or above within four years of leaving school, while between 10-30% (depending on the method used to calculate this) of older ‘second chance’ students

aged between 25-49 years will do so (Karmel and Woods 2008: 25). Consequently, while VET is very good at providing 'second-chance' students with *access* to VET, the *outcomes* are not good.

The outcomes from certificates I and II are particularly poor – for all age groups. These qualifications fall into two main categories: the first category consists of vocational qualifications designed to equip students with basic vocational skills and knowledge as preparation for work in particular industries, to support career advancement, and to provide pathways to further study. The second category consists of preparatory qualifications which are designed to provide students with basic literacy and numeracy skills, and basic skills in job-seeking, employment and personal survival (Stanwick 2005: 19). These programs are called 'mixed field' enrolments, and 46.5% of those aged under 25 years in 2002 who were enrolled in certificate I were enrolled in these programs, as were 9.8% of enrolments at certificate II (Stanwick 2005: 19). In 2002, mixed field enrolments accounted for 45% of those enrolled in certificate I for students aged 25 years and over, and 10% of enrolments at certificate II (Stanwick 2006a: 19).

Young people in certificates I & II

Stanwick (2005: 18) estimated that 32.9% and 42.5% of young people enrolled in a certificate I and certificate II respectively would complete their qualification. Some 14.5% of all students in certificate I go on to complete a further qualification, as do 27.4% of certificate II students.²⁰ Stanwick (2005: 14) says that 'reasonable' proportions of 15 – 19 year old certificate I and II graduates gain fulltime employment after their course, although fewer do so compared to certificate III graduates. Certificate I graduates aged between 20 – 24 years have very poor employment outcomes, and while the outcomes are better for certificate II graduates, they are much worse than certificate III graduates in this age group.²¹ The outcomes for non-completers were commensurably worse across all dimensions.²² Sherman (2006: 15) says that the further study and employment outcomes for these young graduates improve over time, with nearly half of all graduates completing a further qualification two years after their first qualification, however, this is still from a low base.

The outcomes for young people undertaking mixed field courses are even poorer: the projected rate for completing certificate I was 24.4%, and 28.1% for Certificate II (Stanwick 2005: 21). Some 16.8% of all students in certificate I mixed field programs go on to complete a further qualification, as do 13.4% of certificate II students (Stanwick 2005: 23).²³ There seems to be no substantive employment outcomes for these students, except that some are in part-time employment (Stanwick 2005: 21). Again, the outcomes for non-completers were worse than for graduates.²⁴

Mature aged students in certificates I & II

The findings for mature aged students undertaking certificates I and II are similar. Stanwick (2006a: 9) differentiates between students aged between 25-44 years and those aged 45 years and over who are undertaking certificates I and II. He does this because he says that those aged between 25 – 44 years are more likely to be

undertaking these programs for employment-related reasons, whereas those aged 45 years and over are more likely to be in transition from the labour force. However, substantial proportions of the older age group said they were undertaking studies for employment related reasons, even if this percentage was lower than the age 25 – 44 years group.²⁵

The projected completion rates for both age groups are low at around 24% for all groups undertaking certificates I and II, except for those aged between 25 – 44 years undertaking certificates II who have a higher projected completion rate of almost 30% (Stanwick 2006a: 14). Around 14-15% of all certificate I and II students aged between 25-44 years will proceed to study at a higher level, while between 10-11% of those aged 45 years and over will do so.²⁶ Only small proportions of graduates and subject completers who were not employed prior to training were in fulltime or part-time jobs after training; however, the fulltime employment rates were not much better for certificate III graduates.²⁷

The outcomes for those undertaking mixed field programs were much poorer, particularly for those undertaking a certificate I. The estimated completion rate for those undertaking a certificate I was around 17-16% for each age group respectively. The completion rates for certificates II were better (between 32%-30%), which is slightly above the completion rates for certificate II students overall. However, certificate II mixed-field non-completers have the lowest subject pass rate of all students in all categories.²⁸ The percentage of graduates who go on to further study in mixed field programs is similar to all certificates I and II students, except for those in the 45 years and over group undertaking a certificate I who were much less likely to continue to further study.²⁹

Most startling is the fact that 35% and 39% of certificate I and II graduates aged between 25-44 years have a certificate III or above as their prior highest level of education, while 43% and 42% of certificate I and II graduates aged 45 years and over do so. A similarly high percentage of subject completers have a certificate III or above (Stanwick 2006a: 13). More males reported having a certificate III or above as their prior highest qualification than females (Stanwick 2006a: Table 21).

How are we to account for this? Stanwick (2006a: 16) looks at the percentage of students in certificates I, II and III who reported that they enrolled in their course as a requirement of their job. The percentage of students who reported that this was why they enrolled was modest – ranging from 10 – 13% for graduates, and less for subject-completers. Males in the 25-44 year age group who already had a certificate III as their prior highest qualification were more likely to report that they enrolled for this reason (19%), while the highest group in the 45 years and over age group were males with a certificate II as their prior highest qualification (19%). The percentages reporting that they enrolled as a requirement of their job were lower for women and for subject completers (Stanwick 2006a: Table 26, p.27).

Overall, the outcomes for students who enrolled as a requirement of their job were good. Stanwick looks at outcomes in selected training packages and finds that in some areas that students had very low course completion rates, but very high subject completion rates, indicating that they were undertaking elements of their course for reasons that may include ‘occupational health and safety and equipment handling as a

requirement of their job, probably for induction purposes' (Stanwick 2006a: 17). He examines another training package and finds that that course completion and subject completion rates are high, and that many students undertaking these courses already had a certificate III or above as their prior highest qualification. Again, it is clear that students are meeting workplace or occupational requirements in undertaking these programs. However, it must be remembered that the percentage of certificate I and II students undertaking their course as a requirement of their job is modest, and does not fully account for the very large percentage of students with a certificate III or above as their prior highest qualification.

It is not clear why other students who already have a certificate III or above are studying at a lower level. Karmel and Nguyen (2006: 26) speculate that it may be because they have a low quality or an unmarketable higher level qualification, because they are seeking a career change, or because of other personal factors or characteristics. It is also possible that some students have enrolled for personal interest and achieve their objectives without completing subjects or their qualification, but this would not account for the overall outcomes from these qualifications. The further study and employment outcomes for these students are not good, and Karmel and Nguyen say that there is, on average, a negative effect on wages for these students. It may also be that some of these students are required to participate in lower level VET qualifications as part of 'welfare to work' policies. These policies are based on a 'work-first' principle so that the emphasis is on short-term training designed to get students into work (Guenther *et al.* 2008). Barnett and Spoehr (2008) argue that current welfare to work policies do not adequately distinguish between training for short-term, insecure employment and that required for high quality employment. Arguably, it may be that rather than contributing to long-term employment and providing pathways to higher level studies, these programs are instead contributing to 'churn' in low-skilled, short-term and insecure employment, without providing the basis for further study. Guenther *et al.* (2008) argue that the performance indicators for job network providers should be changed to emphasise skills acquisition rather than short-term outcomes.

Apart from the outcomes for the very specific group of students who are studying as a requirement of their job, the overall further study and employment outcomes from certificates I and II for students aged 25 years and over in both the vocational and mixed-stream programs are very poor. Karmel and Nguyen (2006: 30) raise the question as to whether certificates I and II should be continue to be funded given that they appear to have little return.³⁰

Gaps in the data

The data used in the above discussion on certificates I and II are now a bit old, however there is no reason to think that these outcomes may have improved in subsequent years given the further study outcomes reported earlier. There is also no comparable research for outcomes from certificates III and IV. It is particularly important that we understand the outcomes from Certificates III and IV as these qualifications directly mediate access to diplomas and advanced diplomas There is, as discussed above, Stanwick's work that outlines the outcomes from diplomas and above, but this too is becoming somewhat dated, and again arguably the further study

outcomes are likely to have declined rather than improved. More recent analyses exemplified in Stanwick's work is needed to inform policy. The data on further study and employment outcomes for VET graduates is recent and provides important insights, but it is not as nuanced and comprehensive as Stanwick's work (and also Karmel's and colleagues' work).³¹

Discussion of outcomes from programs & pathways

The above discussion has implications for equity policy and for the way we structure programs and pathways in tertiary education. It shows that as things currently stand, pathways within VET and between VET and higher education are not making the contribution that will be needed if government equity and educational participation targets are to be met.

Equity policy

Rather than separate VET and higher education equity policies and separate sectoral policies that mean pathways are of some importance only 'at the borders', a tertiary education policy framework will be needed that considers equity outcomes and pathways within and between sectors and places these outcomes as key concerns of both sectors. This means that just as the government's targets for educational participation and achievement cannot be considered separately by each sector, equity in VET and higher education cannot be considered independently of each other. The sectors will need to work together to support students from disadvantaged backgrounds to progress to higher level qualifications if they are to achieve their equity objectives. More nuanced and coherent tertiary education equity policies are needed that focus on educational progression for students from disadvantaged backgrounds from lower level VET qualifications to higher level qualifications, particularly *to* diplomas and advanced diplomas, and *from* diplomas and advanced diplomas to degrees. Moreover, just as universities are expected to work with schools to raise students' aspirations for study in higher education, they will also need to work with TAFE and other VET providers in the same way.

The Australian and state governments need advice if they are to develop coherent tertiary education equity strategies, yet existing arrangements are sectorally based. A new National VET Equity Advisory Council has been established to advise the Ministerial Council for Tertiary Education and Employment (MCTEE) on equity in VET, while the existing Indigenous Higher Education Advisory Council (IHEAC) provides advice to government on higher education. IHEAC has been concerned with pathways from VET to higher education for some time, and in its submission to the 2008 Review of Australian Higher Education, it identified VET pathways as one of the keys to increasing participation in higher education by Indigenous students (IHEAC 2008: 17). One proposition arising from this report is that equity advisory bodies be constituted so that they provide advice on tertiary education equity policies, strategies and outcomes.

If the sectors are to effectively work together they will need consistent definitions of equity and consistent measures of outcomes, even if some are elaborated or developed

in different ways in each of the sectors reflecting their different concerns, student populations and particular challenges. Targets for each sector will obviously differ, however targets *within* VET will need to become more differentiated to reflect the under-representation of students from disadvantaged backgrounds in higher level VET qualifications. Low SES students need to be recognised as an equity group in VET because of their under-representation in higher level VET qualifications, and because these qualifications are meant to be pathways for low SES students to higher education.

Equity research in Australia has generally been differentiated by sector, yet this does not provide us with the insights we need to support students' transitions between sectors. Moreover, the emphasis in much VET equity research is on retention and successful completion of qualifications and not on transition to higher level VET qualifications. The National Centre for Student Equity in Higher Education has recently been established, and as with equity advisory bodies, it seems appropriate that the remit of NCSEHE be expanded to undertake research on equity in tertiary education.

Rethinking the design of tertiary education qualifications

The relationship between occupational outcomes and educational progression in tertiary education qualifications requires reconsideration for several reasons. First, the loose 'fit' between qualifications and their intended occupations shows that qualifications must prepare students for a much broader range of workplace contexts. Second, the relationship between qualifications and good labour market outcomes is complex. Only a minority of workers move to a higher skill level immediately post-training (Pocock 2009: 20), while successful achievement of qualifications may contribute to deepening and broadening skills of individuals and workplaces.³² However, all categories of students benefit from obtaining higher level qualifications: they are more likely to be in secure employment, have higher rates of pay and more access to training at work, (Karmel 2007b, 2008a), and they are likely to be in jobs where they have greater autonomy over their work practices (Buchanan *et al.* 2009). In a later section, this paper discusses proposals for strengthening occupational pathways by linking occupational progression and educational progression within 'vocations'.

Third, we also need to take account of the complex and inter-related reasons that people engage in study. Most people indicate that they are studying for employment related reasons, but this does not exclude other reasons for studying, which may include further study outcomes and personal development. As explained earlier, only 4.7% of VET graduates in 2008 said that they enrolled because they were seeking to go on to further studies, yet 32.8% of graduates actually proceeded to further study (see Table 1). DEST (2005: 13) found in a survey that almost 81% of school students reported that future job opportunities were an important 'trigger' in deciding whether they would undertake VET, 77% said interesting subjects were important, followed by a recognised qualification (73%), industry knowledge and practical experience (69%), and credit towards TAFE or university (66%). Retention and completions are likely to be enhanced when students are engaged in education that leads to vocational outcomes, but also when it is personally meaningful and provides the basis for further

study. If we conceive of ‘getting a job’ too narrowly we are likely to miss opportunities to engage students in learning they find personally meaningful and challenging.

Fourth, it is quite clear that many young people are using diplomas and advanced diplomas as transitional qualifications to help them access higher education and not as qualifications to enter the workforce. Recent international research has found similar results for students undertaking foundation degrees in England and higher national diplomas in Scotland, and as with Australia, researchers found that many students are not employed in the occupation associated with their qualification (Reeve *et al.* 2009). Moreover, diplomas and advanced diplomas are often designed for those in middle management or supervisory positions, and this may not be appropriate for students who have yet to enter the workforce and who are using these qualifications primarily as a stepping stone to higher level studies. Similar considerations apply for international students who need a qualification they can use in their own country and a qualification that will provide them with access to higher level studies.

Fifth, we need to provide avenues for students to move from VET to higher education in generalist degrees with a disciplinary focus and not just vocationally specific degrees. This is a matter of equity as much as anything else, and it is important to ensure that Australia has sufficient numbers of students undertaking these qualifications in higher education. Moreover, universities are increasingly using a generalist first degree as the basis for entry into a vocationally specific professional degree, particularly in the elite professions in the elite universities. VET articulators should not be locked out of these qualifications. However, because of the workplace focus of VET qualifications, most general and further education qualifications are focussed on lower level qualifications with an emphasis on language, literacy and numeracy, and there are few qualifications at higher levels that provide students with this kind of access. Adult tertiary education preparatory programs exist in most states, but these are not high priorities of most jurisdictions and they are not appropriate for all students.

Finally, the place of theoretical knowledge in VET qualifications requires consideration. The National Quality Council /COAG Joint Steering Committee (2009: 15), as part of a consultation about VET products, reports that stakeholders identified concerns that underpinning theoretical knowledge was not sufficiently emphasised in VET qualifications, particularly in higher level qualifications. This has an impact on workplace outcomes, but it also limits the effectiveness of these qualifications to support students’ progression to higher education.

The conclusion is that we need a broader view of qualifications and their outcomes, particularly if we are to increase rates of educational progression. Society, communities, workplaces and individuals benefit when high proportions of the population have non-school qualifications and higher level qualifications, and we need to recognise that qualifications serve more than one purpose. Young people in particular need access to qualifications that will support them in their transition to adulthood as active, contributing members of society. The Kangan Committee (1974: 7) pointed this out in 1974 in saying that: ‘Most forms of general education are vocational for at least some students. Again all vocational education affects the learner as a person.’ Winch (2006: 421) explains that:

Once one sees that a society is a plurality of internally related practices, among which educational ones occupy a central role, it is no complaint against a form of education that it is a preparation for another practice or that it straddles practices. The important point for the success of education is that it prepares for or straddles them *effectively*, thus enhancing those practices for which it is a preparation.

We need vocational qualifications (which include vocationally oriented higher education qualifications) that prepare students for a broad range of occupational outcomes and provide them with the basis for further study in their field. We may, in this way, enhance the capacity of vocational qualifications to support occupational progression. This means that a structuring principle of all qualifications should be that they provide students with the knowledge and skills they need for further study in their field, as well as specific vocational outcomes.

The role of adult and community education

The role of adult and community education has been recognised in two Ministerial Declarations. The first was in 2002 by the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA 2002) entitled *Ministerial Declaration on Adult Community Education*. The second had the same title and it was produced in 2008 by the Ministerial Council for Vocational and Technical Education (MCVTE 2008).³³ The MCEETYA (2002) *Declaration* listed four goals:

1. Expand and sustain innovative community-based learning models
2. Raise awareness and understanding of the role and importance of adult community education
3. Improve the quality of adult community education learning experiences and outcomes
4. Extend participation in community-based learning

The MCVTE 2008 declaration elaborates these goals through the articulation of principles, goals and strategies. It reaffirms ‘the value of ACE in developing social capital, building community capacity, encouraging social participation and enhancing social cohesion’ (MCVTE 2008: 3), and it emphasises the role that ACE can play in building human and social capital through supporting disadvantaged learners. Principle four states that:

Increased provision of vocationally focussed programs by ACE is supported while its community and citizenship capacity building agenda continues. (MCVTE 2008: 5)

ACE has an important role to play in working with disadvantaged students because it has the most engagement with these students. Both *Declarations* make it clear that it is important to provide positive, non-threatening and supportive learning experiences for those whose prior learning experiences have resulted in feelings of humiliation, exclusion and failure and that ACE is ideally suited to provide such an environment.

If ACE is to play the role envisaged by ministers it will need to provide a range of programs that include non-formal programs and accredited further education programs as well as VET programs. Students need to feel that *their* interests are being addressed if we are to engage them in meaningful learning, so that such learning can lead to positive vocational outcomes. Golding (2009: 73 - 74) explains that it may be counterproductive if ACE is viewed as a means for 'labour market trainers' to 'ambush' disadvantaged learners. Volkoff *et al.* (1999: 59) find that narrow conceptions of VET do not necessarily meet the needs of those who are attracted to ACE and that students' wider interests must be engaged. They say that in ACE:

people are rarely seeking only one specific vocational skill, or set of skills, for a very specific job. They also need knowledge and understanding of the newly emerging world of part-time and fragmented work, with its emphasis on initiative, multi-skilling, networking and flexibility.

It is critical to engage students in *successful* learning experiences regardless of their nature, and this can have positive vocational outcomes because 'Vocational intentions reside within individuals rather than within particular programs' (Volkoff, Golding *et al.* 1999: 58). In an insight that is relevant for those with certificates III and above who are required to undertake lower level certificates as a condition of welfare to work policies or because there are few other available alternatives,³⁴ Volkoff *et al.* (1999: 58) say, in discussing ACE students with prior experience of VET and higher education, that:

It is critical for such lifelong learners that the experience of study be personally rewarding, positive, social and affirming, as well as being vocationally useful. It is also important that further opportunities for study are available to support learners who gain a subsequent job or provide personal and social affirmation for those who are unable to find employment.

The provision of funding for and development of specific strategies to achieve the goals as set out in the two *Ministerial Declarations* would make an important contribution to engaging people in learning and providing the basis for pathways. For example, Birch *et al.* (2003: 27) found in a 2001 national survey that included 400 ACE students, that 53% of these students went on to study another program after their ACE course, which included further study in ACE (39.2%), TAFE (40.9%), and university (19.9%). They say that around 25% of those who proceeded to further study said they would not have been able to do so without having first undertaken their ACE program.

Rethinking the purpose & design of lower-level VET qualifications

The intended purpose of certificates I and II for all age groups is to provide pathways to work and to further study, particularly for disadvantaged students who require foundational knowledge and skills to make these transitions. They do neither effectively. The purpose and design of lower level VET qualifications need to be fundamentally reviewed and redesigned if they are to provide disadvantaged students with access to pathways leading to educational and occupational progression. This means recognising the multiple purposes students have for studying these

qualifications, how they can best be engaged in learning, and the needs of different cohorts in these programs.

Certificates I and II need to lead to meaningful outcomes, and their delivery should be an integrated part of wider strategies designed to support disadvantaged students. Rather than ‘generic’ programs designed to provide people with skills in the abstract (such as job searching), these programs should provide students with foundational knowledge, particularly in *their* areas of interest, and where they have a vocational purpose, they need to provide access to vocational outcomes. Guenther *et al.* (2008), in discussing how to support those who are in training as part of welfare to work policies, say that integrated support is required using a case-management approach that explicitly incorporates skills development and takes into account the multiple barriers disadvantaged students often confront. Industry also needs to take a role in developing a strategic and coordinated approach. Factors that help students make the transition to work include: ‘training that supports life skills and identify formation; training that supports clients’ social and employment networks; active support for trainees; training that builds on-the-job experience; and flexibility, in terms of access and delivery’ (Guenther, Falk *et al.* 2008: 33).³⁵ They say that this may not always be directly aligned with training packages, and that students sometimes need access to education that is outside the AQF. The ACE sector potentially has a particularly important role in delivering certificates I and II.

Programs that are directed towards disadvantaged students need to be adequately funded, particularly if they are to incorporate the level of support that is needed (Guenther, Falk *et al.* 2008). Figgis *et al.* (2007) explain that short-term funding is often used to support disadvantaged students through an increase in student-staff ratios and through individual support for students who have multiple disadvantages. They say that this support produces good results, but that these initiatives are rarely widespread within institutions. This is in part due to inadequate funding models that emphasise seed-funding for short-term projects and rarely provide sustainable, long-term funding that is needed to embed such support. They argue that funding models need to be rethought if students are to be provided with the support they need.

Propositions for equity policy & the design of qualifications

The implications of the above for equity policy are that:

- A consistent tertiary education equity policy is required, with consistent definitions of equity groups in VET and higher education, even though the sectors will have different targets. There is a need for further differentiation of equity targets *within* VET to focus on pathways to higher level VET by students from disadvantaged backgrounds. Low SES students need to be designated as an equity group in VET so that policy attention can be focused on their progression to higher level VET qualifications.
- Consideration should be given to establishing tertiary education equity advisory bodies to advise MCTEE and other stakeholders on policy, strategy and outcomes; and,

- Equity research is required that encompasses both sectors so that attention can be paid to students' experiences of transitions, and how to support progression by disadvantaged students through higher level qualifications.

The implications of the above for the design of qualifications, including lower level VET qualifications, are that:

- A broader view of educational qualifications is needed, one that recognises the multiple purposes that qualifications serve, and the multiple reasons why students undertake them. This is particularly important in light of the loose fit between qualifications and their occupational destinations. Learning outcomes and curriculum need to reflect these multiple purposes and reasons.
- A structuring principle of all AQF qualifications should include learning outcomes that provide students with access to the theoretical knowledge and skill they need to study at a higher level within their field.
- Strategies are needed to redress the decline in the percentage of VET graduates who proceed to further study. VET qualifications need to be reviewed so that they focus on educational progression and not just workplace outcomes. ACE can play an important part in these strategies by providing a wider range of programs that address students' interests and encourage transitions.
- The role of ACE in meeting the learning needs of disadvantaged students needs to be recognised and explicitly mapped in as an intrinsic component of post-school education and pathways. This includes funding for and the development of a range of non-formal and accredited programs that will engage students' interests.
- In particular, the role of ACE in providing low level and high level qualifications needs to be reconsidered to address a gap in provision, and to provide an important mechanism for transition from lower level VET qualifications to higher level ones, and from these qualifications to higher education. Students need access to higher level qualifications that prepare them to enter generalist disciplinary programs in higher education as a matter of equity, and to ensure that sufficient students undertake these qualifications. This takes on renewed importance given that some universities are moving to generalist first degrees followed by professional postgraduate qualifications.
- Strategies are needed to implement the MCEETYA 2002 and MCVTE 2008 *Ministerial Declaration on Adult Community Education*. The MCVTE *Declaration* lists principles, goals and strategies but there is no national framework for coordinating these strategies or for developing a coherent framework to support the growth of ACE. VET did not develop national prominence until it was supported by national frameworks, funding and agreements.
- Certificates I and II do not meet their intended purposes, and consequently, the purpose, structure and outcomes of these qualifications need to be reviewed. Such a review should include a broad range of stakeholders from jurisdictions, the schools, ACE, VET, and higher education sectors, industry bodies, and education and community services bodies that work with disadvantaged students. This is to ensure that recommendations from such a review result in advice that supports 'joined up policy' across portfolios and jurisdictions that are responsible for education, welfare, employment participation and

workforce development policies. These programs need to be adequately funded to ensure they provide students with the support they need.

Summary

Qualifications in tertiary education need to be designed in relation to each other to support educational progression and to meet government equity and educational participation targets. Concerns with vocational outcomes must be balanced with concerns about educational progression in both sectors, and qualifications need to prepare students for a wider range of workplace outcomes and destinations. This requires consideration of the way lower level programs provide the basis for students to study at a higher level, and the way that higher level programs support students' transitions. In particular, VET qualifications will need to incorporate learning outcomes to support students' further study at a higher level as well as outcomes that focus on occupations. Higher education will need to work with schools, VET and ACE to support students' transitions. All sectors will need to work together to build components in qualifications that support educational progression, to develop pedagogic strategies to support students' transitions, and to develop institutional arrangements that facilitate this cooperation.

How are pathways constructed & how can we improve them?

This section examines different types of pathways, the way they are currently developed and students' experiences of those transitions, and it discusses the factors that support or impede their development. It then analyses what pathways need to look like if they are to provide the basis for occupational progression and support students from disadvantaged backgrounds in undertaking higher level qualifications. This is followed by a discussion of the role of teachers. The final component discusses the policy, institutional, programmatic and curricular implications if pathways are to achieve these objectives, and it concludes with related propositions for consideration.

The key finding is that while policy can support or impede the development of pathways between educational sectors, they are only constructed when institutions agree to develop them and they are ultimately based on trust. Consequently, policy that seeks to enhance pathways must get the 'policy settings' right, but it must also support the development of institutional relationships between the sectors, between institutions and disadvantaged communities, and between institutions, industry and professional bodies within occupational fields of practice. Teachers in all sectors are the key to these relationships and we need to consider developing national policy mechanisms to support their collaboration with each other and other industry and community partners to ensure students are encouraged to engage in pathways, and to develop coherent curriculum and teaching and learning strategies that support students in making these transitions.

What do pathways look like?

There are four main ways that students can use their VET qualification to gain access to a university. First, they can use their VET qualification as the basis for admission to a university. It need not be from a specific VET program to a specific degree. This depends on universities' willingness to accept VET qualifications as the basis for entry. Diplomas and advanced diplomas are the qualifications that are most often used, but many universities also accept a certificate IV as the basis of entry to some programs. Table 6 shows the percentage of students admitted to universities on the basis of their VET qualification in 2000 and in 2007. The Group of Eight universities admit very few prior VET students, while the other universities are much more likely to do so. The dual-sector universities almost doubled the percentage they admitted on the basis of prior VET studies over that time.

Table 6: Percentage students admitted basis prior VET in 2000 & 2007

	2000*	2007#
Group of Eight	2%	3%
Dual-sectors	9%	17%
All other universities	8%	13%
All universities	7%	10%

See Notes on Table 6 in Appendix one

The second mechanism is through ‘bonus’ points to the tertiary entry score awarded by universities to school leavers and VET students from their partner institutions. This approach helps to support partner schools and TAFEs within regions, which can be particularly important in areas where participation in post-school education is not high. It is also cheap to implement but very high in symbolic importance because it tells prospective students that they are welcome in higher education.

The third mechanism is through structured pathways. Pathways refer to structured links between two qualifications. They link VET and higher education courses and establish credit transfer arrangements. They can take different forms and provide different levels of access to qualifications and credit for prior studies. A pathway sometimes consists only of a link between two courses, so that successful completion of one may be used as the basis for an application to enter another, with no credit transfer granted. Alternatively, a pathway may link a VET and higher education course, and it may also provide credit transfer.

Pathways can be *standardised* or *customised*. Standardised pathways are formally approved by the institutions involved, and ensure that all students meeting the specified conditions are granted the same benefit, usually credit transfer. Customised pathways are developed where no standardised pathway exists, or to meet the specific needs of individual students or groups of students. Most pathways between TAFEs and universities are standardised pathways. They are moderately labour intensive and expensive to develop, and need to be renegotiated every time there is a change in one or the other qualification.

Enhanced pathways offer articulating students more credit or advanced standing in the destination course than would otherwise be the case. An enhanced pathway is developed by both parties (VET and higher education) and it is based on varying levels of collaboration around curriculum, teaching and learning and assessment. The credit is usually only extended to students from the partner TAFE because that TAFE has augmented its curriculum to enhance transition to, and credit in, the degree. It may, for example, be based on augmenting existing programs in either sector, or it may be based on agreements about the content of curriculum and assessment so that there is greater alignment between components of programs in both sectors, resulting in cross-crediting of subjects in one program so they count as equivalent in the other. Enhanced pathways are very labour intensive and expensive to develop and maintain.

Guaranteed pathways are also becoming more prominent. Most often, VET students must win access to the destination higher education program through competitive entry processes before they are able to attain the credit transfer specified in the agreement. In contrast, guaranteed pathways reserve a place in degrees for articulating student provided they meet the standards of performance specified in the pathway agreement. Queensland has a range of ‘dual-offers’ which link a VET diploma in TAFE with a degree in a university, and if students pass the diploma they are guaranteed a place in the degree. Students enrol directly in the university once they have finished their diploma, and they do not have to reapply for entry through the Queensland Tertiary Admissions Centre. In 2009, there were 134 dual-offer programs between Queensland TAFE institutes and universities.³⁶ Dual-offers are moderately cheap to develop and high in symbolic importance, particularly for students from

disadvantaged backgrounds because they offer them a ‘second-chance’ to enter university, but also because they are ‘insurance against risk’ – if they don’t finish the degree, at least they have the diploma.³⁷

The fourth mechanism is through dual-awards. The above describes pathways that link two, mostly pre-existing, programs, however, programs can be developed that combine elements from both sectors so that the new program leads to the award of two qualifications, or programs where successful completion of one is required for successful completion of the other. Examples of the latter include ‘nested’ programs which commence in VET and conclude in higher education with various exits along the way. They may be based on credit for the VET program in the higher education program, or the VET program could (for example) constitute the first year (or two years) of the degree. Nested awards particularly lend themselves to supporting students to move from para-professional to professional areas (like nursing) and provide students with an early credential so they can use this to work within their field while continuing their studies. They may also appear more accessible to students from disadvantaged backgrounds both in gaining admission, and in developing aspirations for higher education. This is because they offer school-leavers and mature aged students ‘progression by internal promotion (not selection by score)’ (Teese 2000: 229).³⁸ Nested awards are institutionalised *within* sectors, for example, from certificate to diploma in VET, or the (now very common) graduate certificate to graduate diploma to coursework or taught masters program in higher education.

The other example is dual-sector programs that combine two awards, one from each sector, so that students complete both in less time through cross-crediting subjects in each. They have been developed by analogy from joint higher education courses such as the joint arts/law degree and the joint accounting/information systems degree that have proliferated in the last decade. Dual-sector awards may draw on complementary fields of study, for example, information technology and accounting. Alternatively, they may draw on the same discipline, but in a way that embeds VET qualifications in degree programs (for example, a certificate as a lab technician within a science degree), allowing students to obtain an early credential they can use for part-time or casual work in their intended field of practice. Dual-sector programs do not really offer great potential for increasing access to students from disadvantaged backgrounds because to gain entry to such a program students must first meet the entry requirements of the higher education component of the award (Wheelahlan 2000). They may, however, be helpful in particular occupations or industries and so remain an important mechanism for meeting occupational requirements.

There are many variations on all of the above. Pathways are sometimes constructed so that they embed transition support within programs in either sector, or as an additional component that students are required to undertake. The former may entail dovetailing the curriculum and assessment in existing subjects so that it provides more of a foundation for subsequent higher education studies, or including additional subjects in VET program. An example is the science subjects developed jointly by Charles Sturt University and TAFE NSW – Riverina Institute which can be used as embedded subjects in a diploma of nursing at Riverina Institute. Alternatively ‘bridging’ programs may be offered in higher education, for example, to ensure those VET students who are articulating into engineering degrees have the mathematics they need. As an illustration, Charles Sturt University offers the same science subjects in

nursing that is offered by Riverina Institute as a bridging program. These arrangements are not widespread because they are labour intensive and expensive. TAFE must come up with imaginative solutions to fund augmented programs if the subjects offered cannot be directly aligned to existing units of competency within the training package. This problem also confronts universities that wish to offer individual subjects rather than full enabling programs. Stand-alone subjects can only be offered as full-fee.

Transition support can also be built into the design of the pathway. Articulating VET students are often 'plonked' in the second year of a degree and expected to have the experience, knowledge and skills of second year students, which includes the capacity to write essays, work with abstract theoretical knowledge and work as independent learners (Milne *et al.* 2006a). This can be ameliorated by structuring their program of study in higher education so it includes foundational subjects undertaken by first year students, but also by grouping VET articulators together for tutorials so that their particular learning needs are understood. It can be difficult to develop these arrangements and ensure that students are able to structure their program of study so they benefit from the pathway and complete their degree in a timely way. It requires a supportive institutional culture and staff with sufficient influence and authority to make it happen.

How are pathways currently developed? The importance of trust

Pathways are built on different types of partnerships between institutions. PhillipsKPA (2006c: 3) report that the trend is 'towards developing more systematic models both within institution-to-institution partnerships and in multi-institutional arrangements.' The extent to which there are multi-institutional arrangements differs by state. Victoria has the most devolved TAFE system and agreements are between individual TAFEs and individual universities. In South Australia, TAFE SA has an agreement with each university, as does Queensland TAFE.³⁹ NSW TAFE has negotiated credit-transfer agreements with many universities.⁴⁰ In many states, TAFE publishes information on a state-wide website about pathways and credit-transfer with each university (PhillipsKPA 2006b). These over-arching agreements often form the basis of more specific agreements between individual universities and TAFEs.⁴¹

Pathways are built first and foremost on trust. Coles and Oates (2005: 12) argue that student pathways, credit transfer and articulation can only be built on 'zones of mutual trust' which comprise agreements between key players about the quality, standard and outcomes of qualifications.⁴² They explain that zones of mutual trust 'exist through the behaviour of people who are participating in them, operating through, or anticipating, common values and concerns. ZMTs cannot be imposed, they are dependent on processes of consensus and on voluntary participation' (Coles and Oates 2005: 13). Raffe (2005: 36) says these zones are based on agreements that result in specific learning outcomes (such as qualifications) being automatically accepted and credited by another institution or sector and can be at the level of a discipline, institution or network. Qualifications frameworks and credit systems can make negotiations easier because they provide the basis of a 'common language', but they cannot substitute for these relationships.

Trust is at two levels. The first level is systemic, and it is based on trust in the educational systems and institutions in a society. This means for example, that there is confidence that those who have qualified to become doctors are capable and competent, and that newly qualified electricians can be trusted to safely install wiring in a building. This trust takes a long time to be established, but it can be eroded quickly as we have seen with the 2009 crisis in international education over the standards of education provided in some private VET providers.

The systemic level of trust is a necessary but not sufficient condition for the second level. This second level is more specific, and it is this that is needed to develop extensive pathways and credit-transfer agreements. Levels of credit and student transfer are higher when there is trust between institutions (PhillipsKPA 2006a). Such trust is based on confidence in teaching, learning processes, syllabi and assessment and not independently of these. The extensive 'credit mapping' exercises that teaching staff in the sectors undertake to develop pathways is one way that these issues are addressed and trust is developed, particularly when there have not been many other opportunities for teaching staff to get to know each other.

Credit-mapping most often involves a broad understanding of the 'level' of the qualification, identification of equivalences and/or comparability between subjects in each qualification, and can include considerations around the 'volume' of learning or the time it takes to complete qualifications. Enhanced pathways are based on credit mapping that also includes broad notions of the depth and complexity of learning (as well as level), detailed exploration of the syllabus, and discussion of assessment. All this takes place with more or less thoroughness. However, these processes are important. Without them students may be awarded insufficient credit, there may gaps or overlaps in study, or students may be given too much credit which jeopardises their capacity to succeed in higher level study.

This is why we are unlikely to see generic pathways between TAFEs and other VET and ACE providers on the one hand, and all universities on the other, based solely on outputs that provide all articulating students with the same level of credit in degrees. First, while many VET qualifications may be based on the same competency outcomes in training packages, degrees differ between universities. Moreover, TAFEs and other VET providers differ in the teaching, learning and assessment processes that they use for the same qualification and it is this that is used to establish comparability and not just stated outcomes. Second, universities do not have such arrangements between themselves – there is, for example, no general agreement between universities that the first year of a business degree in one university automatically equates to the first year in another university. Credit is based on judgements about equivalence or comparability. This can be assisted by an understanding that a subject in one degree is at the same 'level' as a subject in another degree at another university, but nonetheless, teaching staff will ensure that the two subjects are broadly equivalent or comparable.

It may be that general agreements can be reached between VET and universities about the *quantum* of credit, but this again will be determined by individual universities based on the trust they have in the other institution. Many universities have credit-transfer policies that stipulate the quantum of credit that can be granted for VET qualifications at particular levels, while leaving scope for more nuanced agreements

with individual TAFE partners. In some cases, universities will negotiate credit-transfer agreements with particular TAFEs (or with TAFE at the state level) that results in all articulating students being awarded the same credit regardless of where they acquired their VET qualification. However, some process of credit mapping will have taken place for this to occur. These most often result in standardised pathways. Minimal processes of credit mapping may result in credit transfer agreements that have been 'bolted on' to existing qualifications, but they are unlikely to result in coherent and supported pathways that have been developed holistically within complementary programs that maximise credit and support student learning, linked to shared understandings about student learning outcomes and the vocational field of practice for which students are being prepared. This kind of collaboration happens between institutions, not between systems.

Developing close institutional partnerships is very resource intensive, as is the process of developing complex pathways. Closer institutional partnerships are more likely to result when:

- the number of students using the pathway makes the investment in time worthwhile for both partners;
- both are offering programs in similar fields so that building pathways from one level to the next is educationally and vocationally coherent;
- institutions are located relatively close to each other, making it easier for staff to collaborate and for students to transfer between institutions; and,
- the institutional mission of each is underpinned by common values, such as meeting the education and training needs of employers and communities in their shared regions.

Partnerships are developed between single-sector universities and TAFEs, between co-located higher education and TAFE campuses, and between the sectors in dual-sectors universities. Within each model, there may be collaboration at different levels to develop:

- a shared sense of purpose and mission at senior levels;
- student entry arrangements through, for example guaranteed pathways (such as dual offers) into higher education programs, or through providing students from partner institutions with a bonus in their entry score;
- articulation and credit transfer agreements (standardised pathways);
- enhanced pathways based on collaboration and consultation around curriculum in both sectors, leading to more credit than may be the case otherwise;
- blended curriculum and learning arrangements, based on collaborative curriculum development in both sectors, cross-crediting between the two awards, and sometimes concurrent enrolments;
- shared teaching arrangements within pathways;
- new programs such as nested-awards, dual-awards or associate degrees;
- support for capacity building within the partner institutions, for example, graduate programs to support the upgrading of teachers' qualifications in TAFE, or VET programs to support the professional development of administrative staff in universities;
- shared resources (such as buildings, libraries and student services);

- partnerships with industry advisory bodies, professional associations or employers; and,
- shared projects around research, community needs, government tenders, business development and so forth.

There can be no collaboration at one end of the continuum on each of these dimensions, to extensive collaboration at the other. There can also be collaboration around some of these dimensions and none around others. Collaboration between institutions is most likely to be more intensive between some areas of each institution than others based on closer synergies between the two areas and higher levels of trust. The more complex, dense and long-standing the institutional partnership, the more it is likely that collaboration around a number of dimensions will occur. Strongly supportive institutional cultures reduce the 'cost' involved in developing pathways, and may result in agreements to develop a pathway in an area where it is not cost-effective to do so, but may still be important for other reasons, such as supporting students from disadvantaged backgrounds to enter higher education.

How do students experience pathways?

There is surprisingly little Australian research about the way students experience the transition from VET to higher education. This is an extraordinary gap, given the extensive literature about 'transfer shock' in the United States which identifies the personal, social, cultural and pedagogic hurdles community college students experience when they transfer to four-year universities (Laanan 2007). The US literature is premised on students moving from one type of higher education program to another in programs that have been *designed* to complement each other. In Australia however, most pathways are designed *after* the programs in each sector have been developed using competency-based training in VET, and knowledge-based curriculum in higher education. A possible explanation for this omission is the more or less consistent finding over several years now that TAFE students, on the whole, have pass rates that are similar to school leavers in higher education, which demonstrates their capacity to study at higher education level. This is confirmed by more recent institutional studies (Milne *et al.* 2006b; Wheelahan 2005; Young 2005a, 2008a).⁴³

However, a small number of institutional studies have been undertaken in recent years that provide more insight into students' experiences. These have found that while the performance of TAFE articulators is similar to other groups of students, their experience of their first year in higher education is stressful (Cameron 2004; Abbott-Chapman 2006; Milne, Glaisher *et al.* 2006b). Students reported difficulties as a consequence of differences in teaching style, bigger class sizes, lower contact hours, higher academic standards, lower levels of support, and expectations of more independent study. They also report problems with not knowing how to access resources, not knowing what to expect, time management, study skills, motivation, finances, managing work and family, and making new friends (Abbott-Chapman 2006; Cameron 2004; Milne, Glaisher *et al.* 2006b). These are all problems associated with 'transfer shock', and point to the need for transition support (Laanan 2007).⁴⁴ Milne *et al.* (2006b) report that some students said they found it difficult to get the information they needed, and to navigate administrative requirements to obtain credit

transfer. Many credit transfer agreements result in students being provided credit for the first year of degrees, and Milne *et al.* (2006b) found that some students said that it was difficult to go straight into second year of degrees because of gaps in their knowledge, and because lecturers expected them to be performing at second year level and not as a first year student. Ian Young (2005a: 6), the Vice-Chancellor of Swinburne University of Technology, argues that TAFE students ‘cannot simply be ‘dropped into’ 2nd year degree programs and be expected to do well.’

Milne *et al.* (2006b: 47) identified the factors that support transition. They argue that students benefit if they are prepared for higher education study by their TAFE teachers *before* entering higher education; if their TAFE course equips them with the academic knowledge and skill they need in their field; and, if there was a ‘good fit’ between the TAFE and higher education program. They argue that institutional attention is needed to provide students with a more ‘seamless’ experience, so that their process of transition is smoother.

There is also very little publicly available research that explores students’ intentions for further study when they enrol in TAFE. Research at Victoria University, a dual-sector university, is the standout exception. VU researchers found, in a project involving 114 TAFE students, that the majority of students enrolled with the express intention of articulating to a degree, however ‘approximately one third of the students keen on articulating had made their decision during the final year, and in some cases the final weeks, of their TAFE course’ (Milne, Glaisher *et al.* 2006b: 3).⁴⁵ While students drew on a range of resources in helping them understand the articulation process (and indeed whether they should articulate), the information they received from TAFE and higher education teachers in class was very important, as was hearing from TAFE articulators who could report first hand on these experiences.

What factors facilitate or impede pathways?

The different policy, governance, quality assurance, regulatory, funding and reporting frameworks for each sector are an impediment to the development of pathways. These factors are the focus of another AQFC project and so will not be addressed again in this report. The sectoral differentiation of qualifications within the AQF does not help. PhillipsKPA (2006a: 13-14) explain that:

While providing an overarching framework for all qualifications, the AQF recognises and accepts the differences in qualifications in each sector. However, this has also meant the descriptors for qualifications reinforce these differences by using a different taxonomy to define knowledge, skills, level of autonomy of learners and work-related outcomes for students. If the language for defining the descriptors of qualifications was based on a common conceptual model or taxonomy, this could facilitate understanding of the relationships between qualifications and credit transfer pathways. Such a conceptual framework could be developed in a way that does not diminish the capacity for each sector to adopt its own educational approaches to meet the needs of its clients.

The differences in the nature of the qualifications are underpinned by different curricular models in VET and higher education. Gabb and Glaisher (2006: 10) argue that much of the cross-sectoral literature tacitly suggests ‘that cross-sectoral pedagogy is unproblematic, or at least much less problematic than the institutional and structural barriers.’ However, unless the different curricular basis of qualifications in each sector is addressed and aligned in at least some components, it will be difficult to design pathways that ensure students have access to the systematic disciplinary or applied disciplinary knowledge they need study at a higher level in their field.

These problems make it more difficult for institutions to develop close partnerships, but there are examples where institutions have done so despite these problems. The factors that enhance and facilitate the development of pathways are:

- governance structures to support the partnership and ascribe roles, responsibilities, and accountability and reporting arrangements;
- a visible and demonstrable commitment by senior management;
- resources to support the development of collaborative activities, particularly in developing new, innovative awards and pathways;
- staff who are employed to develop links between the sectors, who understand the cultures, language, demands, priorities and realities of each. Sommerlad *et al.* (1998) refer to such staff as ‘boundary spanners’; and,
- a strategy that specifies priorities for the partnership and processes for implementing these priorities.

Broadly speaking, trust, management support and boundary spanners are necessary because a close institutional partnership will not result in a uniform willingness to collaborate *throughout* either institution. This is because educational institutions are sites of contested organisational and political culture. The dual-sector universities show that institutional strategies and a commitment by management can result in increased levels of articulation from VET to higher education, as is demonstrated in Table 6. Swinburne University of Technology is the standout example; it increased the percentage of students it admitted on the basis of prior VET studies from 13% in 2000 to 27% in 2007 (Wheelahon 2009).

What should pathways look like?

Pathways need to be premised on continuity and complementarity if they are to support educational progression and occupational progression. The OECD explains that:

Articulation is not a mechanical matter of formal recognition of qualifications, or of prior learning experience, necessary as these may be. It is also a learning concept, implying complementarity, continuous enhancement or development of competences, achievement and progression along a pathway that is personally meaningful and has a social recognition and status (OECD 1998: 51).

Pathways need to scaffold learning so that students are provided with the basis to study at a higher level within their field. The next two components discuss what this

means for developing pathways to support disadvantaged learners, and pathways to support occupational progression and skills deepening.

How can we develop pathways to support disadvantaged students?

A suite of strategies is needed to develop pathways that support disadvantaged learners. These strategies must be premised on an understanding of the different needs of students in each equity group, but also on an understanding of the diversity within groups and the consequences of multiple causes of disadvantage.

There is extensive literature on how to support Indigenous students and communities.⁴⁶ The literature emphasises the need to develop partnerships with communities and to leverage the strengths within communities to help them build capacity. It emphasises the importance of partnerships, the ‘incorporation of Indigenous identities, cultures, knowledge and values’ (Miller 2005: 5), collaboration over curriculum, course design and teaching, extensive student support, and crucially ensuring that at least some teaching staff come from the communities.

There is a small but growing literature on support for refugee communities. Research shows that strategies to support refugees must aim to improve English language proficiency, help them to develop their cultural understanding of Australia, and improve their employability skills (Miralles-Lombardo *et al.* 2008). It also emphasises the importance of building partnerships with refugee communities that are based on collectivist cultures, and similar processes of negotiation and collaboration around course design and curriculum as with Indigenous communities, and with including leaders from those communities as teachers within programs (Bereded *et al.* 2000). English language needs to be integrated within vocational programs and contextualised by those programs, and students need access to work placements (Miralles 2004).

All this suggests that current funding models are too rigid to meet the needs of communities, and there needs to be flexibility in the way courses are designed, as well as collaboration with communities in designing and teaching in programs. There also needs to be scope to develop qualifications that have multiples purposes – such as improving vocational outcomes, but also with providing students with access to the foundational knowledge that they need.

Students from isolated, rural and regional communities not only face the problem of lack of access to education, many are also from a low SES background. Consequently, strategies need to be premised on building aspirations for higher education study, providing guaranteed pathways to higher education for rural and regional students, and providing access to higher education programs in regional locations. A key strategy is the provision of higher education programs in TAFE, either in partnership with a university or as a stand-alone undertaking. This could include the provision of degrees, but it could also include associate degrees that have been specifically designed to constitute the first component of a degree and provide students with guaranteed access from TAFE to a university. These degrees could be under the auspices of a university, or TAFE could apply for accreditation of these programs and offer them in its own right. Both approaches will probably be needed. In all cases,

support for partnerships between universities and TAFEs is necessary, as is support to help TAFE (and TAFE teachers) to develop the capacity to deliver higher education programs. One example of a partnership is the university centre at Griffith which is a partnership primarily between the Riverina Institute of TAFE and Charles Sturt University. TAFE has many more campuses and has established infrastructure throughout Australia, and this should be leveraged to provide students with access to higher education. There are many other models. Key to this strategy is recognising the role of TAFE in providing access to higher education in rural and regional areas.

The delivery of higher education programs in TAFE is also one way in which students from low SES backgrounds could be provided with access to higher education in supported pathways. This is, however, only one strategy, and it needs to be complemented by other partnerships between TAFEs and universities and other agencies. In particular, support is needed to build relationships between teaching staff in VET and higher education. This is addressed in a later component.

How can we develop pathways to support occupational progression?

If pathways are to result in deepening the knowledge and skills of the population and the workforce, we need to have a notion of an occupational field practice for which students are being prepared, and not just specific workplace tasks and roles. This is particularly important given the loose fit between qualifications and occupational destinations.

Buchanan *et al.* (2009) argue that there are discontinuities and fragmented flows within the labour market, within education (between VET and higher education), and between the labour market and education. This shows that deepening the skills of the workforce is not just a supply side problem, we also have to consider the nature of occupations and the way labour is deployed at work. They argue for linking education and work through an expanded notion of a vocation, based on the construction of occupational pathways within skills ecosystems.

A vocation links occupational and educational progression and seeks to develop human capability based on recognition of the growing complexity of work. As people are promoted they are often required to access and use theoretical knowledge in different ways and in different contexts as their work grows in complexity and difficulty (Young 2008b). Occupational progression involves a movement from the contextual to increasingly complex applied theoretical knowledge, and educational pathways must provide support to help students move from the contextual to greater engagement with this knowledge (Muller 2009). Workers (and thus students) must continue to engage with the contextual at higher levels, but they use theoretical knowledge that is more complex and at higher levels of abstraction to do so. Providing students with this support is a precondition for the development of autonomous workers with increasing self-responsibility over their practices. It requires a focus on the development of the person within the context of the occupation or vocation.

This is why the professional bodies need to be drawn into the development of pathways from vocational to higher education in much more systematic way than

hitherto. They are concerned with the development of the person in the context of their occupation, and less with specific workplace tasks and roles, which are the legitimate concerns of employers and unions. Bretherton and Oliver (2008: 42-43) explain that 'Historically, professions have played a critical role in negotiation, preservation and integration of skill within a sector.' They say that professional bodies are intrinsic to 'skills escalation' strategies because they are concerned with the development of professional knowledge and skill and their deployment.

If we are to build pathways to the professions we need to consider how the knowledge and skills required for the professions can be supported by lower level qualifications. This has implications for the development of learning outcomes in qualifications, and emphasises the 'importance of clearly defined, self-directed and flexible pathways, supported by a unified qualifications framework' (Buchanan, Yu *et al.* 2009: 30). It also has implications for the development of curriculum and teaching and learning strategies. If lower-level VET qualifications are to lead to professional qualifications, then the professional bodies will need to be involved in negotiating what this means for curriculum, as they already do with universities.

This would require establishing a dialogue between the professional bodies and VET's industry skills councils. There is very little interaction between the two at present, and this contributes to the divide between VET qualifications and professional qualifications offered by universities by reinforcing the distinction between low/medium skilled occupations and high skilled professions. It also contributes to discontinuities and fragmented flows within the labour market as discussed above (Buchanan 2009). Increasing the skill levels of the Australian workforce will require building continuities between linked occupations and between VET and higher education qualifications. Arguably, dialogue between the professional bodies and skills councils would enhance curriculum in *both* VET and higher education by leading to a better blend of occupational and theoretical knowledge on the one hand, and experiential experience in the workplace where students learn to integrate that knowledge with practice. It may also result in more effective and supportable integration of non-formal and continuing professional development into VET and higher education programs because all parties would have a better understanding of the nature of the learning that had been undertaken. The conclusion is that we must engage the professional bodies in developing pathways, and in developing curriculum. Teachers are the key here once again.

Why teachers are the key

Teachers have been relatively ignored in policy and in cross-sectoral research,⁴⁷ yet they are the key to helping students to develop aspirations to go to higher education, and to developing coherent and supportive pathways. In research in the United States, Gross and Goldhaber (2009: 22) found that the quality of instruction and the nature of the student's educational experience was important, and that students who successfully transferred from a two year to a four year college 'reported that their instructors' attention and expectations were key to giving them the skills and confidence to transfer', even when they had no prior expectation of transferring. They found that colleges that had a higher percentage of tenured fulltime staff also had higher transfer rates and better outcomes for students when in four year colleges:

In fact, the model estimates that for every 10 percent increase in the percent of tenured faculty in the two-year college, holding all else equal, the odds that a student will transfer to a four-year college increases by 8 percent. (Gross and Goldharber 2009: 24)

They also found that higher levels of spending on student services resulted in higher levels of transfer: 'each \$100 in per-student spending is associated with a five percent increase in a student's odds of transferring' (Gross and Goldharber 2009: 24). These factors had a bigger impact on rates of student transfer than did state transfer and articulation policies, although these policies did seem to be related to students' transfers from Hispanic backgrounds.

This doesn't mean that these policies don't matter, but it does mean that we need to recognise the central role of VET teachers in helping students develop aspirations for higher education studies. As we have seen, students often rely on their teachers' advice on whether they should consider going to higher education, and in shaping their understandings of 'realistic' options (Milne, Glaisher *et al.* 2006b).⁴⁸ Teachers can contribute to 'heating up' or 'cooling out' students aspirations to study at higher levels. The extent to which it is one or the other often depends on the extent to which teachers in one sector have knowledge of the other and trust in the teaching staff. Strong, collaborative relations also means that students' transitions are supported because teachers ensure that students have better and more realistic understandings of what awaits.

Close relationships between teachers across the sectors also leads to more pathways, and to the development of more enhanced pathways and new awards. Better credit arrangements are much more likely when teachers are sitting across a table discussing the syllabus, teaching and learning and assessment. Good relationships will also result in better embedded transition and a better 'fit' between programs if teachers consider programs in the other sector worthwhile and if there is a high level of trust.

Teachers are also the key to developing partnerships with disadvantaged communities and with industry, occupational and professional bodies. There needs to be continuity in pathways from the senior years of secondary school, VET and higher education, and this can only happen if teachers work together with these bodies to gain insights into how pathways and curriculum must be structured to support educational and occupational progression. Consequently, consideration is needed to develop mechanisms to support this collaboration.

Policy, programmatic, curricular & institutional implications

The policy implications of the above analysis are that:

- New funding models are needed to support the development of programs that are designed to integrate vocational, educational and foundational knowledge and skills in qualifications to support disadvantaged communities, and to ensure such provision is culturally appropriate, and provides sufficient student support;

- TAFE has a role in supporting student access to higher education programs in partnership with universities and/or in their own right.⁴⁹ TAFE can play a key role in helping government to improve access for remote, rural and regional students, for low SES students, and for students from other disadvantaged groups. In order to do so, TAFE will require access to:
 - Public funding for student places in higher education programs; and,
 - Support for capacity building within TAFE so that teachers are supported to gain the qualifications they need to teach higher education programs, and TAFEs are supported in developing the scholarly and institutional cultures that can support the development of a higher education culture.
- Mechanisms to support collaboration between teaching staff in senior school VET and higher education are needed, and between teaching staff, professional bodies, industry skills councils and disadvantaged communities. Consideration should be given to developing cross-sectoral teacher professional development bodies that are organised around industry/occupational areas in the case of vocationally oriented programs, and broad disciplinary frameworks in the case of general/further/and enabling education. This would help promote collaboration between professional associations and industry skills councils in designing curriculum, and it would enrich and build the capacity of teachers to develop their own skills in their occupational/ disciplinary area. It would also promote collaboration between teachers across sectors, and lead to more coherent pathways based on educational continuity.
- Institutions should be required to report on their partnerships and the outcomes of these partnerships. Research in the United States has found that it was not enough for states to have strong state-wide structural policies and coordinating mechanisms; those states that performed the best in student articulation also used data as a tool to improve transfers and provide feedback to institutions about their relative performance (Wellman 2002). Attention needs to be focused on policies and reporting mechanisms that support student transfer and transition in the ‘receiving’ institution (such as universities), and not just on the ‘sending’ institutions (such as TAFEs) (Wellman 2002).
- Cross-sectoral research capacity needs to be developed to support policy, institutions, partnerships, pathways and student transitions. Most research is sectorally based, and the absence of insights from research constitutes a break on the development of partnerships and pathways between the sectors, and it limits the development of policy.

The programmatic and curricular implications are that:

- All qualifications need to include the capacity to study at a higher level within each field as a key learning outcome;
- There needs to be consistency within the AQF in knowledge, skills, and learning outcomes between the sectors to promote progression, coherence and educational and occupational continuity;
- The design of qualifications should include pathways to promote curricular coherence and continuity.

The institutional implications are that:

- Partnerships need to include appropriate governance arrangements that specify and attribute roles with specified outcomes and responsibilities so that the success or failure of partnerships does not rest on the inclinations of individuals;
- Appropriate policies are needed within institutions and between institutions to support the development of pathways and to ensure the development of institutional cultures that support pathways;
- Funding and resources for these partnerships need to be considered as a line-item element of institutional budgets, and not as discretionary funding;
- Staff who act in the role of ‘boundary spanners’ need to be employed, ensuring that they report to staff with appropriate seniority to establish their authority in negotiations within and between each institution;
- Institutional strategies need to be developed based on programs, policies and pathways that range from least to most expensive:
 - Initiatives that are relatively cheap but high in symbolic importance include guaranteed pathways (such as dual-offers), and tertiary entrance bonuses for students of partner institutions
 - Initiatives that are moderately expensive include standardised pathways. Rather than trying to develop standardised pathways in every program across the two institutions, pathways should be developed where the traffic is the greatest. Customised and individualised pathways can be developed in other instances, and these may provide the basis for standardised pathways in time, if sufficient numbers of students traverse them;
 - Initiatives that are expensive include the development of enhanced pathways, new dual-award and nested programs, and complex concurrent pathways. These should be limited to areas where they will be most strategic. This includes pathways developed with professional bodies and other industry partners, and with leaderships of disadvantaged communities. These initiatives are likely to be most successful if they focus on areas where there is the greatest support for pathways and synergy between the two institutions.
- Universities need to provide pathways from TAFE to at least some of their high demand programs, and not use pathways primarily to fill load in areas where there is weak demand;
- Institutional strategies need to be developed and funded around joint projects, research and areas of high social and occupational priorities;

Conclusion

The current reforms to the AQF will be important in helping to improve pathways. However, no single policy will be the ‘answer’ and nor will a revised AQF, on its own, achieve the changes that are required. Gallacher (2007: 10) argues that national qualifications frameworks can be *instruments* of change, but not *agents* of change. They cannot drive change on their own, but they can be used to support change. However, they must be supported by ‘policy breadth’ which includes broader policies that promote sectoral collaboration and the development of partnerships (Raffe 2005). This report has focused on ‘policy breadth’.

If pathways are to contribute to government objectives and educational targets we will need to think about them in new ways because ‘more of the same’ is unlikely to achieve the outcomes we want. While some pathways have been built into the design of qualifications, this is the exception rather than the rule. Australia has had some success with pathways, but more is needed. John Dawkins (2009), the chair of the AQFC, explained in a recent speech that:

To say nothing happened would be quite wrong. There are instances where strong connections between the sectors have been established. It’s just that there are many areas where these connections are either inadequate or non-existent.

We need to move beyond ad hoc arrangements to systemic arrangements that incorporate pathways as part of the normal development of programs and qualifications in tertiary education. Policy breadth is needed to support pathways. This requires strong partnerships between the sectors and between educational institutions, and it requires strong partnerships between teachers in the sectors and between teachers and other stakeholders.

Appendix one: Notes on Tables

Notes on Table 1: Employment & further study outcomes for government funded TAFE graduates 2003 – 2007 # ^

Source: DEEWR (2008: 215, Table A2.8) Employment and further study outcomes after completing VET

^ This table is restricted to reporting on government funded TAFE graduates, and not all VET that is reported (which includes all provider types and funding sources) because these data are only available from 2005 – 2007. In 2005, 31.6% of all VET graduates went on to further study compared to 35.1% for TAFE graduates, and in 2006 and 2007 the percentage of TAFE graduates going on to further study was around 2% higher than for all VET graduates.

There is a certain amount of ‘elasticity’ in the percentages reported here due to sampling variability. This is minimal for the outcomes reported for all graduates, and for graduates who were seeking an employment related outcome. The outcomes are within 95% confidence interval levels (unless otherwise stated). See DEEWR (2008: 45 - 46) that explains the sampling variability, and DEEWR (2008: 215, Table A.28) that explains the possible variation for each reported percentage.

* The estimate has a relative standard error greater than 25% and therefore should be used with caution.

** Source for this line of data DEEWR (2008: Table A2.4, p. 211)

Notes on Table 2: Socio-economic background of commencing under-graduate students in universities in 2007, & percentage share of low SES students in dips/adv dips & all AQF qualifications in 2001

* Doesn't equal 100% because small categories were excluded

** Source Wheelahan: (2009:12)

*** Source: derived from Foley (2007: 27 Table 3). The method used by Foley to calculate SES used somewhat different ABS indicators compared to those used in higher education, but he used the same level of aggregation as those used in higher education. See Wheelahan (2009: 10) for an explanation.

^ Source: derived from Foley (2007: 27 Table 3)

Notes on Table 3: Socio economic groups' share of each vocational education qualification level, 2001

Source: derived from Foley (2007: 27) Table 3: AQF level by socio-economic group, 2001. Foley reports that there were 29.2% low SES, 50.7% medium SES, and 20.1% high SES students in VET in 2003. In contrast, the percentages for VET SES students in Table 3 were derived from Foley (2007: 27) are based only on students enrolled in certificates 1 – diploma and above. It does not include in other VET qualifications or non-award enrolments.

Notes on Table 4: Participation rate of equity groups in HE in 2007 & VET in 2008 & proportion in general population

* The higher education participation rates and proportion in general population are from Bradley (2008: 28, Table 4), whereas the 2008 participation rates in VET are from NCVET (2008b: Table 3)

^ The non-English speaking background category in higher education is defined as having arrived in Australia within the last 10 years from a non-English speaking country, while VET defines this as speaking a language other than English at home. The ABS (2008a: 456) reports that 15.6% of people spoke a language other than English at home in 2006.

^^ The Bradley (2008: 28) report, in discussing higher education, says this category ‘Excludes profound and severe core activity limitation’, whereas NCVET (2008b: Table 3) includes impairment or long-term condition in this category. The ABS (2008a: 341) says that 20% of the population reported a disability in 2003, and 6% ‘had a profound or severe core activity limitation (sometimes or

always needing assistance with self-care, mobility or communication)'. The ABS here includes the whole population, and not the usual reference range of 15 – 64 years that is usual for data on education and work.

The NCVET reports on inner regional and outer regional, and remote and very remote. The inner and outer regional were combined to make one category and the remote and very remote were combined to make another category.

Notes on Table 5: Share of qualification level by VET equity group in 2008

Source: NCVET (2009: Table 5)

* There are no data for SES in VET by each qualification level since 2001. Source: Foley (2007: 27, Table 3)

** This includes 'outer regional, remote and very remote', but it does not include inner regional.⁵⁰ This group is 19.4% of all VET students derived from NCVET (2009: Table 3).

Notes on Table 6: Percentage students admitted basis prior VET in 2000 & 2007

*Source: derived from Moodie (2007: 3)

#Source: Wheelahan (2009)

Endnotes

¹ The Australian Bureau of Statistics (2008b) estimates that 47% of the population held a certificate III or above in 2008 (up from 38% in 2001), which means that the government's target is to halve percentage of the population without a Certificate III or above from 53% to around 27%.

² In 2006 there were 43,934 qualifications completions in VET at the level of diploma and above (DEEWR 2008: Figure 22)

³ The apparent retention rate for Indigenous students to year 12 in 2006 was 40% compared to 76% for non-Indigenous students (ABS 2008a: 383)

⁴ One problem that we have is that the VET data only reports on students in VET institutions that receive at least some public funding and this excludes institutions that are exclusively privately funded. The result is that we don't know for sure how many students obtain VET qualifications in any one year. This makes it difficult to determine if we are meeting targets *within* VET, but we still can get an idea of the extent to which students who are entering higher education have prior VET qualifications, because all commencing students are asked for their prior highest qualification and it doesn't matter where they got it from.

⁵ For example, English further education colleges enrolled 15% of students commencing higher education in England in 2005 (Rashid and Brooks 2008: 4), while 26% of all undergraduate higher education students were enrolled in further education colleges in Scotland (Gallacher *et al.* 2006: 3). Community colleges in Canada and the United States enrol around 35% - 45% of undergraduate higher education students (Moodie *et al.* 2009: 13).

⁶ The match between the intended destination of the qualification and students' actual destination varied among apprentices and trainees. Some 78.9% of apprentices and trainees in a trade occupation course reported that they were working in the same occupation group as their course, while only 37.6% of apprentices and trainees in non-trade occupation courses reported that they were working in the same occupation as their course (NCVER 2008a: Table 7).

⁷ While the VET sector has more students than higher education, it has a much higher *number* of young people than higher education: there were 437,649 domestic higher education students aged under 25 years in 2006 (600,512 if international students are included), while there were 715,800 young people of the same age in VET. Source: (DEST 2007: Tables 19 & 20; NCVER 2008b: Table 2).

⁸ Source: Karmel (2007b: derived from Table 6).

⁹ This means that 12% of those aged between 15 – 19 years 'have not passed a single subject in their period of study.' (Karmel 2007b: 17).

¹⁰ This is an underestimate because of the way the data are collected and reported. It underestimates the percentage of students with prior VET experience or VET qualifications in universities because not all VET students are admitted on the basis of their VET qualification, not all students in higher education with prior VET experience finished their VET qualification, and it does not take into account students' multiple enrolments in both sectors because it reports only on prior highest completed qualification (Moodie 2005a, 2005b).

¹¹ At least, this is the case in Victoria and NSW which were the only two states in 2008 to make this information publicly available on their websites (Wheelahan 2009: 8). In Victoria students with completed TAFE diplomas did not receive as many offers in 2008 as did school leavers, but they received similar offer rates compared to those with completed and incomplete higher education qualifications. There is, however, a great deal of variation between individual universities and between groups of universities (such as the Group of Eight universities) in the extent to which they are prepared to offer places to VET articulators (see Wheelahan 2009). This is dealt with in section two of this paper.

¹² Derived from Stanwick (2006b: Table 7, p. 17).

¹³ Source: DEEWR published and unpublished student statistics (see Wheelahan 2009: 9). Generally speaking, there is usually a higher number of students with a diploma or advanced diploma in higher education than the number who were admitted on the basis of their diploma or diploma – for the reasons outlined in footnote 10. The exception to this is 2007, where the percentage reporting a diploma or advanced diploma as their prior highest qualification (around 10%), was about the same as those who were admitted on the basis of a VET qualification (around 10%) (Wheelahan 2009). It is not clear whether this is due to better collection and reporting of data, or if it is serendipitous.

¹⁴ The NCVER (2009: Table 4) shows that almost 11% of VET students were enrolled in diplomas or above in 2003, and just over 10% were enrolled in these qualifications in 2008.

¹⁵ The percentage of 2007 low SES students commencing undergraduate degrees in this table is higher than that reported by DEEWR (2009), which was 15.9%. This is because DEEWR included undergraduate and postgraduate students, whereas the percentage here refers only to undergraduate students. See Wheelahan (2009: 5-6) for an explanation. It also must be kept in mind that the percentage for higher education refers to *access*, that is to *commencing* students, whereas the percentages for diplomas, advanced diplomas and VET qualifications overall refers to *participation*, that is, all students in VET and not just commencing students. The participation rate of low SES students in higher education is a little lower than the commencing rate (see DEEWR 2009). Table 2 uses 2001 data for VET students in diplomas, advanced diplomas and VET overall, because this is the most recent data that are available.

¹⁶ Women are still under-represented in non-traditional disciplines (such as engineering) and in postgraduate qualifications in higher education. See James et al. (2004) for a discussion of women in higher education. Overall, the outcomes for women in VET are mixed, with the exception of women in low level VET qualifications who have very poor outcomes.

¹⁷ VET defines the proportion of the population with a disability as 20% in line with Australian Bureau of Statistics (Griffin and Nechvoglod 2008), which is a broader definition of disability than in higher education. The Bradley (2008: 28) report, in discussing higher education, says this category 'Excludes profound and severe core activity limitation', whereas NCVER (2008b: Table 3) includes impairment or long-term condition in this category. The ABS (2008a: 341) says that 20% of the population reported a disability in 2003, and 6% 'had a profound or severe core activity limitation (sometimes or always needing assistance with self-care, mobility or communication)'. The ABS here includes the whole population, and not the usual reference range of 15 – 64 years that is usual for data on education and work.

¹⁸ The category of rural/remote in Table 5 has been narrowed to exclude inner regional students, and this narrower category comprises 19.4% of all VET students (NCVER 2009: Table 3).

¹⁹ See footnote 18 for an explanation of the rural/regional group. Table 5 shows the share of low SES students in absolute terms, so that of all low SES students, only 6.8% are in diplomas and above. In contrast Table 3 shows the share of each socio-economic group *within* each qualification – if each socio-economic group were equitably represented in proportion to their numbers in the population, there should be 25% low SES, 50% medium SES, and 25% high SES *within* each qualification.

²⁰ Around 28% of certificate I graduates and 40% of certificate II graduates would complete a further qualification. However, given that only a minority of students graduate, this means that approximately 9% of certificate I graduates as a proportion of all students proceed to further study, and 17% of certificate II graduates as a proportion of all students proceed to further study. Just over 5% of certificate I subject completers go on to further study, as do 10.5% of certificate II subject completers (Stanwick 2005: 18).

²¹ Stanwick reports that 24% of graduates aged between 15-19 years in certificates I and II who were not employed before training were employed fulltime after training, and 16% and 21% of graduates from certificates I and II respectively were employed part-time. In contrast, 34% of certificate III graduates were employed fulltime after training, and 21% were employed part-time. Only 16% of graduates from certificate I aged between 20-24 years who were not employed before training were employed after training and 16% were in part-time employment. Some 24% of certificate II graduates aged between 20-24 years were in fulltime employment and 17% were in part-time employment, compared to 53% of certificate III graduates in fulltime employment and 13% in part-time employment.

²² Overall, graduates from certificates I and II have a subject pass rate that is about 30% higher than those studying at the same level who did not complete their program (Karmel 2007b: 17).

²³ Only 26.4% of certificate I and 24.6% of certificate II graduates in mixed field programs go on to further study, which represents around 6.4% of all certificate I young students in mixed field programs, and 6.9% of Certificate II students. Some 13.4% of Certificate I subject completers go on to study at a higher level, compared to 9.1% of certificate II subject completers (Stanwick 2005: 23).

²⁴ Non-completers were much less likely to complete the subjects they were enrolled in compared to graduates; these students completed around 45% of the subjects they were enrolled in compared to almost 76% of those who completed the award (Stanwick 2005: 20).

²⁵ While there were more in the age 25-44 years group who said they were seeking an employment-related outcome, more than half certificate I graduates said this was their reason for studying, as did 70% of certificate II graduates. Some 43% of subject completers at certificate I said they were seeking an employment-related outcome, compared to 63% at certificate II (Stanwick 2006a: 12).

²⁶ Between 31 – 33% of graduates in the 25-44 years age group in certificates I and II go on to further study, whereas 8.7% of subject completers go on to further study. This accounts for 15% - 14% of all certificate I and II students in age group. Some 22% of certificate I graduates in the age 45 years and over group go on to further study, as do 6.1% of subject completers. Some 30% of certificate II graduates in the older age group go on to further study, as do almost 5% of subject completers. (Stanwick 2006a: 18). This accounts for 10%-11% of all certificate I and II students in this age group.

²⁷ Around 10-12% of graduates aged between 25 – 44 years in certificates I and II who were not employed prior to training were in fulltime or part-time work after training. The employment rates for subject-only completers were similar. However, the employment rates for those in this age group undertaking a certificate III were not much better, except that a higher proportion was likely to be in part-time work (28%). The outcomes were marginally lower for the 45 years and over group, but they were somewhat more likely to be in part-time work. Similarly, the outcomes for certificate III graduates in the older group were not much better, except for a higher proportion who were in part-time work (25%) (Stanwick 2006a: 15).

²⁸ The subject pass rate for mixed-field certificate II non-completers was 47.7% and 53.9% for each age group respectively, while the subject pass rate for certificate II non-completers overall was 66.7% and 72.7% for each age group respectively (Stanwick 2006a: 14).

²⁹ Some 40% of mixed-field certificate I graduates and 31.5% of certificate II in the age 25-44 years group go on to further study. Overall, around 15% of certificate I and II mixed field students aged between 25-44 years go on to further study, while around 9% of certificate I and almost 16% of certificate II students aged 45 years and over do so.

³⁰ Karmel and Nguyen (2006: 29) considered of the impact on wages of undertaking further VET qualifications. They found that there is little difference in the wage outcomes for women between years 10, 11, 12 and certificates I, II and III. They explain that certificates III and year 12 are on a par for men, but that there is no wage benefit from certificates I or II. In general, there are no wage benefits from undertaking a VET qualification at the same or lower level. They also ask whether employers should pay for specific training undertaken by those who have enrolled as a requirement of their job, and whether students who already have higher level VET qualifications should be funded to undertake a lower level qualification. However, they do find that those who have a certificate I or II benefit in receiving higher wages from undertaking and completing higher level VET qualifications (Karmel and Nguyen 2006: 29).

³¹ See in particular: (Karmel 2007b, 2007a, 2008b; Karmel and Cully 2009; Karmel, Mlotkowski *et al.* 2008; Karmel and Nguyen 2003, 2006, 2008; Karmel and Virk 2006; Karmel and Woods 2008).

³² A 'good' outcome in VET is one where post-training students are: employed in their intended occupation; employed at the same or higher skill level; or enrolled in further study at a higher qualification level (Karmel 2007b: 22). Based on these criteria, most students achieve a good outcome. However, Pocock (2009: 20) explains that most workers do not move into a different occupational skill level post-training in VET, including over two thirds of those in low paid occupations and 86% of those in higher paid occupations. Around one quarter of VET graduates in low paid occupations move to a higher skill level, while only 3% of those from higher level occupations do so. This reflects the lower base that low paid workers start from.

³³ MCVTE has been replaced by a new Ministerial Council entitled the Ministerial Council for Tertiary Education and Employment (MCTEE).

³⁴ Apart from those who are required to undertake specific studies as a requirement of their job.

³⁵ See also the work by Figgis *et al.* (2007).

³⁶ There were 60 dual-offers between QLD TAFE institutes and Griffith University, 44 with Queensland University of Technology, 12 with the University of Southern Queensland, 11 with the University of the Sunshine Coast, and 7 with Southern Cross University in New South Wales. See http://www.tafe.qld.gov.au/resources/pdf/pathways_university/dual_awards.pdf, viewed 30 August 2009.

³⁷ See Wheelahan and Ovens (2005) who found the theme of insurance against to be important for TAFE articulators in a small-scale institutional research project.

³⁸ An example is the Bachelor of Arts (Fine Arts) offered in partnership between Charles Sturt University and TAFE NSW Riverina Institute. Students must, as a condition of entry, complete the Certificate IV in Fine Arts. Students are granted credit for the first year and enter directly into the second year of the degree. See: http://www.csu.edu.au/courses/undergraduate/fine_art viewed 30 August 2009.

³⁹ This includes the University of Adelaide in South Australia (see <http://www.adelaide.edu.au/dvca/articulation/framework/> viewed 30 August 2009), and the University of Queensland (see <http://www.uq.edu.au/news/index.html?article=15978> viewed 30 August 2009).

⁴⁰ See PhillipsKPA (2006b) for an outline of the arrangements in each state.

⁴¹ For example, Griffith University has a memorandum of understanding with QLD TAFE and this includes a Griffith University – TAFE Links Committee with representatives from QLD TAFE, but also representatives from each of the partner TAFEs that share a geographic region with Griffith. In addition, senior staff from Griffith and each partner TAFE meet to negotiate individual agreements. In NSW, Charles Sturt University has extensive individual agreements with TAFE NSW Riverina Institute of TAFE, TAFE NSW Western Institute, Canberra Institute of Technology and Wodonga Institute of TAFE. The dual-sectors have constructed different mechanisms to develop pathways and they have an extensive array of pathways that emphasise internal transition and pathways from the TAFE to higher education division. See RMIT:

<http://www2.rmit.edu.au/Courses/pdf/2010ProgramGuide.pdf> viewed 30 August 2009 for an outline of the RMIT TAFE to HE pathways. See Victoria University: <http://www.vtac.edu.au/institutions/vu.html> for an explanation of the internal course transfer process, and for an outline of pathways from TAFE to HE within VU see

http://wcf.vu.edu.au/Pathways/index.cfm?ViewPathways_DisplayInstitution=ViewPathways_DisplayInstitution&CFID=21438998&CFTOKEN=56611939. See Swinburne

<http://www.future.swinburne.edu.au/pathways/programs/> for outline of pathways for all students and benefits for Swinburne TAFE students. See Charles Darwin University

<http://www.cdu.edu.au/studentnet/credit-transfer08.html> for list of 2009 pathways, and

<http://www.cdu.edu.au/studentnet/credit-transfer-pathway.html> for the entry process for CDU TAFE to HE students. See the University of Ballarat website for a list of pathways:

<http://www.ballarat.edu.au/aasp/student/recruitment/pathways/> viewed 29 September 2009.

⁴² See Raffe (2005) and Hart (2005) on zones of mutual trust. Michael Young (2003) uses the notion of ‘communities of trust’ as the basis of the credibility of qualifications.

⁴³ Victoria University found that school-leavers performed slightly better than TAFE articulators, while TAFE articulators had better retention rates (Cao and Gabb 2006). Griffith University found that TAFE articulators are less likely to achieve high grades, but they are just as likely to pass, and their average grade point average is comparable to other categories. Griffith also found that TAFE articulators had better retention rates than school leavers and high rates of improvement in both their GPA and retention rates in later years of study. Swinburne found that TAFE articulators had progression rates similar to school leavers, which meant in this case that they were performing as well as school leavers with a tertiary entrance rank between 80 – 90 (Young 2007: 7).

⁴⁴ See Goldrick-Rab and Roksa (2008) for a comprehensive discussion of the systemic, policy, funding, institutional and curricular approaches that are needed to support students’ transitions from community colleges to four year colleges in the United States.

⁴⁵ Earlier research at VU (in 2001) which used a stratified random sample of students who had articulated to higher education found that half said they decided to articulate after they enrolled in their TAFE course, often on the basis of encouragement from their TAFE teachers (Wheelahan 2001).

⁴⁶ See the Indigenous Higher Education Advisory Council (2006, 2008) Miller (2005), Gelade and Stehlik (2004), Young *et al.* (2007), and Davidson and Rankin (2009).

⁴⁷ Again, with the exception of VU institutional research (see also Milne *et al.* 2007; Milne *et al.* 2006c).

⁴⁸ See also Wheelahan and Ovens (2005). See Bathmaker (2008), Goodlad and Thompson (2007) and Burns (2007) for a discussion of students’ emerging identities and understandings of possible future pathways in further education colleges in the UK.

⁴⁹ See Wheelahan *et al.* (2009) on higher education in TAFE and recommendations for the way higher education in TAFE can be supported.

⁵⁰ See note 13, http://www.ncver.edu.au/statistics/vet/ann08/table_notes.pdf viewed 16 August 2009

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