Associate degrees in Australia: a work in progress

Final Report 2013

ALTC Teaching Fellowship
Improving tertiary pathways through cross-sectoral integration of curriculum and pedagogy in associate degrees

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RMIT University
Support for the production of this report has been provided by the Australian Government Office for Learning and Teaching. The views expressed in this report do not necessarily reflect the views of the Australian Government Office for Learning and Teaching.

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2013

ISBN 978-1-921916-20-5  PDF
Acknowledgements

I would like to express my thanks to all those who contributed to the Fellowship and the production of this report:

- RMIT Vice Chancellor, Professor Margaret Gardner, for her vision and leadership in the associate degree space.
- RMIT Deputy Vice Chancellor Academic 2005-2009, Professor Jim Barber; and Director TAFE 2004-2011, Mr. Allan Ballagh; for their pioneering work in the design of RMIT associate degrees and their support in gaining the Fellowship.
- The Australian Government Office for Learning and Teaching, most particularly Siobhan Lenihan, for her unfailing support and encouragement throughout the Fellowship and beyond.
- Mr. Tjerk Dusseldorp for his support in gaining the Fellowship.
- Members of the Fellowship Reference Group for their advice and input during the formative stages of the associate degree research:
  - Professor Gill Palmer, RMIT Deputy Vice Chancellor Academic (Chair)
  - Professor Julianne Reid, Deputy PVC, Teaching and Learning, SEH College, RMIT
  - Mr. Keith Cowlishaw Head of School, Fashion and Textiles, RMIT
  - Associate Professor Eveline Fallshaw, Dean Teaching and Learning, Business, RMIT
  - Ms. Trish McCluskey Manager, Curriculum Innovation, Victoria University
  - Associate Professor Alex Stoycevski Associate Dean Learning and Teaching Scholarship, Swinburne University
  - Dr Christine Spratt Deputy Director Programs (Higher Education), Northern Metropolitan Institute of TAFE
  - Associate Professor Neil Trivett, Director - Institute for Professional and Organisational Learning, University of Ballarat
  - Ms. Megan Lilly Associate Director - Education & Training, Australian Industry Group
  - Mr. Tony Coppola, Senior Manager, Northern Melbourne RDA Committee
  - Mr. Michael Butera Executive Director NORTH Link Institute for Advanced Study La Trobe University.
- Members of the RMIT Associate Degree Network, and its conveners, Ms. Lisa Thompson (2012) and Ms. Vicki Molloy (2013); and all RMIT associate degree leaders and teachers who supported my Fellowship and generously gave their time to be interviewed, and assist in data collection.
- My colleagues in the Office of Director TAFE at RMIT: Allan Ballagh and Christine Robertson who me to integrate associate degree research and development into my work role; and Marilyn Capper, Jeanette Pierce, Jane Kemmelfield and Chris Raab who variously listened, read drafts, and cheered me on.
- The RMIT Deputy Vice Chancellor Academic, Professor Gill Palmer; and Dean Learning and Teaching, Professor Geoff Crisp, who generously provided me with a time allocation for research and writing during 2011.
- Representatives of Charles Sturt University; Deakin University; Advance TAFE; Chisholm Institute of TAFE; TAFE NSW and the Queensland Department of Education and Training who contributed to the case studies included in this report:
  - Deputy Vice Chancellor Charles Sturt University, Professor Ross Chambers
Leonie Wheeler and Gemma Baker from the RMIT Northern Partnerships Unit who facilitated access to secondary schools and industry associations and managed the process of data collection from these sources.

Members of the Whittlesea Youth Commitment/Hume Whittlesea Local Learning & Employment Network (HWLLEN); and the Inner Northern and Banyule Nillumbik LLENs who participated in focus groups and facilitated access to local careers teacher networks.

The Department of Education and Early Childhood Development for permission to collect data from secondary schools in the Northern Region.

Careers teachers and year 11 students from secondary colleges in the Northern Region of Melbourne who provided such valuable insights into the transition from school into tertiary study and work.

Margaret Taylor, Director Learning Edges Australia for her assistance in case study data collection.

Mr. Michael Butera, Executive Director NORTH Link for facilitating access to industries in Melbourne’s north.

Representatives of enterprises who agreed to be interviewed about training needs and the potential role of associate degrees in skill formation.

My most grateful thanks to Rob Sheehan, Sharp Words Consultancy, Editing & Writing, for his insightful support in the role of Fellowship evaluator and critical friend, and later as editor of this report. His contribution, which went well above the call of duty, helped to keep me on task and able to navigate through the complexities I set up for myself by choosing to write a wide-ranging report.

Finally, I acknowledge the contribution made to my Fellowship — and indeed to so much of my work at RMIT — by the late Sally Leavold, Deputy Director TAFE in the RMIT College of Design and Social Context until January 2013. It was Sally who initiated university-wide collaboration around the design and implementation of associate degrees, and secured RMIT Learning and Teaching Investment Fund (LTIF) support to create the RMIT Associate Degree Network. Throughout her illness Sally continued to nurture the network, champion the associate degree cause across RMIT, and support the growing suite of specialist vocational pathways in her college.

This report is dedicated to Sally for her leadership and inspiration; and to the associate degree leaders and teachers who rose to the challenge of forging new ways of doing vocational learning at RMIT.

Helen Smith
July 2013
List of acronyms and abbreviations used

ABS  Australian Bureau of Statistics
ACPET  Australian Council for Private Education and Training
ADSS  Associate Degree in Social Science
AHES  Australian Higher Education Supplement
ANET  Australian National Engineering Taskforce
ANTA  Australian National Training Authority
APESMA  Association of Professional Engineers Scientists and Managers Australia
AQF  Australian Qualifications Framework
AQFAB  Australian Qualifications Framework Advisory Board
ASQA  Australian Skills Quality Authority
ATAR  Australian Tertiary Admissions Rank
AUQA  Australian Universities Quality Agency
AVCC  Australian Vice Chancellors Committee
BMHS  Blue Mountains Hospitality School
CASR  Collaboration and Structural Reform
CBT  Competency based training
COAG  Council of Australian Governments
CPA  Certified Practicing Accountant
CSP  Commonwealth Supported Places
CSU  Charles Sturt University
DAYD  Deakin at your Doorstep
DEET  Department of Employment Education and Training
DEEWR  Department of Employment Education and Workplace Relations
DEST  Department of Employment Science and Training
DETA  Department of Education, Training and Employment Queensland
DSC  Design and Social Context
DVCA  Deputy Vice-Chancellor Academic
EA  Engineers Australia
EFTSL  Equivalent Full Time Student Load
ESFC  Employment and Skills Formation Council
GFC  Global Finance Crisis
HECS  Higher Education Contribution Scheme
IBSA  Innovation and Business Skills Australia
IEAust  Institution of Engineers Australia
IELTS  International English Language Testing System
IRSAD  Index of Relative Socio-economic Advantage and Disadvantage
ISC  Industry Skills Council

Associate degrees in Australia: a work in progress
Associate degrees in Australia: a work in progress
Executive summary

The aim of this fellowship was to contribute to improved student access to a range of post-school pathways through closer integration between the tertiary sectors with a particular focus on associate degrees.

It commenced in a time of great change in the Australian higher education sector. The Australian Government had set new priorities for higher education in response to the *Review of Australian Higher Education 2008* (the Bradley Review) with new targets for increased participation in higher education and the introduction of demand-driven funding. To attract a wider range of students, new types of qualifications would be needed. The associate degree has the potential to be a qualification to meet this need and as a dual sector provider, the Fellow’s home institution, RMIT University is in a unique position to provide improved educational pathways.

The associate degree is already a bridge between vocational and academic learning with its nomenclature aligning it with higher education while sitting it at the same Australian Qualifications Framework level as vocational qualification. With this in mind, this Fellowship aimed to answer two questions:

1. Could the associate degree help to bring about a better alignment between vocational and academic curriculum and pedagogy, and, in doing so, facilitate smoother VET/higher education pathways?

2. Could associate degrees offer young people, who learn best through practice, access to occupations requiring a combination of technical and conceptual skills?

The investigation to answer these questions led to the trialing of new pedagogical approaches; development of information for careers teachers and students; and development of resources to support associate degree teachers to design and implement associate degree pedagogies.

Chapters one outlines the planning process for the fellowship while chapters two, three and four uncover the associate degree and place it in the current policy context. Chapters five and six discuss orientations to tertiary learning and the transition in (and to) a mass tertiary system. Chapter seven draws all of the information together and chapter eight discusses how to implement a new tertiary pathway.

Throughout the program, the Fellow engaged with a broad cross section of stakeholders including secondary students; careers teachers; associate degree students; associate degree teachers and program managers; and learning and teaching leaders in VET and higher education at RMIT and other relevant institutions. The Fellow looked into the history of the associate degree, both locally and international and followed this by examining the policy context with a focus on credit transfer recognition and the Bradley Review.

The work undertaken during this fellowship has result in three evolving processes:

1. a dialogue about new forms of tertiary learning;

2. emerging new relationships across RMIT and other Victorian associate degree providers; and

3. an agreed agenda for further work on the development of associate degrees at RMIT.
The Fellow found that, to date, efforts to establish tertiary pathways have shown a lack of success, in part due to national policy settings failing to secure a sustainable base for change. In light of the Bradley Review, there is now a base for change. However, despite this, the power of traditional differences between TAFE and university lives on and continues to be a barrier to innovation.

This report introduces a design model that captures the range of aspirations and stakeholder demands that may be encountered and lays out a process for consultation and decision making. Although the model may seem a challenge to implement, it is presented as a framework for negotiation rather than a blueprint to be followed.

The report concludes with a number of recommended strategies targeted at the tertiary sector, the Victorian State Government and RMIT University including that a national conference be held to encourage critical reflection on curricula and pedagogical practices in the context of tertiary participation targets; that the Victorian Government supports a State-wide information campaign on associate degrees; and that RMIT engage in a range of activities to promote associate degrees to stakeholders. A full list of recommendations is discussed at section 8.4.
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Chapter 1 Planning and implementing an ALTC Fellowship program

1.1 Background

The institutional arrangements governing tertiary education need significant reform. Tertiary qualifications are offered in two sectors with what have been, historically, very different roles and approaches to educational provision. But the move to a mass higher education system together with the growth of a credentials-driven employment environment has seen a blurring of the boundaries between the two sectors. However, each still has a critical role to play in meeting Australia’s future skills needs. While it is important to maintain the integrity of the VET system and its provision of distinct qualifications in which the content is strongly driven by the advice of industry, the time has come for a more coherent approach to tertiary educational provision.

Australian Government 2008: xvi

There are three elements that are the key to this Strategic Plan.

- Building RMIT’s future from its foundations. From its beginnings, this University has been willing to believe that bold hopes can be realised and that we can bring knowledge within reach; has been dedicated to useful knowledge that responds to industry and community; and has trusted that education and research, drawing on action and experience, gives people the meaning and ability to build futures we cannot now imagine.

- Refining RMIT’s distinctive strengths, so that it becomes a university of technology and design; global in its presence, reach and impact; tightly connected with and relevant to the professions and industries with which it is engaged; and creatively inspired by and contributing to the cities in which it finds its place.

- And finally, combining these distinctive strengths to chart a successful course through a shifting but exciting tertiary education landscape.

RMIT Strategic Plan Red Paper 2010a: 3

This ALTC Teaching Fellowship program was envisaged in early 2010 in a policy environment framed at a national level by the Commonwealth government’s goals for higher education arising from the Review of Higher Education (Australian Government 2008), and locally by RMIT University’s strategic directions as a tertiary provider. The proposed Fellowship program was particularly influenced by the opportunities for reform offered by the Commonwealth’s targets for increased higher education participation and the introduction of demand-driven funding. If universities are to attract a wider range of student cohorts, and ensure these students can graduate with the knowledge and skills needed to enter a competitive global marketplace, new types of qualification are needed, along with new curricula and pedagogical approaches. The associate degree, introduced into the Australian Qualifications Framework (AQF) in 2004, was envisaged as a qualification with the potential to meet new target group needs. Though a newcomer on the Australian tertiary stage, it has performed great service since the early 20th century in US and Canadian junior/community colleges, both as a transfer (pathway) and as an occupational degree in its own right.

RMIT introduced associate degrees for international students in 2005. Domestic students joined the program when Commonwealth Supported Places became available in 2007.
Associate degrees initially appealed to RMIT as a strategy to increase options for international students.

When the RMIT associate degree policy was revised and updated in 2007, the vocational orientation of the associate degree was given greater prominence alongside its potential as a professional pathway. The associate degree offered the opportunity to meet the growing demand for high level paraprofessional skills. This position on associate degrees as vocational was underlined by the decision that associate degrees would be delivered by RMIT vocational education and training (VET) teachers, with input from higher education academics to the design of pathways into related degree qualifications.

RMIT’s commitment to improved educational pathways, along with its commitment to industry, educational and community partnerships, stems from its foundations as The Melbourne Working Men’s College and its vision of the future as a global university of technology and design. Established in 1887, the Working Men’s College was ‘dedicated to useful knowledge’ (RMIT 2010a, p.3), offering young people and adult workers opportunities to gain employment skills and to pursue learning for their interest and career advancement. ‘Useful knowledge’ was defined broadly to include history, political economy, moral philosophy and art, and from the outset the College was to ‘promote general education and technical training’ (Murray-Smith 1987, p.20).

RMIT’s record as a provider of pathways from vocational into professional qualifications is not unblemished. Even in the recent past there has been some resistance within RMIT to closer integration between the sectors. Presently there is also some discomfort with the notion of the associate degree — a ‘higher education’ qualification, being in the hands of VET schools across RMIT. Nevertheless, as RMIT’s strategic plans demonstrate, there is a strong commitment from RMIT Council and executive management to the vision being played out through the strategic plan with its strong emphasis on integrated VET/higher education offerings and pathways. Indeed, as a scan of current undergraduate program guides shows, the original RMIT motto, *Perita manus, mens exculta* (a skilled hand, a civilised mind), lives on as the foundation for three and four year degree design: most particularly so in applied science, design and engineering degrees.

Equally, a range of innovative program initiatives across RMIT demonstrates the practical commitment of VET and higher education teachers to cross-sectoral cooperation. There are several dual awards comprising a degree in combination with a nationally recognised VET award. For example:

- Bachelor of Applied Science (Construction Management) and Diploma of Building;
- Bachelor of Applied Science (Project Management) and Diploma of Building;

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1 The scene was set for a seamless integration of the sectors over a decade ago as the then Pro-Vice Chancellor (Learning and Teaching) explained: ‘Rather than attempt to specify differences [between vocational vs general programs], RMIT used the Australian Qualifications Framework to allocate responsibility for program management and delivery. TAFE/VET program teams were responsible for learning outcomes from AQF levels one to six; and higher education teams for learning outcomes at AQF levels six to eight (Praetz 1999, p.3 in Wheelahan 2000 p. 29)

2 RMIT’s commitment to connecting with the communities in which it is located is demonstrated by a range of programs conducted in partnership with schools, local councils, and industry associations, for example in Melbourne’s north where RMIT maintains formal partnership arrangements with the City of Whittlesea, Local Learning and Employment Networks and secondary schools based on work undertaken between 1988 and 1992 by Phillip Institute — see Appendix Three for further details.

• Bachelor of Applied Science (Environmental Science) and Certificate IV in Occupational Health and Safety;

• Bachelor of Arts (Criminal Justice) and Certificate IV in Alcohol and Other Drugs;

• Bachelor of Applied Science (Laboratory Medicine), Bachelor of Applied Science (Pharmaceutical Science), and Bachelor of Environmental Science with Certificate IV in Frontline Management.

RMIT also offers skills electives to undergraduate students for a range of occupational applications including: Construction Skills; Alcohol & Other Drugs counselling; Point of Care Patient Testing; Business Skills for Creative Industries; Occupational Health & Safety Units; and Training & Assessment. Based on the success of these skill electives as a platform for linking theoretical learning with its practical applications, degree electives are being introduced into diploma and advanced diploma qualifications.

The associate degree now joins these cross-sectoral offerings as an integrated tertiary qualification: combining vocational knowledge and skill with the foundations of disciplinary knowledge.

1.2 Planning

The general objective of this ALTC Teaching Fellowship was to contribute to improved student access to a range of post-school pathways through closer integration between tertiary educational sectors. The particular focus of investigation was on the associate degree, an AQF level six paraprofessional qualification offering new career options and pathways for school leavers; and on its potential to facilitate a closer degree of conceptual integration between VET and higher education.

Turning the concept of ‘pathways’ and its tools and strategies (including credit transfer, articulation, recognition of prior learning), into sustainable educational practice has proved to be a challenge for at least the past twenty years. Despite considerable policy attention and many pilot projects during this time, the structural and cultural gap between VET and higher education remains more or less in place. The number of TAFE to university articulation arrangements has certainly increased, and many universities clearly specify the level of credit offered for specific programs on their websites. However, such arrangements vary from one institution to another and potential students face a complex array of options. The National Centre for Vocational Education Research (NCVER) recently concluded that ‘credit transfer arrangements are hampered by layers of bureaucracy, and often rely on individuals rather than systems’ and that the persistent gap in the sectors’ understanding of each other’s learning and teaching approaches continues to limit the effectiveness of credit transfer and articulation arrangements.\(^4\)

With increasing school retention rates the wider range of educational experiences and aspirations represented in year 12 graduates has made the relationship between school and university more problematic. The reliance on the Australian Tertiary Admissions Rank (ATAR) to rank applicants for admission to tertiary courses either excludes graduates of non-ATAR year 11 and 12 programs (for example, the Victorian Certificate of Applied Learning) from applying for a tertiary place, or relegates them to a special entry category. Universities refer to ‘unprepared’ or ‘under-prepared’ first year students. This reference may be to students who have not completed, say, the necessary level of maths to tackle first year

engineering; however, it tends also to be a gloss on an educational and cultural gap between the university and new student cohorts. Research data shows that year 12 students (and their parents) in all SES categories aspire to university (Beavis 2004; 2006), and many will achieve the required ATAR rank. However, there are many who nevertheless struggle to relate to academic pedagogies and expectations.

Considering these problematic aspects of the school to tertiary transition, there are several features of the associate degree which make it a potential lever for change. The associate degree nomenclature aligns it with higher education while it sits at the same AQF level as a vocational qualification. It can offer vocational outcomes and further study pathways, and be offered by VET and/or higher education providers. Its structural position and designation within the AQF make the associate degree a natural bridge between vocational and academic learning. Hence my interest in two questions:

- Could the associate degree help to bring about a better alignment between vocational and academic curriculum and pedagogy, and, in doing so, facilitate smoother VET/higher education pathways?
- Could associate degrees offer young people who learn best through practice, access to occupations requiring a combination of technical and conceptual skills?

The proposed program was based on an investigation into these two questions which would lead to: trialing of new pedagogical approaches; developing information for careers teachers and students; and developing resources to support associate degree teachers to design and implement ‘associate degree pedagogies’. The program would involve engagement with a broad cross section of stakeholders including: secondary students; careers teachers; associate degree students; associate degree teachers and program managers; and learning and teaching leaders in VET and higher education at RMIT and other relevant tertiary institutions. The extract below from the Fellowship proposal summarises the planned activities and outcomes.

**ACTIVITIES**

1. Investigation of how vocational and academic curriculum components are configured and delivered in current associate degrees;
2. Review of current RMIT information for prospective students and collection of data from selected secondary colleges on senior secondary student conceptions of associate degrees;
3. Survey of associate degree student learning preferences and vocational aspirations;
4. Design and incorporation of an integrated tertiary pedagogy encompassing vocational/applied and academic/theoretical learning into selected RMIT associate degrees;
5. Promotion of project outcomes and recommendations to stakeholders.

**OUTCOMES**

1. Data on current associate degree curriculum and pedagogy in the context of student preferences and aspirations which can inform associate degree design and delivery;
2. Dissemination of information and strategies to support improved curriculum development and the introduction of new pedagogies;
3. Data to support the development of links with secondary schools and improved information for teachers, senior secondary students and parents;
4. Guidelines on implementing a tertiary pedagogy;
1.3 Implementation

There are three broad understandings to take on board when embarking on organisational change: first, that every organisation is different; second, that change can only proceed on the basis of a shared understanding about the nature of the problem; and third, that there will always unforeseen details to be accounted for.

The particularity of organisational context

Planned change is a perennial challenge at RMIT University. Not only is it a large and complex entity, it has also grown by accretion for much of its history. New regulations, policies and practices have been layered over old, so that the old goes on, alongside the new. More than other large universities, RMIT operates in a space of manifold complexity, juggling educational offerings from AQF Certificate I to PhD under integrated governance arrangements. VET programs which are primarily state-regulated and funded, and Commonwealth funded higher education programs⁵ with their different stakeholder expectations and regulatory requirements, are governed and managed within a single structure. All imaginable technical and cultural difficulties are crowded into each policy and operational decision. Expectations from near and distant pasts rise to the surface with the least provocation.

RMIT was not always an ‘integrated’ structure. Nor indeed has it always known itself as an institution made up of two ‘sectors’ labeled ‘VET’ and ‘higher education’: names which have quite recently morphed from ‘the tech’ and ‘the institute’ to ‘the TAFE’ and ‘the university’. Having come into existence as the Working Men’s College in 1887 and travelled through periods as a technical college and an institute of technology before becoming a university in 1992, RMIT has suffered along the way from what Stephen Murray-Smith named as a ‘weakness of corporate identity’ (Murray-Smith 1987, p. 453). There were several attempts to slough off the RMIT technical ‘division’, including the adoption of a policy of complete separation in 1970. Then after the institute of technology became a university in 1992, a strategy of ‘seamless’ cross-sectoral governance and management saw TAFE submerged in, rather than integrated with, higher education as RMIT attempted to become a different kind of university. Murray-Smith locates this longstanding identity crisis in a complex of historical and cultural uncertainties, maintaining that RMIT:

[has] suffered throughout its history because society at large and successive governments have not been able to make clear their expectations for it. The University of Melbourne has enjoyed a role and status within the society of Victoria which, while often non-explicit, has nevertheless represented the pinnacle of academic achievement within that society. Technical institutions meanwhile have occupied a twilight world of trade, technology, apprenticeship and quasi-scientific mysteries largely unappreciated by a society permeated with other values. Often aims and objectives were foisted on the institute which were unrealistic, while its real achievements, appropriate to the needs of the times, were disregarded. Given the deep penetration of anti-technological assumptions within Australian

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⁵ As this report is being written, government regulatory arrangements for VET are changing with the state agreeing to Commonwealth regulation through ASQA – and in the case of Victoria and WA, the enactment of mirror state legislation.
society, these contradictions are likely to remain, despite the increasingly sophisticated efforts to forestall them (ibid).

In 2005 RMIT started on a new journey ‘to build a future from its foundations’ (RMIT 2010a, p. 3). It is slowly and surely shaping programs and structures around its identity as a global university of technology and design badged as a tertiary rather than dual sector institution.

My Fellowship program sits at the intersection of this evolving identity. In blithely sallying forth to ‘improve tertiary pathways through cross-sectoral integration of curriculum and pedagogy in associate degrees’ (as my Fellowship program was named), I stepped into the middle of a challenging change agenda in a most particular organisation. Nothing at RMIT is any less complex or more predictable than it has ever been; and change agendas still sink or swim on their adaptability, and their capacity to persuade, build alliances and take advantage of opportunities as they arise.

**Establishing a shared understanding**

The potential strategies to improve tertiary pathways documented in my Fellowship proposal were mine, and not necessarily owned by the stakeholder groups through whom the agenda would be enacted. Reaching some level of shared understanding about the way forward required an extensive period of dialogue. In this process, as stakeholders engaged with its potential, the Fellowship took on a life of its own and the agenda started to change. My first presentation on the proposed program, to learning and teaching leaders at RMIT, led to an extension of the scope of stakeholder engagement to include employers and industry associations, with the aim of exploring their perceptions of associate degrees in relation to changing skill requirements. It was clear that this excursion would eat into the time available for developing and trialing new pedagogies. However, it was also clear that new pedagogies needed to be informed by an understanding of industry stakeholder needs and perceptions.

At the same time I was obliged to acknowledge what I had dimly foreseen, and put to one side at the time of drafting the proposal: that implementing new pedagogical practices within the scope of the Fellowship over 12 months was not possible. Nevertheless the agenda had to be set with this large and longer term goal in frame, and so it remained, with timelines and possible implementation strategies being adjusted as the program unfolded. My initial contact with associate degree coordinators revealed a shared preoccupation with building their teams and negotiating for resources to support new programs or expand numbers in 2011 and 2012. Everything was (indeed still is) very new in the associate degree space at RMIT. Of the current associate degrees at RMIT, the first four were introduced in 2008. The next three, first offered in 2010, graduated their first cohort at the end of 2011. Two programs had their first intake in 2011 and three more in 2012. As my Fellowship started in June 2010, some program teams were developing proposals for new programs, designing curricula for programs approved for delivery in 2012 and 2013, or producing resources for programs due for introduction in 2011. Others were taking stock of their first graduate feedback. The four engineering associate degrees had just had their provisional accreditation with Engineers Australia reviewed (and confirmed) and their coordinators’ preference was to delay any further unpacking of their curriculum structures and teaching practices.
In this busy context, pedagogy was not regarded as a major issue – or perhaps more correctly, the most pressing issues facing associate degree program teams were not regarded as amenable to pedagogical interventions, particularly of the kind that would involve the complexities of getting higher education and VET teachers involved in joint professional learning (as my Fellowship program proposed). As a consequence I focused on setting the scene for later pedagogical work. I built alliances with key stakeholders, organised and/or presented at workshops, forums and seminars to promote the concept of an integrated tertiary pedagogy and its implementation in associate degrees, and negotiated for the continuation of the change agenda beyond the timeframe of the Fellowship.

The devil in the detail

The third reality of organisational change is that while it can look quite simple from a distance, its assumed parameters start to fray in the face of the detail to be accounted for. As the program got underway and I reviewed the literature, I was struck by the scant published history of the associate degree, and by how little there was by way of practice standards to guide Australian tertiary providers in designing associate degree programs. I also realised that, interestingly, there was no national policy imperative for including the associate degree in the AQF. Unlike the United Kingdom, where the foundation degree was introduced as a consequence of a higher education review, and accompanied by a flurry of discussion and policy papers, the Australian associate degree slid quietly into the AQF in 2004. There was no national enquiry, just a set of recommendations based on options canvassed in an AQF commissioned discussion paper (Allen & Gientzotis 2003). The Associate Degree Guideline in the fourth edition of the AQF Implementation Handbook (2007) was quite properly no more or no less comprehensive than that for other qualifications. However, other forms of support and advice might be expected for a new qualification which did not, and still does not yet, possess a shared cultural and pedagogical history to underpin its design. A scan of Australian tertiary institution websites showed a growing number and diversity of specialist programs offered by universities, TAFE institutes and private Registered Training Organisations (RTOs) which have gone about devising their own programs in relative isolation from each other. Because there is no readily available collated information about, or analyses of, these current offerings and the models developed by different providers, it seemed to me that the Australian associate degree needed to be accounted for and its history told.

I was also drawn back into what my Fellowship evaluator would later name as ‘the dispiriting history’ of Australian tertiary education policy since 1988: a period in which we have tried and apparently failed to resolve the educational relations between vocational institutions and universities satisfactorily. 

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6 A selection of these presentations tracing the conceptual development of an integrated pedagogy has been compiled as an adjunct to this report and is available as a separate document.

7 These included two White Papers which heralded the foundation degree as a strategy for extending higher education participation and building the UK’s competitive position in a global labour market – see appendix 2 for details.

8 There are of course notable exceptions, including regional universities such as Charles Sturt which have longstanding productive partnerships with TAFE institutes, and nationally the Australian Catholic University which features credit arrangements for TAFE students (http://www.acu.edu.au/information_for/pathways_and_tafe_students). More recently, following the Commonwealth Government’s adoption of major Bradley Report recommendations, major metropolitan
students could readily move back and forth between the sectors, constructing programs which meet their needs (and those of their employers) rather than the dictates of regulatory and administrative structures. I ‘knew’ of this failure but had forgotten just how profound it was; and had also forgotten that others had forgotten as well — or not even known. And then there are the successful partnerships, programs and curriculum innovations which flourished under special funding and faded away when the funding ceased, and which now lie buried in the archives. We will simply keep repeating ourselves unless we acknowledge these past efforts and understand that we have another chance to get it right courtesy of the Bradley findings adopted by the Commonwealth. So here was another history to be told.

**Fellowship program activities**

As I encountered the realities of change and took account of the broader context, my Fellowship program took a loosely bound new shape which has been momentarily tidied up in the form of this report, and from which it will no doubt spill as a new stage in the associate degree agenda gets underway in 2012.

At a practical level the original plan, devised in 2010, was to undertake the Fellowship program in a series of ‘block release’ periods of time ranging from one to four weeks across the year for a total of 13 weeks. I ended up spreading the program across an eighteen month period which enabled me to fit in with stakeholder time constraints, accommodate other work commitments and take advantage of opportunities as they arose – for example, engaging with program teams working on the development of new programs and consulting with other associate degree providers.

The work undertaken between July 2010 and December 2011 has been classified under four headings: research; stakeholder consultation; development; and dissemination and communication. A summary of each is provided in Figure 1 on page 20. Broadly speaking this work had resulted in three evolving processes: a dialogue about new forms of tertiary learning; emerging relationships across RMIT and with other Victorian associate degree providers around the new ‘tertiary space’; and an agreed agenda for further work on developing associate degrees at RMIT.

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universities have started to establish intersectoral partnerships; however, until 2009-10 successful cross-sectoral relations stood out as exceptions.
### Fellowship program outcomes

Five sets of outcomes of the Fellowship are represented in Figure 2 on page 21. These outcomes have been facilitated largely by three stakeholder groups with whom the Fellowship program has been implemented.

(a) Schools, industry organisations and employers

The focus for these consultations was Melbourne’s north – including Bundoora, Epping and Whittlesea areas with which RMIT has maintained associations since the early 1990s. Contact with stakeholder groups was facilitated by the RMIT Northern Partnerships Unit (NPU) which ‘brokers learning and research opportunities through school, industry and community partnerships’\(^9\). The Unit’s focus is on youth transition, career education and the

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9 [http://www.rmit.edu.au/browse;ID=3n5e5mlfopfw1](http://www.rmit.edu.au/browse;ID=3n5e5mlfopfw1)
development of learning communities in Melbourne’s north, and its strong stakeholder links were of significant benefit to the Fellowship. Indeed, without the involvement of the NPU, it would not have been possible in the time available to collect data from secondary teachers, students and employers on their perceptions of associate degrees, and advice on how to promote the qualification to these groups. I return to the theme of stakeholder engagement in chapter six, using the Northern Partnerships Unit as an example of the approaches taken by tertiary providers to support successful school-tertiary-work transitions.

Figure 2 ALTC Teaching Fellowship: outcomes, December 2011

(b) VET learning and teaching leaders and program teams

The development and delivery of associate degrees at RMIT is undertaken by vocational teachers who are supported by two Deputy Directors TAFE and relevant Heads of School. In 2010, RMIT moved to increase its associate degree provision based on the success of the existing associate degrees, and evidence from industry of growing demand for paraprofessional skills in a broad range of industry and occupational areas. During 2011, five RMIT schools were engaged in developing a total of ten new associate degrees. Discussions underway in Health and Community Services are aimed at producing a suite of programs for these industries for delivery in 2014.

As the level of activity increased and I started to discuss my program with VET leaders, associate degree matters were included on the agenda of regular VET executive meetings and discussions across teams and schools led to a strategic dialogue about the role of the program at RMIT and to questions of curriculum and pedagogy. The Deputy Director responsible for leadership of three schools delivering and developing new associate degrees proposed the establishment of a network comprising relevant Heads of School and learning and teaching leaders. Our joint proposal received support from the RMIT Learning and Teaching Investment Fund (LTIF) to address the following matters:

- Gaining and maintaining industry support for and recognition of associate degrees;
- Identifying domestic and onshore/offshore international market opportunities for associate degrees;
- The development of a common narrative to describe the RMIT associate degree model;
- Integrating competency based and other modes of criterion referenced assessment;
- Agreed approaches to associate degree curriculum development and articulation;
- Clearly expressed outcomes for associate degrees aligned to the new AQF descriptors; and
- Moderation of Program Guides to ensure consistency of messages about RMIT associate degrees (Leavold & Smith 2011, p. 2).

The network has met regularly since receiving seed funding in April 2011 and has led a number of initiatives including the development of a common associate degree narrative, negotiations with RMIT Marketing regarding a promotional campaign, two university-wide forums (August 2011 and 2012) and an ongoing network wide dialogue on curriculum design and assessment. By the second half of 2011, as the period of Fellowship funding was drawing to a close, there was an active associate degree discourse across RMIT and a consensus about the need for a coordinated approach to the design of an associate degree pedagogy.

(c) RMIT academic leadership

The third stakeholder group comprises the Deputy Vice-Chancellor Academic (DVCA), the Dean Teaching and Learning, and the Director TAFE. The DVCA was the sponsor of my Fellowship, and also enabled me to spend some time during second semester 2011 doing additional development work and writing this report. The Dean Teaching and Learning is responsible for implementing the new AQF and for university procedures to address teaching and learning standards and TEQSA requirements. The Director TAFE is responsible for quality and compliance for RMIT VET programs, and while associate degrees are accredited under the RMIT higher education accreditation procedure, they are delivered by VET teachers and are pivotal to redefining ‘vocational’ and ‘professional’ learning as RMIT moves into the new ‘tertiary’ environment.

Not all of the planned outcomes were achieved within the designated Fellowship period. However, the groundwork necessary to realise the original Fellowship goal of contributing to improvements in tertiary access and cross-sectoral pathways has been done. The RMIT Associate Degree Network and the additional work made possible through RMIT funding during 2012 will contribute to the further development of associate degrees as effective paraprofessional and pathway qualifications. The Network has created a new discourse about curriculum and pedagogy and taken on a leadership position for associate degrees at RMIT. Its members are energetically committed to pursuing new pedagogical horizons. A start has also been made on connecting with other associate degree providers: in particular with the other Victorian dual-sector universities (Ballarat, Swinburne and Victoria universities), and with Deakin University and two of its partners (Chisholm and Advance Institutes of TAFE). Representatives of all four universities have indicated their interest in continued dialogue as associate degree providers, and in joint action, such as a state wide associate degree information campaign.
The work continues: improving tertiary pathways beyond the period of the Fellowship

The DVCA, the Dean Learning and Teaching and the Director TAFE established a twelve-month position during 2012 which enabled the work started through the ALTC Fellowship to continue. One half of my position was located in the Office of the Director TAFE and included provision of time to support Associate Degree network activities and associate degree program teams. The other half was in the Office of the DVCA where I worked with the Dean Teaching and Learning on two initiatives: first, the design of an integrated tertiary approach to curriculum and pedagogy for application in associate degrees; and second, assisting schools to align associate degree architecture and curriculum with AQF and TEQSA requirements. In the second half of 2012 I took on the task of facilitating an information and marketing strategy. The work to develop a coordinated approach to associate degree design continues in consultation with associate degree leaders and teachers; and the Network is just entering its third year with a sustained university-wide membership. In 2013, support from the RMIT Office of the Director TAFE is enabling the collection of data on current associate degree students and the tracking of patterns of retention and attrition, and graduate articulation to further study and entry into the workforce.
Chapter 2 Discovering associate degrees

The first discovery I made about associate degrees was how little was known about the qualification amongst the general public and key stakeholder groups in Australia. A 2007 study of higher level VET qualifications commented that ‘the associate degree is, at this stage, relatively unknown. Neither students in the focus groups nor employers in the interviews had heard of the associate degree’ (Foster et al 2007, p. 29). My own investigations led me to echo just those words. Surveys of employers and senior secondary students revealed little more that guesses about what an associate degree might be (‘something to do with a bachelor/undergraduate degree?’). In Australian academic circles the associate degree is for the most part vaguely known as a two year higher education qualification introduced into the AQF in 2004. However, it is not a subject that has yet excited widespread Australian research interest.\(^{10}\)

A search of the international literature turned up evaluations of the associate degree’s effectiveness as a pathway and its international standing, and feasibility studies related to changing occupational skill needs.\(^{11}\) In depth academic studies are limited. In the US where the associate degree has been offered since the early 1900s, research on higher education is dominated by studies of baccalaureate and graduate degrees (Grubb, 1993). There is a Texas Tech University Doctor of Education thesis (Coronado 1996) which analyses employer knowledge of and attitudes to the qualification, and also provides a well referenced history of the associate degree in the United States. However, such a focus is relatively rare and the majority of research has focused on the pathways role of associate degrees. A recent series of reports from the University of Illinois point to a shift in interest towards the role of associate degrees in vocational preparation and an associated growth in applied baccalaureate (AB) degrees which offer credit for graduates of technical (and previously non-pathway) associate degrees (Bragg et al 2011). A related study of pathways in science, technology, engineering and mathematics (Makela et al 2012) shows that here is growing awareness in many US states of the value of applied associate degree programs in addressing paraprofessional skill levels, in addition to the traditional transfer (pathways) qualifications they have represented since the 1950s (Makela 2012, p. 10).

The UK short-cycle higher education program, the foundation degree, was introduced in 2003. This is based on a somewhat different model to the US associate degree, the prevalent model of which focuses on general education in preparation for a four year degree. The UK foundation degree aimed to produce work-ready graduates to meet national skill shortages and involved employers in both program design and delivery (Gabb & Glaisher 2006, p. 6)\(^{12}\). Demand for this vocationally focused two year program doubled between 2003 and 2006 to 46,000 students and has risen steadily since then to a 2010 total of 100,000 (HEFCE 2010, p. 9). However, despite the aim to meet skill shortages, national

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10 Investigations into tertiary pathways sponsored by the National Centre for Vocational Education Research (NCVER), the Australian Learning and Teaching Council (ALTC), the Australian National Engineering Taskforce (ANET), and Innovation and Business Skills Australia (IBSA). Reports from these projects are included in the reference list.

11 See for example the tertiary education data base VOCEDplus (http://www.voced.edu.au/) for listings of publications incorporating findings from US, UK, European and Australian studies. There are relatively few focussed primarily on associate degrees. The majority is broader studies incorporating reference to associate degrees as a pathways offering.

12 Gabb & Gleisher also point out that in contrast to the US, work-based learning and flexible learning are common in the UK foundation degree, and that while the UK equivalent of community colleges may deliver foundation degrees, they are awarded only by universities (Gabb & Gleisher 2006, p. 6).
and regional analyses of UK policy and practice have found that the foundation degree was working more effectively as a pathway than as a paraprofessional entry qualification (Dodgson & Whitham 2005; Beaney 2006; Greenbank 2010).

While there are several European studies of the broad conceptual and practical dimensions of qualifications frameworks, there is little comment on the associate degree in particular — I found just one substantial paper on the associate degree’s inclusion in The Netherlands Qualification Framework (NLQF). Asia presents a similarly sparse picture. A Hong Kong review of higher education (Hong Kong University Grants Committee 2010) revealed that the associate degree occupied an uncertain and contested space in that higher education sector, and other jurisdictions seem to be maintaining a watching brief and perhaps offering the qualification through international partnerships.

In this chapter, I focus on the history of the associate degree in Australia. This is a selective rather than a comprehensive history, providing a backdrop to the introduction of associate degrees in universities, other higher education providers, TAFE institutes and other Registered Training Organisations (RTOs). However, it is a start. Accompanied by the sources included in the further reading list, it may facilitate more in-depth studies.

2.1 Emergence of the associate degree in Australia

The associate degree made its first appearance in the Australian tertiary sector in the 1990s as universities and TAFE institutes faced both increased demand for places and policy imperatives for improvements in articulation into higher education qualifications. The early 1990s were a time of structural innovation in education and industry. Universities were reforming within the policy provisions of the Unified National System (introduced in 1988) and experimenting with credit transfer arrangements, supported by Commonwealth government grants. Australian industry was coming to the end of a period of major structural reform. With support from the Hawke Government’s Structural Adjustment Fund, unions and employer associations had agreed on major changes to industry award structures. In the Metals and Engineering industries this meant a completely new award structure that had 360 job classifications and 1800 wage rates ‘broadbanded’ and restructured around fourteen broadly defined occupational groups (MTIA 1990, p. 6). This new award structure was a significant factor in a number of reforms in engineering education and training. Arguably it was a significant factor in Engineers Australia (then Institution of Engineers, Australia – IEAUST) introducing a membership structure which reflected articulation between the position of engineering associate and professional engineer in place of the previous strict separation of the profession from what were regarded as trade-based occupations. In 1989, a group of professional engineers headed by Brian Lloyd (who was to become President of IEAust in 1993) published New Pathways in Engineering Education (Lloyd et al 1989). They proposed an articulated educational structure targeted at members of the metals and engineering workforce and proposed the

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13 Appendix 2 provides an overview of associate degrees in the US, Canada, UK, The Netherlands and Hong Kong.

14 The Hawke Labor Government came into power in 1983 on the back of the previous government’s failure to resolve the state of economic stagflation – the hitherto unlikely combination of high inflation and unemployment – stemming from global economic changes. Hawke promised to address stagflation through the ALP industrial relations policy based on an agreement with the ACTU – The Accord – in which industrial peace and wage stability were traded for tax cuts and government intervention to maintain stable price/income ratios (Ewer et al. 1991).
new categories of engineering technologist and engineering associate\textsuperscript{15}. At the same time Victoria College (now Deakin University) initiated a three year qualification pathway leading to the Bachelor of Applied Science (Technology Management) – see pages 46-47 for further details.

The relationship of these policy and program initiatives to the emergence of associate degrees in the early 1990s was certainly indirect, but nevertheless significant (and possibly more significant in the later acceptance of associate degrees by Engineers Australia). Labour market reforms demonstrated the possibility of new approaches to entry level training. And the notion of articulation in occupational structures was carried by Laurie Carmichael from the articulated Metals and Engineering Award Structure into the National Board of Employment Education and Training (NBEET), via his role as chair of NBEET’s Employment and Skills Formation Council (ESFC) which championed credit transfer initiatives between 1989 and 1996. Key to the moves to introduce associate degrees is the concept of bridging different educational forms. As Elliott argues in his evaluation of the Swinburne pilot associate degree initiative, ‘it is this notion of linking vocational and general education which underscored the development of the model of the Associate Degree at Swinburne’ (Elliott 1997, p. 199).

2.1.1 The Associate Degree in Social Science: a 1990s pilot

The Swinburne Associate Degree in Social Science (ADSS) was probably the first Australian experiment\textsuperscript{16} into the options for a two year qualification designed to have both vocational and further study outcomes. The proposal for the ADSS arose in 1992 from the Swinburne TAFE/Higher Education Pathways Project. Swinburne was awarded Commonwealth funding through the Department of Employment Education and Training (DEET) for a pilot program which commenced in July 1993 with 37 students located at partner secondary colleges – two in Melbourne and one in central Australia\textsuperscript{17}. The Government objectives were for a program which would:

... meet the vocational needs of these young people by giving them the necessary background, knowledge and skills to allow them to work in a range of administrative and service occupations, and establish a model which may be implemented by other institutions to meet the needs of school leavers (Baldwin 1993 in Elliott 1997, p. 44).

Swinburne chose the title of ‘associate degree’ because the nomenclature had ‘international currency and recognition being the standard title for precisely the type of qualification proposed’ (extract from funding proposal cited in Elliott 1997, p. 45). The links to future employment options was quite direct. As Elliott reports, Swinburne was encouraged to develop a course which drew on the findings of a paper published by the Public Service Commission in 1992 which developed the concept of ‘core competencies’ for public service occupations. The competencies for ‘Administrative Services Officers 5-6’ were regarded by

\textsuperscript{15} Lloyd’s motivation was to preserve the integrity of the engineering profession. He later writes about the time as one in which IEAust ‘took control of the occupational and educational criteria for the three-tiered engineering work force of professional engineers, engineering technologists and engineering associates, later appropriately identified as the Engineering Team’ (Lloyd 2008, p. 4).

\textsuperscript{16} In 1993, three universities (Swinburne, Bond and Curtin) were offering associate degrees. Swinburne’s program is the only one for which there is a public record, and the only one which received specific Commonwealth support.

\textsuperscript{17} Monash University also received Commonwealth funding of $1.4m as part of this initiative to ‘develop support schemes for year 12 leavers who wished to access higher education or TAFE units through open learning’ (Elliott 1997, p. 3)
DEET as a potential curriculum framework for the associate degree (Elliott 1997, p. 37). These and other Public Service Commission senior officer classifications were regarded as the basis on which the Swinburne Development Team would ‘draw upon a range of training elements and relate these to the academic disciplines of the social sciences’ (ibid).

A total of 147 students enrolled in the Swinburne ADSS between 1993 and 1995. Seven of the 1993 intake, and 45 of the 1994 intake, completed the course. Seventeen graduates went on to further studies at Swinburne and a small number obtained fulltime jobs as ‘a direct result of the ADSS’ (Elliott 1997, p. 99). Student responses to the program were mixed. General satisfaction with its overall structure in relation to vocational outcomes was underscored by a desire for more practical experience rather than ‘what was seen as a largely theoretical emphasis’ (ibid). Students responded positively to the course as a two-year tertiary qualification and also reported that inclusion of ‘degree’ in the title was a positive incentive. There was a general consensus amongst students that the secondary school based delivery did not work: facilities were inadequate to the demands of the course, in particular for library resources. The negative responses to the poorly resourced secondary school based delivery were no doubt fueled by the fact that students were paying a fee of $2400 for the course. The Commonwealth grant of $1million over two years was solely for set-up costs, with no provision made for recurrent funding for student places.

The lack of recurrent funding saw the rapid demise of the ADSS and its redesign as a VET diploma which would attract state funding through the Swinburne TAFE Division. The development of what became the Diploma of Administration and Services (General Studies) was also regarded as a curriculum capable of delivering on the findings of the 1995 Karpin report on the need for reform in management education. The University argued that ‘using generic competencies as its core elements [the diploma saw] the continuation of the innovative curriculum framework of the Associate Degree in Social Sciences from which it is derived’ (Elliott 1997, p. 130).

2.1.2 Policy positions on the associate degree

By 1996, when the Swinburne pilot program was drawing to a close, there were eight other universities offering associate degrees: Bond; Curtin; Deakin; Edith Cowan; Queensland University of Technology; Southern Cross; and Western Sydney. Elliot (1997, p. 30) reports that RMIT University, Victoria University, University of Southern Queensland and the University of Sydney were considering their introduction. Enrolments remained small with just 2124 EFTSU across Australia by 2001 (Allen & Gientzotis 2003, p. 7) and little indication of widespread support for growth in provision. Indeed there was some opposition to associate degrees, including from the TAFE sector, on the grounds that associate degrees would further entrench the university monopoly on post-secondary education (The Australian Higher Education Supplement 26.10.95, cited in Elliott 1997, p. 28). NBEET also expressed concern about the possible impact of associate degrees on existing vocational programs and on the TAFE ‘industry-driven mandate’:

As a means of increasing diversity in post-compulsory education, the possibility of developing associate degrees such as that currently being tested by Swinburne University of Technology was canvassed. This

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18 Subsequent reports show that the University of Southern Queensland was offering associate degrees by 2002 and Victoria University was in the process of introducing associate degrees in 2006. RMIT commenced delivery to international students in 2005. The University of Sydney has not moved in this direction. Swinburne ceased delivery in 1996, recommencing in 2007.
received some support, although concern was expressed about the possible effect on associate diplomas, and whether associate degrees would divert TAFE from its industry-driven mandate (NBEET 1993, p. 3).

The Commonwealth government itself was muted in its pronouncements, at the time appearing more concerned about maintaining a clear boundary between TAFE and university offerings (albeit supporting student articulation). The 1998 Senate Inquiry into TAFE reported that the ‘two year associate degrees which are offered by some universities will not be recognised within the AQF’ (Commonwealth of Australia 1998, p. 64). The Senate Committee went on to report on proposals for TAFE to offer vocational degrees which it opposed on the grounds that it was better to improve articulation than to introduce new qualifications. The Commonwealth review of higher education four years later was similarly muted, noting a continued debate about the use of the term ‘associate degree’ and an area of ‘obvious overlap’ between the associate degree and the diploma:

As the interface between higher education and VET has grown so has the debate about which sector should offer what qualifications. This has been fuelled in recent years with decisions by several State governments to allow TAFE institutes to offer some degree level courses and the decision by some universities to offer associate degrees and VET qualifications (Commonwealth of Australia 2002, p. 31)19.

The Australian Vice Chancellors’ Committee (AVCC) decided in 1996 not to endorse the inclusion of the associate degree in the AQF ‘at this stage’. Nevertheless, the AVCC maintained that ‘universities should continue to offer associate degrees, and if they wish, introduce new associate degrees as they are entitled to do under their legislation’ (AVCC memo 20 March 1996, appendix 13 to Elliott 1997).

With little more than mild support between 1993 and 2003, when the AQF Advisory Board commissioned a discussion paper on options in relation to the AQF, the associate degree motored along in its host institutions, exhibiting the variation of form and focus that would be expected from a decentralised implementation. Some associate degrees were re-badged diplomas or associate diplomas; others were simply the first two years of a related undergraduate degree (Elliott 1997, p. 30; Wheelahan 2000, p. 29). However, during this ten year pre-AQF period, a broad consensus about the associate degree’s key features and roles emerged, together with some evidence of divided opinions. Three main sets of institutions contributed to this outcome: the AVCC in its negotiations with member universities and the Commonwealth Government; state governments via policy decisions; and universities offering associate degrees, in particular Victoria’s dual sector institutions.

19 The review report also cites from a quite prescient submission which argued that: ‘... a significant element of structural diversity could be introduced into Australian higher education by changing Australian qualification framework levels 5 and 6 [diploma and advanced diploma] from a site of duplication, overlap and competition between sectors and governments to a site of shared qualifications, responsibility and financing between the sectors and levels of government (Moodie, submission 185, p.4 in Commonwealth of Australia 2002: 33)
**Articulation arrangements**

From the outset, like its US and Canadian counterparts, the Australian associate degree was regarded as a transfer or pathways qualification. The Swinburne ADSS aimed to strengthen pathways into university as well as articulation into degree programs. As Minister Baldwin explained in launching the project, it would ‘take pressure off year 12 school leavers to repeat studies and provide them with guaranteed credit transfer opportunities into degree programs’ (cited in Elliott 1997, p. 3).

Victoria University endorsed the introduction of associate degrees in its 1992 Pathways Project Proposal. In the same year, the Vice Chancellor of RMIT University, Professor David Beanland, proposed ‘a comprehensive program of Associate Degrees’ to facilitate credit transfer between TAFE and Higher Education (Elliott 1997, p. 40).

In 1996 the AVCC, while not advocating for the inclusion of the associate degree in the AQF, did develop an associate degree guideline which described a qualification with a nominal duration of two years. The guideline contained the following statement under the heading ‘Distinguishing Features’:

> The qualification, by its nature, is linked or articulated to a relevant university degree, so that satisfactory completion of the associate degree would give a student the equivalent of two years advanced standing towards a degree of the university (AVCC March 1996, appendix 13 in Elliott 1997).

The Commonwealth Department of Employment Education and Training (DEET) proposed strengthening the statement as follows:

> There is clear and full articulation between an associate degree and a degree, with the associate degree course being made available only where it represents the first two years of a degree course in the same field of study (ibid).

The AVCC argued that the proposed DEET inclusion was too restrictive and would diminish the flexibility of universities, countering with the statement below which it recommended to its members:

> The qualification, by its nature, is linked or articulated to a university degree in the same broad field of study, so that satisfactory completion of the associate degree would give a student the equivalent of two years advanced standing towards a degree of the university in the same broad field of study as that covered by the associate degree (ibid).

By 2003 when the AQFAB Discussion Paper was released, the notion of a two year program offering 1:1 credit was quite widely established with seven associate degree providers ‘indicating they give near or full credit towards a degree in a related area’ (Allen & Gientzotis 2003, p. 9)

**Student outcomes and industry recognition**

As noted in the discussion of the Swinburne ADSS, the qualification aimed to meet the vocational needs of young people for work in administrative and service occupations. Two occupational streams were offered during the pilot: Administration and Management, and Human Services. The course overview refers to the core competencies identified by the Public Service Commission for administrative officer occupations. However, the curriculum outline did not include any specific reference to workplace conditions and skills needs, instead adopting broad descriptors – for example, the following Description for Communication Skills:
This subject explores the nature of communication theory and the ways in which people can develop and apply their abilities in the key areas associated with written, spoken and graphic forms and styles (Elliott 1997, p. 306).

The evaluation of the Swinburne pilot found that participants would have preferred more practical course content and Elliott’s comprehensive report only refers to a small number of graduates finding employment related to their associate degree studies.

The AVCC Descriptor is also quite general with the Learning Outcomes referring to: ‘The application of a significant range of fundamental principles and complex techniques across a wide and often unpredictable variety of contexts in relation to either varied or highly specific functions (AVCC 1996)’. However, there was no specific reference to employment applications.

Elsewhere there was clear endorsement of the associate degree’s vocational focus, for example from the RMIT Vice Chancellor:

> The course would have a strong theoretical basis, paralleling the content of the first two years of a bachelor degree, but would have sufficient vocational content to ensure that it is highly regarded by employers, and stands as a valuable exit qualification in its own right (Beanland, Nov 1992, cited in Elliott 1997, p. 40).

In 2003 the Victorian Government agreed that TAFE Institutes could deliver degrees and associate degrees in niche areas on a fee for service basis, with the provision that ‘these courses be strongly vocational in focus and show clear linkages to training package competencies with credit transfer between courses’ (Allen & Gientzotis 2003, p. 5). Data provided by seven universities offering associate degrees to the AQFAB Discussion Paper similarly indicated that programs were ‘vocational and usually designed to provide preparation for specific occupations or for the arts’ (Allen & Gientzotis 2003, p. 9).

**Sectoral differentiation**

In 1996 the AVCC was clear that the associate degree was the province of universities. The Associate Degree Descriptor’s statement on ‘Certification of the qualification’ refers only to universities, and the development of the associate degree descriptor was undertaken in part because it ‘might make it easier to defend associate degrees from attack from the VET Sector’ (AVCC 1996).

Victoria University proposed an associate degree model which would be offered in both TAFE and higher education divisions but with unequal credit outcomes. Graduates of associate degrees delivered in TAFE would be eligible for three semester’s credit, whereas higher education associate degree graduates could receive four semesters’ credit (Elliot 1997, p. 39).

The model proposed by RMIT was a single higher education qualification with a strong vocational focus which would be managed and delivered by TAFE:

> It is proposed that the Associate Degree be a course of educational standard equivalent to the first two years of a bachelor degree program. It would lead to a university award, with the university accrediting and monitoring the content and standard of the course. It would be taught in TAFE Colleges by TAFE staff, with the assistance and cooperation of higher education staff on an agreed partnership basis (Beanland, Nov 1992, cited in Elliott 1997, p. 40).

However the weight of opinion in universities was behind a higher education associate degree, and it was clear that universities in the main regarded TAFE qualifications as less likely to articulate smoothly with a degree program. For example, Victoria University’s
The logic underpinning these positions is that TAFE is, by its nature, so different from higher education that it cannot deliver outcomes to the same level as would a higher education institution delivering the same qualification. In Victoria University’s argument, a TAFE associate degree would be different from the higher education version of the same qualification because the TAFE version would contain less academic content, reflecting the vocational orientation of the sector. At the time the notion that sectoral location created differences in qualification outcomes was formalised in the Register of Tertiary Education (RATE) which located the associate diploma and diploma in both VET and higher education sectors (Rumsey 1991, p. 7). And when the AQF replaced RATE in 1995, diplomas and advanced diplomas (which replaced associate diplomas and diplomas in 1995) were similarly given a dual identity – see Table 1.

Table 1 Sectoral location of diplomas and advanced diplomas: AQF 1995

<table>
<thead>
<tr>
<th>Schools Sector</th>
<th>Vocational Education and Training Sector</th>
<th>Higher Education Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior Secondary Certificate of Education</td>
<td>Advanced Diploma</td>
<td>Doctoral Degree</td>
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<td>Diploma</td>
<td>Masters Degree</td>
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<td></td>
<td>Certificate IV</td>
<td>Graduate Diploma</td>
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<td></td>
<td>Certificate III</td>
<td>Graduate Certificate</td>
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<td></td>
<td>Certificate II</td>
<td>Bachelor Degree</td>
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<tr>
<td></td>
<td>Certificate I</td>
<td>Advanced Diploma</td>
</tr>
</tbody>
</table>

This sectoral allocation suggests that in fact the same qualification can be different, explained in the AQF Handbooks between 1995 and 2007 as a consequence of different authorising agencies:

In the vocational education and training sector, qualifications are based on nationally endorsed competency standards where they exist or on competency standards developed by relevant industry, enterprise, community or professional groups.

In the higher education sector, objectives and academic requirements of courses are set by higher education institutions having regard for requirements set by peer review and the requirements of relevant professional bodies and employer groups (AQFAB 2007, p. 37).

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20 Broadly speaking this argument is based on assumptions that sectoral purposes (vocational vs. academic) by definition create different and incommensurable qualifications and learning experiences. It is a view which places more significance on input factors and processes rather actual outcome standards. This issue is taken up further in chapter 5.

However, it is equally important to note that the sectoral designation of qualifications referred to their legislative and policy framework. It did not preclude sectors delivering qualifications designated as ‘belonging’ to another sector. As the 2002 AQF review discussion paper pointed out:

... the AQF does not refer to education and training delivery. A school may deliver a VET qualification; a university a vocational education and training outcome and a training provider registered under the Australian Quality Training Framework can seek approval and accreditation to deliver higher education qualifications. But to do so they would be quality assured under the legislative and policy framework of the sector with responsibility for accreditation (Allen and Gientzotis 2003, p. 3)

Further, in both RATE and the AQF, the characteristics of learning outcomes for each qualification in fact remained consistent across the sectors, with only the pathways options and authority for learning outcomes differing.

For those who work best under conditions of certainty and clarity of distinction, the notion that sameness and difference can co-exist within the same entity is a disconcerting proposition, particularly so for those who also regard the differences between vocational and higher education as qualitatively significant. Perhaps this is the source of the discomfort that some higher education academics experience at the notion of associate degrees and degrees delivered in TAFE. In other words, if quality is regarded as vested in institutional credentials rather than the specifications and standards determined by accrediting agencies, then there is a problem of trust when a qualification falls into hands outside that institutional frame. Addressing this issue of dislocated trust is of paramount importance if cross-sectoral linkages are to be viably embedded in our tertiary culture and is further explored in section 5.5.

2.2 The associate degree in the Australian Qualifications Framework

In 2003, the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) endorsed the Associate Degree as a new qualification in the Australian Qualifications Framework. It could be offered from 2004 onwards in the higher education sector in accordance with the MCEETYA National Protocols for Higher Education Approval Processes.

As outlined in the previous section, although several universities accredited and delivered the associate degree between 1992 and 2003, there was little support for its inclusion in the AQF. The prevailing argument was that diplomas and advanced diplomas, which could be accredited and awarded through either vocational education and training or higher education, served similar requirements and purposes to an associate degree. Additionally, in the period that the associate degree was being introduced in individual universities, the Australian Qualification Framework Advisory Board (AQFAB), precursor of the AQF Council, was fully occupied in the transfer of authority from the Australian Education Council Register of Australian Tertiary Education – RATE (1991-1994) and the development of a ‘comprehensive, nationally consistent yet flexible Framework for all qualifications in post-compulsory education and training’. Central to this post-compulsory framework was the development of a suite of nationally agreed and recognised statements of learning outcomes which accommodated the use of industry competency standards as the basis for skills recognition and certification, and which aligned qualifications to the Australian

22 This section of the report is based on a commissioned paper by Suzy McKenna of COMMET Consultants.
Standards Framework. The consideration of a new qualification for which there was no overwhelming support was low on AQFAB’s agenda.

Despite the absence of national recognition and Commonwealth funding for student places, the associate degree refused to die: it persisted in universities able to self-accredit, quality assure and charge fees to international students and industry clients. Having considered and rejected or deferred consideration of its inclusion in the AQF over several years, in 1997 MCEETYA agreed to further consider inclusion of the associate degree in the AQF, if it was demonstrated that it did not duplicate other qualifications and guidelines, and that it could be issued on a consistent basis.

Action was not immediate: the review did not get underway until 2002. It is not entirely clear what led to the 1997 decision, nor what caused the delay, nor what eventually stimulated action. What is known is that the Australian Council for Private Education and Training (ACPET) supported the inclusion of associate degrees in the AQF and had lobbied to this effect on behalf of its members. The fact that the AVCC had supported individual member universities involved in delivery of associate degrees, and had developed its own qualification descriptor, meant that there was little likelihood of opposition from this powerful source.

In 2003, AQFAB released a discussion paper (Allen & Gientzotis 2003) which set out the arguments for and against including the qualification in the national framework. The discussion paper noted that the policy position since 1995 was one which emphasised ‘the extension of national developments in articulation between the existing awards rather than [the inclusion of] associate degrees in the Framework’ (Allen & Gientzotis 2003, p. 4). It pointed out that institutional involvement and enrolments remained small. The paper included a discussion on ‘related issues’ including ‘the nature of higher education studies’ and VET/higher education relations, and referred readers to the current Commonwealth issues paper Varieties of learning: the interface between higher education and vocational education and training (Commonwealth of Australia 2002). An overview of national and international associate degree markets was provided as a framework for considering alternatives. Contextual factors presented included a discussion of likely directions in the competitive international education market. As more countries entered the market, the challenge for Australia would be to attract and meet the needs of students from developing countries (including applicants with lower IELTS scores) and a growing number of students looking for a more affordable qualification. Additionally there was a ‘competitive neutrality’

23 The ASF, introduced by the National Training Board in 1992, was an eight-level set of ‘competency descriptors’ that distinguished competent performance according to: the level and type of supervision normally applied; the level of responsibility contained in the job/task; the complexity and breadth of competency involved; and the level of independence required for competent performance. Use of the ASF was abandoned in the late 1990s when it was effectively replaced by the AQF descriptors.

24 Deakin Australia, the private wing of Deakin University delivered Associate degrees in Management and Technology management to industry clients. Bond University charged fees to domestic students.

25 Data available at the time of the review show that there were nine universities offering a total of 65 associate degrees: Bond; Charles Sturt; Curtin; Deakin; Edith Cowan; Northern Territory; Queensland University of Technology; Southern Cross; and Southern Queensland. Numbers were small in many programs, with a total of 2124 students enrolled across Australia. Disciplinary/occupational fields included Aboriginal Art, Visual Arts, Social Sciences, Health Sciences, Community Development, Information Technology, Mine Technology, Agribusiness, Banking, Viticulture, Paralegal Studies, Indigenous Community Management, and Engineering (Allen & Gientzotis 2003, p. 32).

Associate degrees in Australia: a work in progress
argument for a nationally recognised associate degree. Under arrangements at the time, self-accrediting universities had an advantage over private higher education providers which could register through the National Protocols only recognised AQF qualifications accredited by the external higher education authorities in the states and territories. The discussion paper also reported on the development of associate degrees and related sub-degree qualifications in other countries, including the UK (the foundation degree) and Hong Kong, and noted the widespread acceptance of the associate degree in the United States.

Three options were presented in the discussion paper: (a) the status quo; (b) include the associate degree in the AQF as a higher education qualification; or (c) include as a dual sector – VET and higher education – award. The arguments for and against associate degrees were analysed in the context of the five principles for including qualifications in the AQF, as detailed in the AQF Implementation Handbook (1995):

- Relationship to other Awards;
- National consistency;
- International comparability;
- Communication; and
- Strategic development.

Arguments presented for including an associate degree as an AQF higher education qualification included:

- It is a recognised international qualification attractive to overseas students;
- Australian students would be eligible for HECS funding, with a two-year program as a less expensive option for students and government than commitment to a full degree program;
- Substantial unmet demand for places in higher education, and the availability of two-year programs designed with substantial credit into a degree program, would expand access to higher education degree programs;
- Credit arrangements into higher level qualifications from current qualifications exist but need more work; and
- The impact on the existing qualifications might be small.

Arguments posed against including the associate degree as an AQF higher education qualification included:

- We already have serviceable sub-degree qualifications at that level, namely the diploma and advanced diploma, that can be offered in either sector;
- The current qualifications are widely understood in the community;
- There could be a negative impact on these qualifications; and
- The associate degree would erode parity of esteem between the sectors, and the development of pathways across the sectoral boundaries currently accorded by the dual sector qualifications.

There was just one argument mounted in favour of the associate degree as a dual sector AQF award, on the grounds of international comparability, noting that many overseas associate degrees were delivered in similar patterns to VET programs in Australia (Allen & Gientzotis 2003, p. 29). Opposition to the dual sector award was considerable and included concerns that a new qualification would affect the acceptance of diplomas and advanced diplomas and ‘negate the recent developments of these awards within industry’. Concern was also expressed about the hidden costs of replacing existing programs (Allen &
Gientzotis 2003, p. 29). The discussion paper also noted that no-one had in fact proposed defining characteristics for associate degrees in VET or for dual awards which would differentiate them from existing diplomas and advanced diplomas (ibid). However the point was made that there was a good case for the associate degree to be ‘available through both universities and VET institutions to improve participation and improve options for lifelong learning (Allen & Gientzotis 2003, p. 30).

Arguments for the status quo centred around the fact that there were already well understood and serviceable qualifications at the same level in the AQF which: (a) were well understood by providers and the community; (b) supported lifelong learning and enabled credit arrangements; and (c) could be tailored to the needs of either sector. Although the argument for a differentiated and academic focused sub-degree qualification had been circulating in the higher education sector for some years, its protagonists were unable to make a case that there was a gap in the Australian market and a demand for the associate degree as a distinct qualification type. On the other hand, the maintenance of parity of esteem and fair credit arrangements between qualifications, no matter in which sector they originated, was important to many policy makers and stakeholders who supported the notion of ‘lifelong learning’.

MCEETYA endorsed the associate degree as a new qualification in the Australian Qualifications Framework (AQF), for offer from 2004, describing the characteristics of the learning outcomes as follows:

- acquisition of the foundational underpinnings of one or more disciplines, including understanding and interpretation of key concepts and theories and how they are evolving within the relevant scientific, technical, social and cultural contexts;
- development of the academic skills and attributes necessary to access, comprehend and evaluate information from a range of sources;
- development of generic employment-related skills relevant to a range of employment contexts;
- a capacity for self-directed and lifelong learning (Gientzotis 2003, p. 11).

The associate degree was designated as a higher education program to be delivered in accordance with the MCEETYA National Protocols for Higher Education Approval processes. This meant that it could be offered by universities, other self-accrediting higher education providers, and other providers, including TAFE and private VET providers which met higher education requirements (Gientzotis 2003). In the 2007 AQF Implementation Handbook, the associate degree sits beside the advanced diploma in the higher education column, and adjacent to the VET advanced diploma at the same level (AQF 2007).
Table 2 Sectoral alignments of advanced diplomas and associate degrees: AQF 2007

<table>
<thead>
<tr>
<th>Schools Sector Accreditation</th>
<th>Vocational Education and Training Sector Accreditation</th>
<th>Higher Education Sector Accreditation</th>
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</thead>
<tbody>
<tr>
<td>Senior Secondary Certificate of Education</td>
<td>Vocational Graduate Diploma</td>
<td>Doctoral Degree</td>
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<td></td>
<td>Vocational Graduate Certificate</td>
<td>Masters Degree</td>
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<td>Graduate Diploma</td>
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<td>Diploma</td>
<td>Graduate Certificate</td>
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<td>Certificate IV</td>
<td>Bachelor Degree</td>
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<td></td>
<td>Certificate III</td>
<td>Associate Degree, Advanced Diploma</td>
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<td>Certificate II</td>
<td>Diploma</td>
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The associate degree in the new AQF

In July 2011, a revised version of the AQF was issued following extensive national consultations, a series of discussion papers (AFQ 2009a; 2009b/2009c; 2010), and endorsement by the Ministerial Council for Tertiary Education and Employment. Notably, the AQF Council published handbook (July 2011) is referred to as The Australian Qualifications Framework First Edition rather than the fifth edition of the AQF Handbook which may have been expected. The naming of the AQF 2011 as a first edition signaled an ontological break from the previous versions of the AQF, as did the visual presentation of the ten-level AQF taxonomy in a circular diagram in which no distinction is made between educational sectors — see Figure 3 below— in comparison to the representation of the AQF as three sector specific components, as in Table 2 above.
In this way the AQF is presented as an integrated qualifications policy, in line with the Bradley Review recommendations for the creation of a ‘broader tertiary education sector’, and an integrated relationship between higher education and vocational education and training (Australian Government 2008b, p. 206). In fact, the associate degree, which had been designated as coming under the authority of universities and other higher education institutions (AQFAB 2007, p. 50), was now an AQF level six qualification governed by accreditation standards for higher education (AQF 2011, p. 43). Hence, it was still sectorally bound at the level of governance. Nevertheless, the capacity for VET institutions to become registered higher education providers provides for cross-sectoral practice in the delivery of associate degrees and related qualifications.

The relationship between associate degrees and the advanced diploma which shares a level six position in the AQF, and with the degree at level seven, is further discussed in chapter 5.
Chapter 3 The policy context

As anyone involved in the business of student transition and the negotiation of program articulation agreements knows, pathways between Australia’s post-compulsory education sectors are still not particularly strong. Many do not endure long beyond the time when the initial agreement was struck. This is the case despite the efforts of policy makers since the late-1980s, and despite numerous projects to design and pilot pathways strategies. Some pathways are more problematic than others and the problems experienced by those making the transition between educational sectors take different forms. Even the apparently smooth pathway from an academic senior secondary program to undergraduate study can be challenging, and there is a growing field of research and practice aimed at getting this transition right (Nelson et al 2006; Kift 2009). The pathway from VET to higher education remains littered with structural and perceptual problems including funding, different sectoral regulatory requirements and learning and teaching practices, and inconsistent approaches between institutions to the awarding of credit for prior studies. This section of the report addresses the ways in which national and state governments and institutions have attempted to resolve such issues. My aim is to bring the nature of the problem into clearer focus and reflect on why it has remained so stubbornly resistant to policy intervention.

3.1 Credit transfer and recognition: a 20-year review cycle

The notion that credit for prior study, and recognition of informal and non-formal learning, could be systematised as national policy and inter-institutional agreements emerged during an intense period of industrial and training reform in Australia in the 1980s and 1990s. As a 1989 National Board of Employment Education and Training (NBEET) discussion paper observed:

> The increased integration of education and training and career progression arising from the award restructuring process has major implications for the formal education and training system ... In particular the changes occurring in industry through the award restructuring process compound the pressure for improved credit transfer and bridging arrangements, greater articulation of training and the recognition of training undertaken and the skills and knowledge acquired outside the formal system of education and training (NBEET, 1989, p. v).

Despite expressions of in-principle support and a flurry of activity – including the development by the Australian Vice Chancellors’ Committee (AVCC) and the Australian Committee of Directors and Principals (ACDP) of a series of guidelines for credit transfer – a succession of studies, discussion papers and policy statements at the time expressed concern about the ‘ad hoc and inefficient nature of existing credit transfer arrangements within and between the higher education and TAFE sectors’ (NBEET 1989, p. iii). The Commonwealth Government’s 1988 Higher Education Policy Discussion Paper (Green Paper) and Policy Statement (White Paper) observed that while there appeared to be a general agreement that action to improve credit arrangements must occur at the institutional level, there were few suggestions in the submissions to the Discussion Paper about how this might be implemented (ibid).
NBEET on credit transfer and skills recognition

In 1991, the Minister for Employment Education and Training, the Hon. John Dawkins, asked NBEET to report annually for three years on skills recognition and credit transfer between school, higher education and TAFE sectors: ‘paying particular attention to ways in which barriers to credit transfer ... can be overcome’. The Minister asked that advice be provided in 1993 on how to continue monitoring arrangements in the longer term (NBEET 1992, p.167). In its first of three reports in 1992, NBEET responded with a survey of initiatives underway to improve transition, including the following case studies:

- a proposal for a university credit bank (contributed by Dr Peter Meere, Australian Catholic University, see pp. 1-21);
- an account of the South Australian Credit Transfer project which produced a multi-institution guide to credit transfer across the state (Dr Tony Haydon, Director AVCC Credit Transfer Project: pp. 23-42);
- an evaluation of the performance of TAFE students admitted to degree studies at the University of Wollongong (Donald Lewis, University of Wollongong: pp. 59-102);
- a report on credit transfer arrangements in NSW between 100 TAFE and 170 university courses (Robert Quirk, NSW TAFE Commission: pp. 103-110);
- reports on a Victorian regional credit transfer negotiation (Victoria Committee to Facilitate Credit Transfer, pp. 111-143); and
- a major curriculum reform initiative at Victoria College (later Deakin University) (Professor Geoff Beeson; Dr Ian Dickson and Professor David Stokes, Deakin University pp. 144-165).

This first national assessment of credit transfer arrangements primarily addressed institutional action and stressed the role of the institutional leadership in achieving successful credit transfer outcomes. However, government policy was the crucial enabler. Membership of the Unified National System of universities was conditional on universities accepting government principles on credit transfer (NBEET 1993, p. 4) and national VET agencies were building relevant provisions into their regulatory frameworks. For example:

- The National Training Board (NTB) integrated recognition principles into its national competency framework and competency standards (NTB 1991; 1992); and
- The Vocational Education, Employment and Training Advisory Committee (VEETAC) launched the National Framework for the Recognition of Training (NFROT) as a mechanism for recognising training ‘provided by both the public and private sectors, including enterprises, commercially run colleges, community providers, licensing authorities, TAFE and schools’ (VEETAC 1992, p. 3).

Several national industry projects got underway during this period, foremost of which was the tripartite Metals and Engineering project which was sponsored by government, unions and employer associations to develop an articulated training structure which linked work-based/informal and formal learning (MTIA/MTFU 1988; Murphy 1991). The recognition of skills acquired through work and informal learning became regarded as a key to ‘responsive’ and ‘flexible’ training and the way was opened for the recognition of informal learning when NFROT stipulated this provision in its principles for recognition (VEETAC 1992b, p.11).

The 1993 NBEET report to the Minister on credit transfer and recognition argued that the principles of credit transfer were well embedded and that significant progress had been made in practice. However, the Board expressed concern that the momentum gained would be diminished ‘without adequate incentives, especially funding arrangements’, noting that:
... a critical barrier to effective credit transfer implementation is access to student places, principally in higher education. In an environment where institutions can easily meet their student load targets because of high demand and conflicting priorities for access, students seeking to benefit from credit transfer may be disadvantaged (NBEET 1993, p. 4).

The Board also turned its attention to the question of ‘national consistency’, arguing that state-based developments in credit transfer were variable, resulting in problems in interstate comparability (ibid). On the other hand NBEET acknowledged that ‘the major task is to develop a set of linkages through which credit transfer and articulation processes can operate, but which allow flexibility to meet varying circumstances’ (NBEET 1993, p. 7).

The final NBEET report on credit transfer and recognition in 1994 was able to report on further progress including an increase in the percentage of university entrants granted credit (from 27 per cent in 1992 to 40 per cent in 1993)\(^\text{26}\). The report identified four reasons for this increase:

- A general shift in the climate of opinion in universities towards the granting of credit\(^\text{27}\);
- The introduction of AVCC pilots in a number of disciplines;
- Local credit transfer schemes, including the Pathways Projects in Victoria;
- Improved statistical reporting (NBEET 1994, p. 4).

NBEET also reported on the introduction of arrangements to facilitate pathways from school to TAFE and to recognise vocational learning within senior secondary certificates. The first of these was the ‘Dual Recognition’ program in Victoria in which ‘clusters of TAFE subjects’ were accredited as Victorian Certificate of Education studies (NBEET 1994, p. 9). Other states adopted similar strategies to introduce what is now known nationally as VET in Schools, and the Schools Council of NBEET embarked on a project to ‘develop models of post-compulsory education and training which are based upon defined pathways ... [and] directly linked to post-school options’ (Schools Council 1994, p. 10).

Despite being able to cite mounting evidence about changes in practice, the report went on to record unresolved and emerging issues including the lack of confidence each sector has in the assessment decisions made by the other (NBEET 1994, p. 117). The report raised doubts about the extent to which credit transfer policies were being implemented. An industry representative at the NBEET Consultative Forum (the proceedings of which are included in the 1994 NBEET report) concluded that:

> Despite the growing understanding of where we are up to in credit transfer and recognition of prior learning, there is a strong feeling that we have a long way to go. We are still hearing about the barriers and perhaps a lack of flexibility within universities when it comes to meshing together processes that are basically different — Bob Shaw, Manager, Group Training and Development, BHP (NBEET 1994, p. 109).

Recurrent funding structures had been recognised by NBEET as a significant issue. An earlier report on credit transfer and recognition included the following observation:

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\(^{26}\) Note that this percentage does not exclude students transferring between universities.

\(^{27}\) For example: the Australian Vice-Chancellors’ Committee (AVCC) had endorsed and published Guidelines on Recognition of Prior Learning, and in conjunction with the Department of Employment, Education and Training (DEET) had commissioned two research reports on recognition of industry-based training by universities and also on recognition of experiential (that is, informal) learning.
Of all the issues raised here by far the most central is that current funding structures are preventing or inhibiting the transforming of mainstream education and training provision. New approaches – industry driven, flexible delivery and all the rest – are being treated as ‘add-ons’ and being confined to the margins of the public system (NBEET 1990, p. 73).

By October 1994, when the third report to the Minister was tabled, there had been no change in the structure of recurrent funding. The increased levels of credit transfer and recognition and attitudinal changes were almost entirely fueled by special government grants. As the Board noted in identifying the infrastructure required to support RPL assessment: ‘[t]hese establishment costs could be covered by special funding. Ongoing costs are, however, another matter’ (NBEET 1994, p. 31). Successful TAFE to higher education credit transfer initiatives were undermined by the structure of recurrent funding for undergraduates which limited the number of places for students entering courses with credit.

After NBEET

In June 1996, the new Coalition Government introduced the Employment, Education and Training Bill 1996 to abolish NBEET. While the Bill was not passed, the Councils of NBEET effectively ceased to operate as they had28. In line with Coalition policy to restrict the number and range of independent boards and authorities, responsibility for investigations such as those undertaken by NBEET passed to government departments and parliamentary committees. Between 1998 and 2006 there was a series of investigations into aspects of tertiary education. With the exception of the 2006 study Giving Credit (PhillipsKPA: 2006a; 2006b), the investigative focus had shifted to questions of inter-sectoral roles and relationships. The issues identified in five of these investigations are summarised below.

**Today’s Training, Tomorrow’s Skills (1998)**

The report of the Standing Committee on Employment, Education and Training Inquiry into the Role of Institutes of TAFE (*Today’s Training, Tomorrow’s Skills*) was released in July 1998. The Terms of Reference were ‘to inquire into and report on the appropriate roles of institutes of technical and further education; and the extent to which those roles should overlap with universities’ (Commonwealth of Australia 1998, p. iii). On the question of pathways and credit transfer, the Senate Standing Committee report was no more optimistic than its predecessors, reporting that:

Even allowing for the complexity of the task, there is considerable evidence that individual universities have been unnecessarily conservative in their approach to negotiating articulation arrangements with TAFE (Commonwealth of Australia 1998, p. xxii);

... pathways are often obscure and credit transfer difficult to negotiate. Unfortunately for many students, higher education has been very slow to put in place consistent and transparent articulation arrangements for students moving from TAFE into higher education (Commonwealth of Australia 1998, p. 66).

With its terms of reference dealing primarily with roles and relationships rather than the specifics of credit/recognition, the Standing Committee canvassed a wider set of options to improve the level of sectoral integration, including shared facilities, co-location and dual awards. In particular the Standing Committee saw the value of close collaboration in

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28 The Higher Education Council and the Australian Research Council continued to operate and the role of NBEET was confined to supporting these Councils.
occupational areas in which there were professional and paraprofessional roles (for example, in nursing, dentistry, engineering and medicine) noting that:

Collaboration between TAFE and universities on the education and training of people for these occupational groups can achieve resource savings and result in better quality graduates of both TAFE and higher education programs (Commonwealth of Australia 1998, p. 81).


These two Commonwealth papers – the first a Senate inquiry into the quality of VET in Australia, and the second a policy paper on higher education – are bracketed together here because they stand out from other tertiary sector inquiries and issues papers in having little or nothing to say about the nature of cross-sectoral relations. In fact, in discussing how the needs of individuals are met, Aspiring to Excellence (Commonwealth of Australia 2000) makes no mention of credit transfer, pathways or career development. Our Universities: Backing Australia's Future (Commonwealth of Australia 2003) makes a ritual gesture towards vocational education and training in its (one page) chapter on collaboration and structural reform, viz:

Cross-sectoral collaboration between sectors of the education and training system can respond to labour market demand for new and flexible skill sets, and result in more efficient delivery of education, for example, through shared facilities, and seamless pathways for students (Commonwealth of Australia 2003, p. 39)

The only hint about how this will be achieved is a statement about the availability of funding through the Collaboration and Structural Reform Fund to support collaboration ‘between vocational education and training provider/s and an institution in course provision or an area related to teaching and learning’ (ibid). There is a sense in each report of the sectors settling back into their traditional roles, allowing traffic between them to return to the margins!


Varieties of learning was one of seven issues papers, published in April 2002 by the Minister for Education, Science and Training, the Hon. Dr Brendan Nelson, as part of a review of higher education policy. The paper included summaries of major cross-sectoral initiatives, noting that the two sectors have ‘distinct but complementary roles’ and that ‘their futures are inextricably linked and dependent on their capacity to adapt and respond to changing demand for the educational products of both sectors’ (Commonwealth of Australia 2002, p. 3). The paper pointed to joint initiatives of the Australian National Training Authority (ANTA) and the AVCC to develop national credit processes. However, their analysis of the practice of credit transfer showed a continuing low level of recognition (between 1993 and 2001, growth from 1.6 to 2.8 per cent) (Commonwealth of Australia 2002, p. 11). Essentially the issues paper updated previous reports, reiterating earlier concerns about barriers to effective transition, including limited funding incentives, and different fees, management, administrative and curriculum regimes between the sectors. It noted issues associated with emerging trends, including the potential for confusion as TAFE institutes started to offer degrees (Commonwealth of Australia 2002, p. 32). The options canvassed to improve

29 Most students received an exemption of approximately one-third of their degree course.
articulation were similarly targeted and had similar funding implications to those proposed in previous reviews.

*Giving credit where credit is due: a national study to improve outcomes in credit transfer and articulation from vocational and technical education to higher education (2006)*

This final Howard Government publication on tertiary education relations was in many ways a curtain-raiser for the 2008 Review of Higher Education which included one of the 2006 project team as a member of the 2008 review panel and another as an advisor. The issues raised, and the broad conclusions drawn about the state of the nation, were similar to previous studies. However, the report does add valuable insights about current practice via a set of case studies demonstrating what can be achieved between institutions which establish equitable partnerships (PhillipsKPA 2006b). It is also valuable for its classification of drivers, enablers (leadership, systems mutual respect and commitment, information and transition support) and impediments to credit transfer (funding and accountability of the sectors, attitudes and culture, administrative issues, curriculum and qualification design, assessment and lack of resources). In addition to clearly signposting areas for policy reform, the report provided to institutions a useful roadmap for embarking on joint ventures. Encouragingly, the study was able to report that:

... students who transfer to higher education programs with credit for their VTE studies perform as well as or better than other student cohorts. Importantly, retention rates among these students generally seem to be higher than for other student cohorts (PhillipsKPA/DEST 2006, p. 3)

However, progress continued to be uneven and idiosyncratic:

Even in those institutions with a long history of high levels of commitment to maximise credit transfer opportunities, there are still pockets of resistance or indifference. Even in those institutions with minimal overall commitment to credit transfer, there are pockets in which the commitment is high and practices are exemplary (ibid).

The report canvassed a wide range of options for reform which led to a total of seventeen recommendations covering 13 areas of policy and practice including: funding; clarification of terminology; improved data collection; promoting MCEETYA Good Practice Principles and sharing of good practice; the use of grades in VET to improve the commensurability of outcomes; and designing Training Packages to maximise the opportunities for credit transfer. The set of recommendations made in this study about funding reform are based on the argument that ‘credit transfer from VTE to higher education will not be enhanced unless specific funding is allocated to institutions to provide an incentive both to commit to these initiatives and to support the additional effort required’ (PhillipsKPA 2006b, p. 24). Reform options for consideration included loadings or bonuses on higher education places which involved at least one year credit. Recommendation 13 proposed an examination of the ways in which VTE credentials are assessed within admissions processes, and points to the potential of funding reform, including incentives, to overcome possible discriminatory admissions practices:

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30 For example: ’The study demonstrates that, although there is recent evidence of increased efforts to maximise opportunities for credit transfer between VTE and higher education, there is still much more that could be done. The case studies particularly highlight that, even in those institutions both committed to and successful in creating pathways for students to move with credit from VTE to higher education, barriers continue to hamper efforts and these pathways do not always operate as smoothly, efficiently or effectively as they might’ (Phillips KPA/DEST 2006b, p. ii).
Recommendation 8 addresses the role of the AQF and notes that while it has ‘achieved a great deal in providing a systematic national approach to post-compulsory education and training qualification outcomes and award titles … it is timely to consider how the AQF might further facilitate credit transfer between sectors’ (PhillipsKPA 2006b, p. 27).

Overall, while several sets of recommendations addressed action by national agencies, all but the recommendations regarding funding were focused on micro-policy and institutional practice.

National and local strategies

The interventions proposed between 1988 and 2008, aimed at engineering improvements in cross-sectoral credit and recognition, can be classified into four broad strategies: two related to national policy and two enacted as local practice. While evidence suggests that the local practices have the potential to effect positive changes, the lack of a coherent national policy framework has meant that success is mostly short-lived – as the DEST 2006 study observed: ‘some arrangements that have previously been in place have waned or ceased altogether’ (PhillipsKPA 2006b, p. 3). The four strategies are outlined below.

National frameworks and guidelines

The first, most favoured, and most productive (at the pilot stage at least) was the enactment of national frameworks and guidelines to encourage the negotiation of credit arrangements between institutions. While ANTA was designing the National Framework for Recognition of Training (NFROT), which included provisions for the recognition of informal learning and credit transfer, the AVCC was working on a set of principles and guidelines for the ‘recognition of appropriate prior learning in the granting of credit in university courses’ (NBEET 1994, p. 123). Throughout the 1990s, ANTA and the AVCC cooperated on the refinement and extension of their respective recognition frameworks — for example, in 1999 after Training Packages and the Australian Recognition Framework were introduced, the AVCC and ANTA initiated a joint project to evaluate the impact of reforms in the VET sector on cross-sector linkages (Carnegie 1999). Fueled by government grants, the ANTA and AVCC frameworks and guidelines encouraged a multitude of pilot TAFE/higher education credit transfer projects. An enduring pattern emerged in the early pilots: smaller, newer and regional universities were able to establish credit agreements across the majority of undergraduate programs, while larger, older metropolitan universities experienced difficulties (NBEET 1994). Academics from the more quantitative, skills based disciplines (for example, engineering, computing and accounting) appeared to have less difficulty judging the relative standards and equivalence of courses than those in the Arts and Social Sciences (Ramsay et al 1997, p.4).

By 2002 the AVCC and ANTA had developed national credit transfer arrangements with 35 participating universities in 13 fields of study. These arrangements enabled holders of a TAFE diploma to obtain a minimum of 33 per cent of a related three-year degree, and 25 per cent of a four-year degree (Commonwealth of Australia 2002, p. 9). While the 2002 issues paper claimed that the ‘ANTA/AVCC national scheme arguably represents a step forward in
terms of standardisation of credit transfer and cooperation between the sectors’ (ibid), the AVCC did not formally monitor or evaluate the arrangements. Like other such initiatives under the auspice of national agreements, none were binding (for example, under legislation), nor were there any recurrent funding incentives or sanctions.

**National credit agency**

The second strategy involved the introduction of a national credit bank/agency to mediate and manage credit arrangements through the use of matrices and other metrics to enable the assessment of levels of credit. Key to this approach was an agreed structure of levels of attainment, a common credit agency, agreed interim awards and a shared approach to definitions of achievement (NBEET 1994, p. 13). In July 1995, the AVCC established the Australian Credit Transfer Agency as an incorporated company, with Commonwealth funding of $600 000, to provide advice to enquirers on the national recognition of prior credentialed learning or an assessment of prior learning. The Agency was also to provide policy advice on credit transfer and recognition of prior learning and the development of a national credit transfer database. It was discontinued at the end of 1996 because it was to operate on a cost recovery basis and lack of demand meant that it was not commercially viable (Commonwealth of Australia 2002, p. 9).

**Shared facilities and services**

The third strategy, which sometimes evolved out of negotiations between institutions to secure credit agreements, was the sharing of facilities and services between TAFE colleges and universities, and occasionally co-location. The 1998 Senate Inquiry reported on a number of such initiatives, noting that collaboration around facilities and services was a positive framework for the negotiation of dual awards and other cross-sectoral program and credit options. The same pattern of practice emerged in the sharing of facilities and services:

> The cultural difference between the older and newer universities is again apparent with the newer universities being much more open minded about the range of collaborative projects which can be undertaken with TAFE and their potential benefits to both sectors (Commonwealth of Australia 1998, p. 80).

Some of the early collaborative arrangements have endured, or facilitated new partnerships. Wodonga TAFE and La Trobe University still share a library and other facilities and work together on programs and credit arrangements. Similar arrangements are now in place with Charles Sturt University and regional TAFE institutes. The 1991-92 Northern Melbourne project conducted under the auspices of the Committee to Facilitate Credit Transfer in the Northern Region resulted in credit agreements for courses in IT, engineering, science, business and accounting, agriculture, music and art. While some specific agreements soon had to be renegotiated – for example, when a College of Advanced Education and two TAFE colleges were absorbed by universities – the relationships established through the Committee facilitated a series of ongoing regional partnerships between secondary schools, TAFE institutes, universities and industry.

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31 There are clear, well promoted credit arrangements between La Trobe University and Northern Melbourne Institute of TAFE: see http://www.latrobe.edu.au/mature-age/apply/credit-for-previous-study/northern-melbourne-institute-of-tafe-nmit
Curriculum (re)design

The fourth strategy involved various forms of curriculum (re)design. The need for ‘flexibility’ in curriculum design is referred to in several reports, and the difference between competency and ‘curriculum’-based courses often cited as a barrier to credit transfer. Cooperation between sectors to more closely integrate curriculum is reported as a successful strategy for facilitating movement between courses (PhillipsKPA 2006c, p.58). A related approach is the bridging course to cover identified gaps in knowledge and skill – for example, the University of Wollongong and the New South Wales Technical and Further Education Commission mapped the Bachelor of Nursing curriculum with the TAFE curriculum for enrolled nurses and developed a three subject bridging course between the two qualifications (PhillipsKPA 2006c, p.76). In a partnership between James Cook University and Tropical North Queensland TAFE, articulation between TAFE and degree level nursing training was achieved through modification of the TAFE qualification (PhillipsKPA 2006c, p.81).

The most radical form of curriculum (re)design undertaken was the introduction of new forms of qualification which blended sectoral models and enabled new pedagogical practices. The NBEET investigation of cross-sectoral practices (1992) included a report on what is probably the first such initiative which moved towards bridging two gaps: first between the academy and the workplace, and second between VET and higher education. The project was initiated by Victoria College in 1989, just before it merged with Deakin University, in collaboration with Box Hill College of TAFE, Ford Motor Company and Nissan Australia.

The core of the project was the design of a three-year qualification pathway leading to the Bachelor of Applied Science (Technology Management). The program was designed for people currently in the workforce and offered recognition of all forms of prior learning — work and community-based. Students were usually sponsored by their employers, with the majority coming from Ford and Nissan and from BP Australia. The first exit point offered graduates a six-unit certificate in communications, management, computing, numerical processes and technology which provided the skills and knowledge required to supervise technological processes in a manufacturing enterprise. It also addressed the foundation skills needed for further study. The associate diploma exit point offered a combination of technical and managerial skills for middle level management positions. At the degree level, studies led to senior management positions and emphasised project management and the role of technology in product design. Optional studies enabled students to broaden their knowledge base in line with individual career aspirations. The program was designed to enable students to move in and out of study without loss of credit.

The NBEET report identified several factors leading to the success of this program including the partnership between Victoria College (later Deakin University) and Box Hill College of TAFE, and the close practical links with industry (including industry membership on curriculum working parties). The report also noted support from a Victorian government-32

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32 The use of the term ‘curriculum’ in such instances is somewhat misleading. All courses, whether competency or disciplinary based, involve curriculum design and development – that is, deciding how to structure the course to achieve required outcomes, determining content, designing assessment and selecting delivery modes. As will be discussed further in chapter 5, groupings of units of competency do not comprise a course of study. They express the standards of skill and knowledge which must be demonstrated in order to achieve a qualification. VET teachers, like their higher education counterparts, design and deliver courses of study – commonly referred to as the ‘curriculum’.
owned agency, the Victorian Education Foundation (VEF), which provided funding for innovative initiatives linking industry and education (NBEET 1992, p. 154).

In a critique of government credit transfer/recognition policy, the NBEET Working Party on Skills Formation and Recognition, headed by Professor Ian Chubb, had the following to say about the Technology Management program:

The Technology Management program is an excellent example of almost every new ingredient of the skills formation and recognition brew – a fusion of academic disciplines in ways shaped by industry need and involvement; a program articulated from certificate to degree level; multiple entry and exit points; the recognition for credit of prior learning at any level; and off-campus and often computer based delivery. The program represents almost everything that public policy has sought to support over the past four to five years – yet it receives no direct public funding. It has been funded by the industry partners and the VEF.

Second, a number of the participants in the program are experiencing their first sustained formal education and training since leaving school and many of these did not complete 12 years of schooling. But unlike others in initial training they get no public support (NBEET 1990, p. 72).

The technology management program continued for several years without government funding and was the model for other Technology Management Centre qualifications designed in partnership with industry associations including the Australian Computer Society and the Association of Professional, Engineering and Scientific Managers of Australia (APESMA). As the scale of delivery grew the program concept became the foundation on which Deakin Australia (the forerunner of DeakinPrime, Deakin University’s corporate education provider) was built.

The Case Study Report accompanying the 2006 review report records similar curriculum initiatives; for example, intersectoral curriculum programs at Swinburne University of Technology (PhillipsKPA 2006c, p. 59) and a three year, six semester program leading to a Bachelor of Commerce (Hospitality and Tourism Management) developed through a partnership between the University of New England and the Blue Mountains Hotel School (BMHS). This program, which continued until 2009, offered a particularly innovative curriculum model. The first four semesters were based on Tourism and Hospitality Training Package units of competency, and semesters five and six were a mix of UNE curriculum and subjects developed by BMHS. There were four exit points at certificate III, diploma, advanced diploma and degree levels (PhillipsKPA 2006c, p. 69-70).

**Twenty years on: perceptions of difference persist**

Despite a multitude of local projects, and innovations in curriculum design and the administration of credit, one report after another admits that little about mainstream tertiary education has changed. Indeed the interventions to improve intersectoral relations were taking place in the context of increasing structural differentiation. The higher education reforms of the 1980s (which brought about the Unified National System in 1988) abolished, through amalgamation and reconstitution, a range of non-university

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33 A joint venture between Deakin University and Box Hill TAFE.

34 DeakinPrime delivers to business and industry customised programs and recognition-based pathways to Deakin qualifications, and serves 50,000 work-based learners each year: [http://www.deakinprime.com/deakinprime/default.aspx](http://www.deakinprime.com/deakinprime/default.aspx)

35 In addition to the existing universities, membership of the UNS was made up of universities formed through amalgamations between CAEs to create the critical mass necessary to be declared a university (2000 EFTSU), and the
tertiary providers including agricultural colleges, colleges of advanced education and other specialist institutes. These providers of diplomas and undergraduate degrees designed to meet technical, paraprofessional and professional skill needs, occupied the conceptual middle ground in a tertiary learning continuum. Now Australia follows a binary model of tertiary education amplifying embedded assumptions and perceptions about learning and learners. There are three areas, briefly unpacked below, in which perceptions of difference continue to have powerful consequences for cross-sectoral relations.

**Competency-based vs. disciplinary studies**

Competency-based and disciplinary learning have come to be regarded as distinct and incommensurable forms (Wheelahan 2011, p. 325). Many academics believe that competency-based training does not allow for ‘knowledge development’ and argue that it is difficult for higher education to accurately gauge the extent to which students transferring from VET share the same knowledge base as students who have undertaken all their study in the higher education sector (Commonwealth of Australia 2002, p. 22).

The difference between competency-based and disciplinary learning is compounded by VET strategies for RPL which enable skills and knowledge acquired through informal means to be assessed formally against competency standards. In this way learners can be awarded a full qualification through assessment of informal learning. By contrast, RPL in higher education is limited to a proportion of a program – usually no more than 50 per cent of the total units/subjects, and takes the form of exemptions from study on the basis of prior formal studies rather than assessment of skills and knowledge regardless of how they were acquired. Here differences do reach the point of incommensurability. Because higher education course outcomes are based on what has been learned in the course, rather than assessment against standards, universities do not have the means to unpack and credential learning acquired beyond the known parameters of the institution.

**Competency-based vs. disciplinary assessment regimes**

The difference between competency-based assessment in the VET sector and the most commonly applied graded assessment regimes in higher education sectors is regarded as a barrier to determining levels of credit for transferring students. The 2002 DEST issues paper, *Varieties of Learning*, commented that:

Higher education programmes are curriculum-based, while VET programmes are based on outcomes defined as competencies, increasingly specified in National Training Packages. This can make it difficult for higher education to accurately gauge the extent to which students transferring from VET share the same knowledge base as students who have undertaken all their study in the higher education sector (Commonwealth of Australia 2002, p. 22).

The Final Report of the 2006 national study, *Giving Credit*, concluded that ‘the use of non-graded assessment in the VTE sector is a significant barrier to admission of VTE students to higher education’ (PhillipsKPA 2006a, p. v). The report cites a Victorian Qualifications Authority study that noted that some higher education institutions ‘specifically exclude

granting of university status to previous large metropolitan CAEs (for example, RMIT, Swinburne, VU, UTS). This led to a significant reduction in the number of institutions, from 75 in 1989 to 36 members of the UNS and eight non-members.

36 Earlier reforms which created educational sectors may also have inadvertently widened gaps in perception: for example, the formation in 1974 of the TAFE system comprising what had been technical and further education colleges and trade schools. What had been an idiosyncratic collection of providers was grouped into sectors and badged accordingly.
Associate degrees in Australia: a work in progress

consideration of students who do not have graded assessments’ (VQA 2005 in PhillipsKPA 2006a, p. 14). The report goes on to recommend that ‘the National Quality Council hasten efforts to develop and implement processes of graded reporting of assessment of student outcomes for VTE programs at least at the certificate IV and diploma levels’ PhillipsKPA 2006a, p. 30).

Vocational vs. university learners

Learners in the VET sector are regarded as different from those in higher education – dependent rather than self-directed with a preference for learning through ‘observation and direct experience rather than through verbal presentations’ (Smith 2000, p. 30). Citing his earlier studies, Smith goes on to say that:

In research with apprentices and VET technology learners, Smith (2000a, 2000b) demonstrated that learners exhibit a low preference for self-directed learning. Also shown was a high preference for learning in contexts that are instructor led, where the program of instruction is well organised, and where expectations of learners are made very clear by the instructor (Smith 2000, p. 31).

Other studies have drawn similar conclusions. Boote (1998) maintained that the skills of metacognition required for effective self-directed learning are not well developed in VET learners. Following Witkins’ 1977 inventory of learning styles, Riding and Cheema (1991) argue that VET learners are characteristically field dependent: likely to ‘use a learning program in the way it is constructed by the instructor, rather than restructuring it in a way that may have more meaning for themselves’ (Riding & Cheema in Smith, 2000, p. 31). Smith did go on to caution against stereotyping and to note that there are considerable individual differences within cohorts of VET study, and differences between program groups (Smith 2000, p. 41). However, his findings are reinforced by later studies (for example, a study by Milne et al 2006 of articulating students at Victoria University). Milne found that students transferring to higher education from VET identified lower levels of peer and teacher support, and the demand for more self-directed and independent learning, as characteristic of higher education (Milne et al 2006, p. 9).

As likely as it is that these perceived gaps between the sectors have a negative influence on the level of VET to higher education articulation, Occam’s razor demands consideration of another more straightforward reason for a continuing low level of articulation – something which is acknowledged in passing in the inquiries and issues papers canvassed here. And that is the pattern of VET enrolments. In 2010, nearly 80 per cent of the VET student enrolment in AQF qualifications was at certificate levels 1-4 (NCVER 2011). However, the diploma, is the main qualification that students use to access higher education (Wheelahan 2010, p. 3); and with only 20 per cent of VET students enrolled at diploma level and above, the pool of students most likely to receive a place, let alone credit, on the basis of their VET studies is quite small. This proportion has remained fairly stable since 1996 – in fact there was a decline of 4 per cent in the level of diploma and above enrolments between 1996 and 2010 (NCVER 2011).

So, does this mean that 20 years of concerted effort to extend the links between TAFE and higher education was focused on the wrong part of the cross-sectoral equation? Should the effort have gone into increasing the level of enrolments in diplomas and advanced diplomas? Would this strategy have worked given the continuing perception of gaps between the sectors and the challenges experienced in equating competency and disciplinary-based learning outcomes? The question of policy focus is addressed below in an
analysis of the 2008 Review of Higher Education, and questions of curriculum and pedagogical differences are taken up in chapter 5.

3.2 The 2008 Review of Higher Education

A lot has been said about the Review of Australian Higher Education (Australian Government 2008b) (the Bradley Review), but it must be said again here to set the scene for the work undertaken through this Fellowship. At the outset, the Bradley Review’s report needs to be acknowledged as a watershed in policy regarding the nature of Australia’s tertiary sector. While its focus was on the future directions of the higher education sector, like others before it, the Bradley Review invested investigated the relationship between higher education and the VET sector. And like previous reviews it identified a need for improvements in credit transfer arrangements, sharing of facilities and resources, and funding reform. Where Bradley differed from most other reviews is in the intervention strategy underpinning its recommendations; none of which are directly aimed at bridging curricula and cultural gaps. Instead, the Expert Panel directed its attention to macro-policy systemic reform, leaving the way open for institutions to devise programmatic solutions appropriate to their own needs. The potential impact of the Bradley reform package is explored in section 3.3. First I provide a summary of the Review’s key findings about the nature of the relationship between VET and higher education and what needs to change in order to face future challenges.

The VET/higher education relationship

In its discussion paper, released in July 2008, the Higher Education Review Expert Panel described the interface between VET and higher education institutions in terms of ‘credit transfer and articulation arrangements, dual sector universities, multi-sector campuses, some limited sharing of infrastructure, some research collaboration and increasing overlap in qualifications offered’ (Australian Government 2008a, p. 42). The discussion paper went on to note that we know little about the effect of these relationships ‘on the quality of provision, satisfaction of students or the efficiency of the system’ (ibid), and that the numbers of students moving between the sectors remain small. In 2006, just 10.1 per cent of higher education students were admitted on the basis of prior vocational education and training and the ‘proportion of students gaining credit (or exemption) for previous vocational education and training study was only 3.4 per cent’ (ibid).

The report questions whether these small numbers reflect intersectoral barriers or a low level of demand – ‘that is the two sectors may serve quite distinct markets’. However, it does reach the conclusion that there is a need to drive a more effective interface between the tertiary sectors:

It is no longer helpful to see stark contrasts between higher education and VET in the level and types of qualifications they deliver. Traditionally higher education has concentrated on delivering longer study programs with a strong element of general education and adaptable skills largely for professional occupations, whereas VET has focused on more immediate vocational outcomes in trades and paraprofessional occupations. However, these differences are shifting. [...] The panel has concluded that although distinct sectors are important, it is also vital that that there should be better connections

37 The terms of reference included ‘Establishing the place of higher education in the broader tertiary education sector, especially in building an integrated relationship with vocational education and training’ (Australian Government, 2008b, p. 206).
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Citing a range of research perspectives on future skill needs, the Panel argued that the Australian labour market would require a greater number of people with higher qualifications and a tertiary system with sufficient flexibility to meet the demand for new combinations of skills:

Apart from some professional, associate professional and trade jobs, there is no neat relationship between the level or field of qualifications obtained by students and subsequent occupations. Most firms demand a mixture of workforce skills acquired from either or both sectors and skills acquired on the job become more important the longer someone has been in the labour force (Australian Government 2008b, p. 180).

And:

What is needed is not two sectors configured as at present, but a continuum of tertiary skills provision primarily funded by a single level of government and nationally regulated, which delivers skills development in ways that are efficient, fit for purpose and meet the needs of individuals and the economy (Australian Government 2008b, p. 183, emphasis added).

The Bradley Review also concludes that efforts over a 25 year period to strengthen links between the sectors have met with limited success ‘due to structural rigidities as well as to differences in curriculum, pedagogy and assessment’ (Australian Government 2008b, p. 179) – a familiar refrain after considering the findings of successive reviews. As the report acknowledges, there has been some improvement in the rate of articulation (from 5.8 per cent in 1994 to the present 10.1 per cent), and in the level of credit (from 2.4 per cent to 4.3 per cent in the same period) (Australian Government 2008b, p. 190). However, the rate remains low and raises questions about the nature of the need and demand for articulation and credit. Studies cited in submissions to the review suggest that students often move into unrelated higher education courses, thus limiting the level of credit available; others argued that despite barriers, the small number of articulating students found that the pathways they had selected were functional (Harris, Sumner & Rainey 2005; Harris, Rainey & Sumner 2006, cited in Australian Government 2008b, p. 192).

Rather than making recommendations aimed directly at solving problems in articulation and credit transfer, the Bradley Review referred to the recommendations made in the 2006 PhillipsKPA/DEST study, noting that:

Work on implementing some of these recommendations is already underway. In particular, the development and adoption of a common terminology for describing credit and articulation and the implementation of graded assessment in the upper levels of VET are critical to building confidence to support increased cross-sectoral transfer. Depending on progress, governments could at some future point consider the need for further initiatives such as whether maintenance or further improvement in credit transfer rates should be made a condition of institutional funding, with individual institutional targets to be set. A key challenge in doing so would be to have the capacity to specify robust targets that drive intended institutional behaviour (Australian Government 2008b, pp. 192-3).

Of the 46 recommendations in the Bradley Report, seven are particularly relevant to the present study:

(a) National Targets

- Recommendation 2: That the Australian Government set a national target of at least 40 per cent of 25- to 34-year-olds having attained a qualification at bachelor level or above by 2020.
**Recommendation 4**: That the Australian Government set a national target that, by 2020, 20 per cent of higher education enrolments at undergraduate level are people from low socio-economic status backgrounds.

**(b) Funding reform and incentives**

**Recommendation 16**: That, after further consideration of current problems with regional provision, the Australian Government provide an additional $80 million per year from 2012 in funding for sustainable higher education provision in regional areas to replace the existing regional loading. This should include funding to develop innovative local solutions through a range of flexible and collaborative delivery arrangements in partnership with other providers such as TAFE.

**Recommendation 29**: That the Australian Government introduce a demand-driven entitlement system for domestic higher education students, in which recognised providers are free to enrol as many eligible students as they wish in eligible higher education courses and receive corresponding government subsidies for those students.

**Recommendation 38**: That the Australian Government establish a new Structural Adjustment Fund amounting to about $400 million in funding over a four-year period from 2009-10 to assist the sector to adapt to the reforms recommended in this report.

**Recommendation 44**: That the Australian Government negotiate with the states and territories to introduce a tertiary entitlement funding model across higher education and vocational education and training (VET) commencing with the upper levels of VET (diplomas and advanced diplomas) and progressing to the other levels as soon as practicable.

**(c) Strengthening the links between VET and higher education**

**Recommendation 24**: That the Australian Government, in consultation with the states and territories, review the Australian Qualifications Framework to improve and clarify its structure and qualifications descriptors. Ongoing responsibility for a revised qualifications framework should rest with the national regulatory body.

**Recommendation 46**: That the Australian Government and the governments of the states and territories agree to establish a single ministerial council with responsibility for all tertiary education and training.

In 2009, the Commonwealth government adopted the participation targets for 25-34 year olds, and students from low socio-economic backgrounds, recommended by the Bradley Review. The government also agreed to move to a demand-driven higher education funding model, commissioned the Australian Qualifications Framework Council to review and revise the AQF to improve articulation and connectivity between the university and VET sectors, and moved to form a single tertiary education sector ministerial council, with representatives from the Commonwealth, states and territories. The Commonwealth government also agreed to provide $400 million for structural adjustment, to be made available to all regional and metropolitan higher education providers over a four year period (Australian Government 2009, p. 40).

### 3.3 Framing up a broader tertiary sector

While acknowledging the need for improved credit transfer, the findings of the Higher Education Review Expert Panel on the nature of a ‘broadter tertiary sector’, in which there is a ‘continuum of tertiary skills provision’, refer to matters which go beyond aligning sector-based programs and courses. The vision presented in the Bradley Review’s final report (Australian Government 2008b) is of a tertiary sector comprising a range of providers – from comprehensive and specialist universities to institutes and colleges offering vocational and professional training – in which the transfer of students is facilitated by a simplified and
equitable fee structure and income support regime, and a national quality and regulatory system underpinned by legislative powers.

The reform measures adopted by the Commonwealth government constitute a quite significant enabling framework for realising the vision articulated in the Bradley Review:

- Demand driven funding of higher education places removes an impediment to credit transfer into high demand courses;
- Strategic participation targets make it clear to universities how their program profile and recruitment priorities should be configured; and
- Structural adjustment funding offers incentives for establishing new partnerships and enabling existing arrangements to be strengthened.

Together these reforms are an incentive for adjustments to institutional policy and practice. To quote the chair of the AQF Council and National Skills Standards Council (at the time the National Quality Council):

> With its focus on enhancing articulation pathways between components within tertiary education, the AQF will provide an important vehicle to build on tertiary policy architecture and to ensure its success (NQC 2011).

And so, Australia has a vision of a broad, diverse tertiary education system and a set of structural arrangements to enable its realisation. We know what we want to achieve. The question is how to do so. After 20 years of effort we know the limitations of strategies to extend credit transfer. We can assume that demand-driven funding will alleviate some problems in some institutions. High demand courses may now plan to increase intakes without disadvantaging their ‘traditional’ target groups. However, at the current rate of the numbers of young people articulating from VET to higher education with credit, this strategy will not lead to a significant increase in graduation rates. Moreover, increasing the proportion of young people with a bachelor degree will mean increased diversity in educational attainment and arguably more applicants needing support to make the transition into undergraduate studies. We also know that curriculum reform has generated exemplary programs which rarely outlived the period of special funding – or if they did survive have not had a significant influence on mainstream curriculum.

It is in this context that I am interested in the potential of a new qualification to facilitate improved pathways. The AQF taxonomy places the associate degree in a hybrid space. The articulation of the AQF as a single integrated structure means that while the VET and higher education sectors remain different in so many respects, the AQF is now a freeway which runs through both territories. Uncapped funding offers room for growing a new undergraduate qualification without threatening existing offerings\(^38\), thereby easing the way for curriculum reformists. Structural adjustment funding has already paved the way for some innovative new directions in program architecture and cross-sectoral delivery, and the current national policy environment is encouraging a wide range of cooperative VET-higher education ventures, including joint delivery of associate degrees. The directions being pursued by tertiary institutions and state governments are the subject of the following chapter.

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\(^{38}\) There has been a slight hiccup in the provision of uncapped places at associate degree level, but indications are that this will not lead to a wholesale policy reversal. I shall return to this question later in the report.
Chapter 4 The associate degree in Australia

4.1 A snapshot of associate degree provision

By 2011, Australia-wide tertiary involvement in associate degrees had grown to include 57 tertiary providers:

- 18 universities;
- 5 dual sector universities;
- 12 TAFE Institutes; and
- 22 private tertiary colleges.

Five of the TAFE Institutes are delivering associate degrees in partnership with a university:

- Chisholm, Advance (East Gippsland), Goulburn-Ovens and Sunraysia Institutes of TAFE with Deakin University; and
- Bremer Institute of TAFE with the University of Southern Queensland.

The information on associate degree providers was collected in mid-2011 by a search of university, TAFE institute and the Australian Council for Private Education and Training websites. The information on associate degrees may not provide a completely accurate picture of current associate degree provision as it has not been verified with each provider. It is included here as an indicator of the patterns of provision and as the basis for further data collection.

The enrolment data drawn from DEEWR sources is two years old. Present year statistics will probably show a continuation of growth with smaller providers increasing at a greater rate. Between 2009 and 2011 the enrolment at Charles Sturt increased marginally, from 2227 to 2625. RMIT’s enrolment increased more than threefold, from 365 to 1114, and Deakin University also experienced a three-fold increase, from 32 to just under 100 EFTSL. Australia-wide enrolments recorded by DEEWR show an increase from 2124 EFTSL in 2001 to 8592 in 2009 – an increase of 6468 EFTSL.

A list of universities, TAFE and private tertiary colleges, and the associate degrees they advertised to potential students in 2011, is contained in Appendix Two: Associate degrees in Australia, together with 2009 enrolments and market share data for 2005-2009. The following dot point summary provides some of the highlights from the data.

- The largest associate degree provider by enrolment is Charles Sturt University with 2227 EFTSL and a 26 per cent share of the market;
- The six largest providers – Charles Sturt, the universities of Tasmania and Southern Queensland, the International College of Management, Southern Cross University and RMIT – have 71 per cent of the market share;
- The largest university by range of offerings is the University of Central Queensland which offers ten associate degrees, followed by RMIT with nine programs.
- The largest private tertiary provider of associate degrees by range of programs offered is the JMC Academy which specialises in training for the music, film and television industries. JMC offers 15 associate degrees, including: Audio Engineering & Sound Production; Creative Arts (Film and Television); Digital Television Production; Digital Animation; and Entertainment Business Management;

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39 2011 Charles Sturt University enrolment data sourced from the University Secretary.
• In the decade from 2001, the number of programs has increased from 65 to 176. Seventy-eight associate degrees are offered by universities, 18 by Dual Sectors, 24 by TAFE, and 56 by private tertiary colleges;

• As of July 2011, there were seventeen associate degrees in Engineering, of which fourteen were recognised by Engineers Australia (EA July 2011).

4.2 State Government responses

4.2.1 New South Wales TAFE

Decisions on whether to offer associate degrees have been made by universities and other registered Australian Higher Education Providers operating as individual institutions. Universities have been able to access Commonwealth Supported Places, and TAFE Institutes in ACT, Queensland, South Australia, Victoria, and Western Australia, and other Australian Higher Education Providers in all states, have decided to offer associate degrees on a fee for service basis. So far state governments have played a muted policy role in implementing this new qualification. However, TAFE NSW has made a recent decision to offer associate degrees with guaranteed articulation into university. This initiative, which will be undertaken in partnership with four NSW universities, is enabled by the registration in July 2010 of the NSW TAFE Commission as a higher education non-self-accrediting institution, trading as TAFE NSW Higher Education. Approval as a higher education provider, under the Higher Education Support Act 2003, was granted in February 2011. The governance structure for this new venture, comprising a Governing Council, Academic Board and the TAFE NSW Higher Education Executive Group, separates the delivery of TAFE NSW higher education courses from the delivery of TAFE NSW vocational courses. The Academic Board is responsible for academic policy making, academic administration, oversight of the educational process and maintaining appropriate control over the administration of higher education curriculum. To assure academic integrity, it operates independently of the control and management of TAFE NSW Higher Education. Under the title of ‘Tertiary Pathway Degrees’, TAFE NSW Higher Education has commenced delivery of a three-year bachelor degree, with an associate degree and one-year graduate diploma programs under development. This move aims to support higher education participation including those for whom university may not be a natural choice, as reported in The Australian in 2011:

The pathways model, which closely aligns with the American community college, will cast TAFE institutions in a new light while providing students with a cheaper and less intimidating entry into university (Hare, The Australian 27 April 2011).

Martin Brown from TAFE NSW Higher Education sees the Tertiary Pathway associate degree as being influenced by the philosophy of the US baccalaureate degree: a four-year degree model through which students complete the first two years of general education subjects at a community college and then articulate into a four-year college where they enrol in more specialised year three and four studies. Brown explains the rationale for the Tertiary Pathway associate degree as ‘part of the strategy to make higher qualifications academically accessible to those who might not usually choose to undertake such a qualification’ (Brown 2011, p. 20).

40 The chair of the Governing Council is Emeritus Professor Mark Wainwright AM, Honorary Visiting Professor at the University of New South Wales, formerly Vice Chancellor and President of the University of NSW. The chair of the Academic Board is Professor Shirley Alexander, Deputy Vice Chancellor and Vice President, University of Technology Sydney.
The TAFE NSW pathways model will be vocationally based, offering associate degree students the opportunity to exit with recognition for their vocational competence or to continue into professional level studies, as illustrated below.

*Figure 4 TAFE NSW Pathways Model*

The NSW TAFE Higher Education pathways brochure describes the pathways approach as encompassing six key characteristics:

- An industry-TAFE-university partnership;
- Learner centred delivery with opportunities for mentoring via industry partnerships and access to careers guidance, childcare and learner support;
- Multiple exit points which will also enable students to ‘drop back into study’ if they have left to obtain employment;
- A vocational focus and applied learning approach incorporating direct workplace learning through work-based internships both in Australia and overseas;
- Joint delivery involving TAFE NSW and university partners; and
- Sharing of resources based on the efficient use of existing infrastructure (TAFE NSW 2011, p. 2).

The first pathways associate degree is likely to be in Accounting, following the signing of an agreement between TAFE NSW, Certified Practicing Accountants (CPA) Australia, Innovation Business Skills Australia (IBSA), Charles Sturt University, the University of New England, and the Australian Catholic University (North Coast TAFE 2011). Further Tertiary Pathways degrees are planned in Allied Health, Building Design, Early Childhood, Engineering and Information Technology. Under the three-year accounting program, students will study at TAFE NSW for the first two years to complete an Associate Degree of Accounting, after which they can progress to the third year of a partner university bachelor program. It is proposed that delivery of the associate degree by TAFE NSW will commence in 2012 at six...
locations across the state, including four metropolitan (Northern Sydney, Sydney, South Western Sydney and Western Sydney) and two regional (North Coast and Riverina) TAFE institutes (ibid).

The funding issue which has previously inhibited TAFE Institute involvement in associate degree developments appears to have been resolved through the TAFE NSW-university partnership arrangements. TAFE NSW explains that ‘enrolment in both the associate degree and the bachelor degree will be funded via a shared government supported Higher Education Contribution Scheme (HECS) place’ and that ‘embedded vocational qualifications may support delivery costs’ (TAFE NSW 2011, p. 2). NSW TAFE is confident that this innovative funding model will continue to get federal government support. The Deputy Director General for TAFE and Community Education, NSW, Dr Pam Christie, has argued that Commonwealth support will be forthcoming given ‘the momentum in universities to embrace the social inclusion agenda’ (Christie, cited in Hare, The Australian 1-9-2010). However, concerns have been expressed more recently, particularly following the Commonwealth’s move at the end of 2011 to cap associate degree places in 2012, that Commonwealth funding for such state initiatives may not be entirely secure.

4.2.2 Victorian government

The Victorian government has not announced any policy position on associate degrees as a pathway or occupationally related qualification. However, a 2009 Victorian government report advising on the development of Victorian tertiary education noted the potential for associate degrees to provide ‘a viable transition between the directed learning at secondary school and the independent learning expected at university’ (Skills Victoria 2010, p. 100).

4.2.3 TAFE Queensland

Queensland government policies on pathways between school, TAFE and higher education are focused on the forming partnerships between VET providers and universities to secure credit agreements from diplomas and advanced diplomas. New associate degree developments are most likely to be happening in private RTOs. The fundamental reason for the continuing focus on diplomas and advanced diplomas is that RTOs cannot access Commonwealth Supported Places, without which ‘you end up talking to universities about delivering the first two years of their degree’ (Schmidt, personal interview, 2011). In contrast to NSW, Queensland is proceeding cautiously in relation to TAFE Institutes becoming non-self-accrediting higher education providers. Industrial relations issues, and concerns about possible tensions between the primary vocational role of TAFE Institutes and that of higher education providers, are cited as reasons for caution.

Given the size and diversity of the state, pathways solutions involving associate degrees will be regionally based and will involve negotiations with universities, including the universities of Queensland, Central Queensland and Southern Queensland which currently have substantial associate degree offerings. Initiatives currently underway include:

- Formation of a University of Queensland college in Ipswich which will move into the associate degree space in line with the Ipswich regional development strategy;

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41 Information on developments in Queensland is based on an interview with Jodi Schmidt, Assistant Director General, Training and Tertiary Sector Operations, Training and Tertiary Education, Queensland.
Establishment of a tertiary pathways relationship between the Far North Queensland TAFE institutes and James Cook University. The staged university college plan starts with enabling/foundation programs including English language, followed by diplomas from 2013 and possible associate degrees; and Establishment of partnerships between the Gold Coast Institute of TAFE and universities in southern Queensland and northern New South Wales.

However, not all Queensland pathways initiatives will necessarily involve associate degrees. For example, the partnership arrangements between the University of the Sunshine Coast and Sunshine Coast of Institute of TAFE involve delivery of first year degree programs by the TAFE Institute, using Commonwealth Supported Places funding, leading to the second and third years at the University of the Sunshine Coast. As Jodi Schmidt explains, ‘in this state there’s probably not a large understanding in the general community about the place of associate degrees in the tertiary market’ (Schmidt, personal interview 2011).

### 4.3 Associate degrees at Charles Sturt University

Charles Sturt University is a community minded organisation with strong links to industry, government, and other educational organisations. Our courses are developed in collaboration with industry representatives to ensure the skills our graduates acquire meet industry needs.

CSU may be the largest inland university in Australia, with students from across Australia and around the world, but it is our sense of community in the cities in which the University is located that sets us apart.


Charles Sturt University (CSU), headquartered in Bathurst, New South Wales, offers courses through ten campuses and study centres in NSW and Victoria, and a campus in Ontario, Canada, established in 2005. CSU became a university after nearly a century of growth and diversification which started with the establishment of the Bathurst Experimental Farm in 1895 as an agricultural training site. It proceeded through a succession of institutional mergers to the point of incorporation as a university in 1989. A history of local vocational provision, including teacher training, agriculture, policing and theology, and the current multi-campus model, have helped to embed CSU within its various communities. The capacity of the university to service widely dispersed individual clients and organisations is enhanced by its distance learning programs which allow students to complete single subjects (carrying credit towards a full award), components of qualifications, and in some cases full qualifications, through a combination of online and traditional print-based distance modes.

CSU is well known for its collaborative approach to educational provision, joining forces with other education institutions, industry and government to extend regional access. One such example is the Western Riverina Higher Education Project in which a partnership between CSU, TAFE NSW Riverina Institute, Riverina Regional Development and the Griffith Council offers a suite of eight programs across the region.

CSU has been a major provider of associate degrees since the late 1990s and currently offers five stand-alone and thirteen exit point associate degrees (see Table 3). Over the past decade an increasing number of associate degrees have been made available as (or

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42 [http://www.csu.edu.au/about/history/university-history](http://www.csu.edu.au/about/history/university-history)

converted to) exit point programs. In these programs, students enrol in the full degree and can elect to exit after two years. This strategy has been adopted to improve the chances that low-SES students (including school-leavers and members of the workforce), who enrol in an undergraduate program, will be able to complete a qualification. As the CSU Deputy Vice-Chancellor Academic points out, these are the students who, for a range of financial and family reasons, are more likely to have to discontinue their studies. Under the CSU arrangements they can exit into the workforce with a paraprofessional qualification and return to study at a later stage, with full credit for their completed studies (Chambers, personal interview 2011).

CSU’s largest program – the Associate Degree in Policing Practice – averages enrolments of 2000 plus students across the two year program (see Table 4). It is the largest associate degree program offered in Australia, with statewide demand sustained through a partnership with NSW Police. Enrolments in other associate degrees are moderate to small, reflecting the thin regional market for specialist qualifications. Where students are widely dispersed in rural and remote areas, programs are offered by distance (standard duration four years) with students attending residential workshops and completing structured workplace learning. This is the case in the Associate Degree in Applied Science (Parks, Recreation and Heritage), where students are usually working part-time as park rangers. While demand for this program remains steady, completion rates (see Table 5) are quite low because students tend to take longer than the standard duration to complete their distance studies.

Table 3 Charles Sturt University 2011: associate degree programs

<table>
<thead>
<tr>
<th>STAND ALONE ASSOCIATE DEGREES</th>
<th>EXIT POINT ASSOCIATE DEGREES</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Applied Science (Parks, Recreation and Heritage)</td>
<td>• Health Science (Leisure and Health)</td>
</tr>
<tr>
<td>• Policing Practice</td>
<td>• Health Science (Mental Health)</td>
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<tr>
<td>• Music Education</td>
<td>• Health and Rehabilitation Science</td>
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<tr>
<td>• Vocational Education and Training</td>
<td>• Clinical Practice (Paramedic)</td>
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<tr>
<td>• Youth Ministry</td>
<td>• Emergency Management</td>
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<td>• Horticulture (Production)</td>
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<td></td>
<td>• Applied Science (Winegrowing)</td>
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<td></td>
<td>• Business Studies</td>
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<td></td>
<td>• Liberal Studies (Arts)</td>
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<td></td>
<td>• Educational Studies</td>
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<td></td>
<td>• General Studies (Science)</td>
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<td>• Information Studies</td>
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<td></td>
<td>• Design for Theatre and Television</td>
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<td>• Jewellery</td>
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</table>

Table 4 Charles Sturt University Associate degree enrolments: 2006-2010

<table>
<thead>
<tr>
<th>Program</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
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<th>2010</th>
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<tr>
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<td>Associate Degree in Applied Science (Food Processing)*</td>
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<td>31</td>
<td>42</td>
<td>37</td>
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Associate degrees in Australia: a work in progress
Table 5 Charles Sturt University associate degree completions: 2000-2010

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<th>Associate degree in</th>
<th>2000</th>
<th>2001</th>
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<th>2007</th>
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<td>5</td>
<td>6</td>
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<tr>
<td>Clinical Practice (Paramedic)</td>
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<td>Food Processing</td>
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<td>Health Science</td>
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<td>Grand Total</td>
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<td>44</td>
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<td>455</td>
<td>1079</td>
<td>793</td>
<td>872</td>
<td>813</td>
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</table>

Note: Prior to 2006, the Policing Practice program was offered through a diploma qualification. It was reaccredited following the inclusion of associate degrees in the AQF.

The offering of an associate degree as an exit point from a three-year degree raises the question of the extent to which the associate degree has value as a stand-alone paraprofessional qualification, as distinct from the first two years of a degree. In pointing out that the CSU accreditation processes insist that the associate degree has a valid set of learning outcomes in its own right, the DVCA agrees that it is sometimes a challenge to demonstrate this to professional and industry associations (Professor Ross Chambers, interview October 2011).
4.3.1 Associate Degree in Policing Practice

The Associate Degree in Policing Practice at Charles Sturt University, which is an entry level course into the New South Wales Police Force, started life as a diploma in 1998, and was reaccredited as an associate degree in 2006. The NSW Police were seeking to align their training with university qualifications and saw the move to an associate degree as a way of making this realignment clear. Because this is a state rather than national policing qualification, students do not qualify for Commonwealth Supported Places and the program is funded through employer reserve places. Students pay a fee which CSU keeps at the same level as HECS and the New South Wales Police pay the remainder. For the first year of the program, students receive a scholarship and in the second year are employed as probationary constables. Policing Studies students may opt to complete the first half of the program by distance and on a part-time basis prior to employment as a probationary constable. The traditional age on entry to policing is 25, and this has been maintained through the associate degree, as have the traditional target groups including applicants who have completed prior vocational qualifications including trades. The DVCA reports that concerns that the traditional recruitment base would be lost in the move to a university entry qualification have been unfounded and up to 50 per cent of those entering the course do so on the basis of a certificate level III (Professor Chambers, interview October 2011).

The Associate Degree in Policing Practice integrates field-based education with classroom and distance education study and is focused on the practical application of skills. Subjects (including communication, physical skills and operational safety) use scenarios to simulate routine police service. Students undertake an 80 hour field experience placement with the NSW Police Force. Students have the option of studying full-time on campus at the NSW Police College, Goulburn, for the first year (sessions 1 and 2), or by mixed mode study which involves distance education followed by on-campus study. Compulsory residential schools for a total of 16 days are held during the first year of study. Students with a minimum of one year operational policing experience (post-probation) receive recognition for current competency equivalent to one session exemption from formal study. Part-time distance study is also available for students who wish to continue to work during the first year of the course. Graduates of the associate degree are eligible for entry to the Bachelor of Policing and the Bachelor of Policing (Investigations).44

A feature of the Policing Practice program is its affiliation with the Indigenous Police Recruitment out West Delivery (IPROWD) program, established in 2008 in conjunction with NSW Police in western NSW which is seeking to recruit more Aboriginal Police Officers to communities in western NSW. NSW Police officers are involved in all aspects of the program from planning the course content and delivery, selecting students and teaching units within the course. The IPROWD program provides a Certificate III in Vocational and Study Pathways, which is undertaken for 20 hours per week over 18 weeks, comprising 360 hours of training in total. This qualification meets the requirements for entry to the Associate Degree in Policing Practice. Students who complete the Certificate III, but do not proceed to the NSW Police College, have further study pathways available to them. These include understanding and fulfilling the medical and fitness requirements for admission to the Police Force. In 2009, Charles Sturt University also introduced online community and

44 This overview of the Policing Practice course is drawn from the CSU website: http://www.csu.edu.au/courses/undergraduate/policing_practice_adpp/course-overview
learning support for Indigenous Policing students which is used by the students as they progress through both TAFE and University.

4.3.2 Associate Degree in Clinical Practice (Paramedic)

The Associate Degree in Clinical Practice is offered as an exit point from the degree program which was originally developed as a joint program with New South Wales Ambulance. There is an annual intake of 150 full time on-campus students, and up to 100 students a year studying by distance. While the two cohorts follow similar programs, they have quite different characteristics. On-campus students are typically year 12 graduates, or young people who have been out of school for a little while, perhaps working as volunteer first aid officers or in other related fields. A requirement for admission to the distance-delivered stream is that students are already working as a full-time paramedic or as a medic in the defence forces. Full-time students who gain employment as a paramedic can elect to shift to the distance stream. CSU’s Director for Clinical Practice, Associate Professor Jenny Wilkinson, reports that the retention rate is approximately 80 per cent of beginning students, with completion rates governed by the number of students who elect to study part-time by distance.

The program has three streams: a skills-based clinical stream; a social science stream which includes law, ethics and sociology; and a biomedical sciences stream which includes pathophysiology and pharmacology. Full-time associate degree student complete 120 hours on road practice with an ambulance crew, and degree students complete a further 120 hours in third year. The ambulance service in New South Wales is the primary provider of clinical placements, with ambulance officers acting as placement supervisors. Distance students who already have on-road experience spend their clinical practice time in a hospital intensive care environment.

Students may opt to exit with an associate degree when they get a job in the NSW Ambulance Service, or in related paraprofessional fields. Those who have unsuccessfully attempted third year subjects more than once are counseled to accept an associate degree with the option of returning to study as a later stage. Associate Professor Wilkinson reports that some students do return to complete a degree. Sometimes this occurs after they have been in the workforce for a number of years, during which time they have developed their skill base and are keen for career progression – perhaps in states where ambulance services are moving to professional status.

Engagement with local and regional employers is regarded as an essential component of the clinical practice associate degree and degree programs:

We work very hard at those external links to actively engage external parties so that our students are ready for the profession and meet those professions needs. The strong industry engagement at Charles Sturt also has a lot to do with the nature of the institution’s origins as an agriculture college and a long history as a college of advanced education, which were always vocationally focused, so always looking towards the profession for advice and input. I think that when we became a university that was maintained and enhanced and really built into all of our course development processes. Our strongest courses – nursing, teaching, policing, paramedical, medical laboratory sciences – are all very vocationally focused (Wilkinson, 2011).
4.3.3 Associate degrees as an element of CSU access and pathways strategies

While CSU has been something of a pioneer as a provider of associate degrees, the program is not considered a singular or major priority by the University’s leadership. Rather it is one of several enabling strategies to provide for higher education access across the region. Employment outcomes and/or pathways are built into other ‘short-cycle’ programs; for example, the Diploma of General Studies which is available as a one year full-time program to potential students without an ATAR score. Four subjects are drawn from TAFE Certificate IV in Further Education, and four from CSU’s bachelor level subjects. Graduates receive both the Diploma and the Certificate IV, and guaranteed entry into non-competitive CSU degrees. They may also receive credit for up to four CSU subjects in the bachelor degree. The program is offered in partnership with three TAFE Institutes, in Albury-Wodonga, Wagga Wagga and Bathurst, and will be available in Port Macquarie in 2013.

The CSU academic philosophy is best described as student rather than disciplinary-centred. Whereas many universities focus on aligning the academic levels of the two qualifications, CSU’s approach is to accept the articulating qualification on its merits (for example, a diploma as equivalent to a year of undergraduate study) and to then assess each student’s needs on a case by case basis:

We don’t treat articulation as mixing and matching, if you like, backwards. We accept that the applicant has a certain diploma with a set of learning outcomes, and ask what they actually need to cover to get the degree (Professor Ross Chambers, interview October 2011).

This case management model is supported by the CSU distance delivery model which allows students to pick units from first year or second year to bridge gaps in prior knowledge and qualifications and enable them to achieve degree level outcomes.

The preferred pathways model at CSU is one based on cooperation with TAFE Institutes in the regions serviced by CSU:

We’ve put a lot of energy into pathways with TAFE which we think is probably the preferable way of improving participation and currently about a third of our commencing undergraduate students enter by TAFE pathway. We have a lot of confidence in TAFE programs and we collaborate with TAFE very closely. The TAFEs – like the Western Institute, Riverina Institute, and North Coast Institute – reach bits of the society no one else reaches. Western Institute’s got 22 campuses in tiny places and Riverina has 18. If you’re serious about regional, especially outer regional and remote access, you have to work with the TAFEs. They’ve got the infrastructure, and as they moved increasingly into diplomas, they’ve also got staff who can operate as tutors for our programs (Professor Ross Chambers, interview October 2011).

In June 2011, Charles Sturt (along with Macquarie University, University of New England and Australian Catholic University) signed an agreement with TAFE NSW, Innovation and Business Skills Australia and CPA Australia Ltd, to participate in the TAFE NSW Tertiary Pathway to Accounting program. Students completing the two-year associate diploma at a TAFE institute will be guaranteed a place at CSU. Applicants do not need to achieve a particular grade point average; they simply need to have achieved the requirements to graduate from the associate degree. They will be provided with additional assistance (for example, additional first or second units) once they are admitted to the degree program.

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### 4.4 Deakin at Your Doorstep

| The Associate Degree of Arts, Business and Sciences is a two year, full-time (or part-time) equivalent course which will introduce school and non-school leavers to university study in a supported tertiary environment. Deakin University is offering the Associate Degree to provide greater opportunities for students in rural and regional areas, for those who may not have met the prerequisites for their chosen university course, as well as providing an option for students who would prefer a more supported entry to tertiary study. |


The Deakin University initiative, Deakin at your Doorstep (DAYD), is a response to the difficulties identified by the Bradley Review of providing higher education ‘in regional areas where there are thin markets which will not sustain a viable higher education presence’ [Australian Government, (2008b p. xii]. DAYD is an access program based on an Associate Degree of Arts, Business and Sciences delivered at Deakin’s Warrnambool campus, and by distance through a partnership between Deakin and five Victorian TAFE Institutes. The partnership delivery at Advance (East Gippsland), Sunraysia, Chisholm, South West and Goulburn-Ovens TAFE Institutes, offers residents in regional Victoria the option of university study without having to travel to a major centre (see Figure 5).
In 2008, Deakin University was awarded structural adjustment funding to ‘develop and deliver a two year Associate Degree through leading edge technology, providing an accessible pathway to higher education focusing on students in rural and regional areas who would not otherwise obtain a university place’ (Deakin University 2008). The three-year grant enabled Deakin to establish a dedicated high-speed broadband network between the DAYD partner campuses, and to negotiate arrangements for cooperative delivery of the associate degree. In the view of the Deakin DAYD coordinator, this Commonwealth grant was essential in ensuring success, particularly in rural and regional centres where implementing a new higher education pathway takes time to gain traction. In particular, the funding enabled Deakin to approach cash-strapped TAFE Institutes with an offer which did not require a large up-front investment in delivery infrastructure.

The associate degree commenced in 2010 with 77 on-campus and distance students. Enrolment in 2011 was 132 students, with 58 returning from 2010. In 2012 a total of 195 students were enrolled across eight sites.

4.4.1 Deakin associate degree options

The Associate Degree of Arts, Business and Sciences is an AQF Level 6 qualification available as a full or part-time program, studied in conjunction with a nationally recognised VET diploma or advanced diploma. The aims are to introduce students to the foundations of several disciplines, to provide a choice of further study options at bachelor degree level, and to provide access to paraprofessional occupations in business, education, health sciences, environment sciences, community services, media and communications, and design.

The on-campus program is offered through six streams: Arts, Business Studies, Education Studies, Health Studies, and Science Studies. Graduates can apply for entry with 18 months credit into related bachelor degrees, or exit with an associate degree into paraprofessional...
work. The core units in first year are designed to assist students to become more self-directed, and to develop skills in research, critical analysis, written communication and oral presentation. The core units are shown in the sample on-campus programs in Figure 6.

**Figure 6 Deakin University: sample on-campus associate degree course structures**

| Associate Degree of Arts, Business and Sciences (Pathway stream to a Deakin bachelor's degree) |
|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|
| Year/Level 1 | Trimester 1 | Learning for a Knowledge Society | E-Literacy for Contemporary Learning | Independent Study (recommended elective) | Elective Unit # |
| Trimester 2 | Work and the Sustainable Society | Applied Community Project (recommended elective) | Elective Unit # |
| Year/Level 2 | Trimester 1 | 1st or 2nd level Unit of Target Award* | 1st or 2nd level Unit of Target Award* | 1st or 2nd level Unit of Target Award* | 1st or 2nd level Unit of Target Award* |
| Trimester 2 | 1st or 2nd level Unit of Target Award* | 1st or 2nd level Unit of Target Award* | 1st or 2nd level Unit of Target Award* | 1st or 2nd level Unit of Target Award* |

| Associate Degree of Arts, Business and Sciences (Exit stream to employment) |
|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|
| Year/Level 1 | Trimester 1 | Learning for a Knowledge Society | E-Literacy for Contemporary Learning | Independent Study (recommended elective) | Elective Unit # |
| Trimester 2 | Work and the Sustainable Society | Applied Community Project (recommended elective) | Elective Unit # |
| Year/Level 2 | Trimester 1 | Elective Unit # | Elective Unit # | Elective Unit # | Elective Unit # |
| Trimester 2 | Work Placement | Elective Unit # | Elective Unit # |

Source: Deakin University DAYD Brochure 2012

The partnership option is offered as a general stream delivered by Deakin lecturers by distance, in combination with a VET diploma delivered by the partner TAFE Institute. Students undertake core associate degree units (four credit points), and a maximum of four electives selected from Deakin undergraduate units depending on the level of credit for their nominated TAFE diploma (from eight to eleven credit points). Graduates of the partnership option are also eligible for entry with credit to related Deakin bachelor degrees.

### 4.4.2 Innovations in tertiary delivery

The DAYD distance delivery model provides students with access to Deakin lectures via a high-speed video link and local face to face support provided by TAFE teachers at each of the delivery centres in the TAFE Institutes. Students attend lectures as a group, and can interact with their peers in other centres, and with the Deakin lecturer, via the video link (see Figure 7). There are opportunities for students at different centres to meet through study-related excursions – for example, a visit to a power station as part of the *Work and the Sustainable Society* unit.

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66 Sample partnership programs are shown in the overview of DAYD at Advance TAFE and Chisholm Institute on pages 72 and 74
The availability of high-quality video links between the lecturers at Warrnambool and the students in each of the study centres is clearly a critical factor in the success. Equally so is the local tutorial support provided by the TAFE partners, particularly for students returning to study. In fact the DAYD coordinator maintains that this is the key success factor in the associate degree delivery system (McCosh, 2011). For their part, the TAFE Institutes maintain that the collaborative attitude of Deakin University’s management and lecturing staff has been the key to a successful delivery model. Overviews of DAYD from the perspective of two TAFE partners provide a snapshot of the associate degree in its second year.

**DAYD at Advance TAFE**

Advance TAFE (previously East Gippsland Institute of TAFE) regards Deakin University’s associate degree as an opportunity for local students to live and study in the region. It is a strategy to support local workforce. Thirteen diplomas\(^47\) are available as a component of the Associate Degree of Arts, Business & Sciences. In the first semester the program consists of 75 per cent diploma units. Semester two consists of roughly equal numbers of diploma and associate degree units, and second year is largely made up of associate degree units. In this way, students have the chance to find their feet in their on-campus studies and gradually take up the distance learning model. In year one, Advance TAFE provides a local tutor for each unit and in second year provides general study support across all units. If required, students with special needs are case managed.

\(^{47}\) These are the Diplomas in: Accounting; Alcohol and Other Drugs; Business; Business Administration; Children’s Services; Conservation and Land Management; Community Services Work; Disability Work; Employment Services; Graphic Design; Human Resources Management; Management; and Visual Arts.
In 2010, Advance enrolled 24 students – the largest cohort recruited by a TAFE partner. This predominantly female cohort is made up of equal proportions of under 24 year olds, and a 35-50 year old group. Students come from the local area – Bairnsdale, Lakes Entrance and Bruthen – and from towns such as Maffra and Traralgon which are up to two hour’s drive away. A number had previously left East Gippsland to pursue higher education. When this did not work for them they returned to the region, found work and/or started a family. They see the Deakin/Advance TAFE program as an opportunity for further study and career advancement which they could not otherwise access from home, other than via fully online study. Of the original enrolment of 24, six students decided to drop their associate degree units in first year because of the pressures exerted by work, study, family and the combined Diploma/Associate Degree. Instead they have decided to continue their Diploma studies first and continue with the Associate Degree after completing the Diploma. According to Advance TAFE’s Executive Manager, Learning and Innovation, the aspiration to undertake an Associate Degree is still there (Brigg 2011).

The programs available to students at Advance TAFE in 2012 are listed in Table 6. Table 7 shows a sample program combining the associate degree with the Diploma of Accounting.

Data on the current associate diploma intake are shown in Table 8.

<table>
<thead>
<tr>
<th>Course</th>
<th>Target Award</th>
<th>Credit Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associate Degree of Arts, Business and Sciences (Arts Studies)/</td>
<td>Bachelor of Creative Arts (Graphic Design)</td>
<td>Up to 12</td>
</tr>
<tr>
<td>Diploma of Graphic Design</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Associate Degree of Arts, Business and Sciences (Arts Studies)/</td>
<td>Bachelor of Creative Arts (Visual Arts)</td>
<td>Up to 12</td>
</tr>
<tr>
<td>Diploma of Visual Arts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Associate Degree of Arts, Business and Sciences (Business Studies)/</td>
<td>Bachelor of Commerce</td>
<td>Up to 13</td>
</tr>
<tr>
<td>Diploma of Accounting</td>
<td>Bachelor of Management</td>
<td></td>
</tr>
<tr>
<td>Associate Degree of Arts, Business and Sciences (Business Studies)/</td>
<td>Bachelor of Commerce</td>
<td>Up to 12</td>
</tr>
<tr>
<td>Diploma of Business</td>
<td>Bachelor of Management</td>
<td></td>
</tr>
<tr>
<td>Associate Degree of Arts, Business and Sciences (Business Studies)/</td>
<td>Bachelor of Commerce</td>
<td>Up to 12</td>
</tr>
<tr>
<td>Diploma of Business Administration</td>
<td>Bachelor of Management</td>
<td></td>
</tr>
<tr>
<td>Associate Degree of Arts, Business and Sciences (Business Studies)/</td>
<td>Bachelor of Management</td>
<td>Up to 15</td>
</tr>
<tr>
<td>Diploma of Management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Associate Degree of Arts, Business and Sciences (Business Studies)/</td>
<td>Bachelor of Management</td>
<td>Up to 12</td>
</tr>
<tr>
<td>Diploma of Human Resource Management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Associate Degree of Arts, Business and Sciences (Education Studies)/</td>
<td>Bachelor of Education (Primary)</td>
<td>Up to 6</td>
</tr>
<tr>
<td>Diploma of Children’s Services</td>
<td>Bachelor of Early Childhood Education</td>
<td>Up to 16</td>
</tr>
<tr>
<td>Associate Degree of Arts, Business and Sciences (Health Studies)/</td>
<td>Bachelor of Health Sciences</td>
<td>Up to 10</td>
</tr>
<tr>
<td>Diploma of Children’s Services</td>
<td>Bachelor of Psychology</td>
<td></td>
</tr>
<tr>
<td>Associate Degree of Arts, Business and Sciences (Health Studies)/</td>
<td>Bachelor of Health Sciences</td>
<td>Up to 12</td>
</tr>
<tr>
<td>Diploma of Community Services Work</td>
<td>Bachelor of Psychology</td>
<td></td>
</tr>
<tr>
<td>Associate Degree of Arts, Business and Sciences (Health Studies)/</td>
<td>Bachelor of Health Sciences</td>
<td>Up to 12</td>
</tr>
<tr>
<td>Diploma of Disability Work</td>
<td>Bachelor of Psychology</td>
<td></td>
</tr>
<tr>
<td>Associate Degree of Arts, Business and Sciences (Health Studies)/</td>
<td>Bachelor of Health Sciences</td>
<td>Up to 12</td>
</tr>
<tr>
<td>Diploma of Alcohol and Other Drugs</td>
<td>Bachelor of Psychology</td>
<td></td>
</tr>
<tr>
<td>Associate Degree of Arts, Business and Sciences (Health Studies)/</td>
<td>Bachelor of Health Sciences</td>
<td>Up to 12</td>
</tr>
<tr>
<td>Diploma of Employment Services</td>
<td>Bachelor of Psychology</td>
<td></td>
</tr>
<tr>
<td>Associate Degree of Arts, Business and Sciences (Science Studies)/</td>
<td>Bachelor of Environmental Science (Marine</td>
<td>Up to 10</td>
</tr>
<tr>
<td>Diploma of Conservation and Land Management</td>
<td>Biology)</td>
<td></td>
</tr>
<tr>
<td>Associate Degree of Arts, Business and Sciences (Arts Studies)/</td>
<td>Bachelor of Arts</td>
<td>Up to 10</td>
</tr>
<tr>
<td>Approved other TAFE Diploma</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Associate degrees in Australia: a work in progress

From Advance TAFE’s perspective, the partnership with Deakin University is ‘going well’. There is genuine collaboration, with TAFE staff involved in planning and delivery, working alongside Deakin faculty. Advance TAFE educators were able to bring design ideas to the table and have key features of VET pedagogy, including competency-based recognition for prior learning, built into the delivery strategy. There has been consistency of coordination with the same Deakin coordinator since the program began, and a strong commitment to consultation and equity of roles in the partnership. Advance TAFE’s DAYD coordinator is also cited as an important factor in the DAYD partnership. The coordinator, who has experience in higher education and TAFE, and a good knowledge of local conditions and educational needs, has been critical to the program’s success. Also important is the fact that the delivery technology has functioned consistently. Students and staff have responded well to the quality of broadcast and other online materials. Advance TAFE regards the initiative as a ‘serious and sustainable venture for both partners’ which sends a message about the value of higher education, and of Deakin in particular, to a region which has in the past struggled to maintain a comprehensive range of higher education programs.

Table 7 Sample associate degree program available through Advance TAFE

<table>
<thead>
<tr>
<th>Year/Level</th>
<th>Trimester 1</th>
<th>Trimester 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st year</td>
<td>Learning for a Knowledge Society</td>
<td>Work and the Sustainable Society</td>
</tr>
<tr>
<td>2nd year</td>
<td>E-Literacy for Contemporary Learning</td>
<td>TAFE diploma units</td>
</tr>
<tr>
<td></td>
<td>TAFE diploma units</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year/Level</th>
<th>Trimester 1</th>
<th>Trimester 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st year</td>
<td>Business Communication</td>
<td>Management</td>
</tr>
<tr>
<td>2nd year</td>
<td>Financial Accounting</td>
<td>Business Law</td>
</tr>
<tr>
<td></td>
<td>TAFE diploma units and/or Level 1 or 2 units from Commerce degree depending on diploma credit arrangements</td>
<td></td>
</tr>
</tbody>
</table>

Table 8 Advance TAFE DAYD statistics: 2011

<table>
<thead>
<tr>
<th>Year of program</th>
<th>1st year</th>
<th>2nd year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of enrolments</td>
<td>18</td>
<td>24*</td>
</tr>
<tr>
<td>Male</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Female</td>
<td>13</td>
<td>16</td>
</tr>
<tr>
<td>Exit year 12</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Already hold a Diploma</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Diploma enrolment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounting/management</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Social Services</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Visual arts</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Students who received recognition for previous studies/ experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounting</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Community Services</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

* 18 students continuing with associate degree; 6 completing the diploma.
DAYD at Chisholm Institute of TAFE

Chisholm Institute commenced its membership of the DAYD program in 2010 when eleven Diploma in Accounting students enrolled in Deakin University’s Associate Degree in Arts Business and Sciences. In 2011, a further eleven students enrolled in the Diploma of Accounting, the Advanced Diploma in IT and the first year of the associate degree. Six second year accounting students completed their associate degree in 2011 and applied to do the off-campus Deakin Bachelor of Commerce. In 2012, Chisholm offered four associate degree/diploma streams (Table 9) with a total of 14 students enrolled in the Associate Degree in Education Studies and the Diploma in Children’s Services, and in the Associate Degree in Science Studies and the Diploma in Conservation and Land Management, offered through the Chisholm Rosebud campus.

Graduates of the Associate Degree in Education Studies may exit into work in child care, kindergartens, family day care, school holiday programs, occasional care, before and after school care. Alternatively, they may apply for admission with credit to Deakin’s Bachelor of Education (Primary) or Bachelor of Education (Early Childhood). Graduates of the Associate Degree in Science Studies may exit into technical and supervisory work in natural parks, water catchment and coastal areas (in roles such as Park Ranger, Natural Resources Manager, LandCare Worker, Water Industry Operative or Marine Park Management), or apply for admission to Deakin’s Bachelor of Environmental Science (Table 10).

<table>
<thead>
<tr>
<th>Course</th>
<th>Campus</th>
<th>Target Award</th>
<th>Credit Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associate Degree of Arts, Business and Sciences/ (Technology Studies)/Advanced Diploma of Information Technology (Software Development)</td>
<td>Dandenong, Mornington Peninsula</td>
<td>Bachelor of Information Technology</td>
<td>Up to 12</td>
</tr>
<tr>
<td>Associate Degree of Arts, Business and Sciences/ (Education Studies)/Diploma of Children’s Services</td>
<td>Dandenong, Mornington Peninsula</td>
<td>Bachelor of Education (Primary) / Bachelor of Early Childhood Education</td>
<td>Up to 6 / Up to 16</td>
</tr>
<tr>
<td>Associate Degree of Arts, Business and Sciences/ (Health Studies)/Diploma of Children’s Services</td>
<td>Dandenong, Mornington Peninsula</td>
<td>Bachelor of Health Sciences / Bachelor of Psychology</td>
<td>Up to 10</td>
</tr>
<tr>
<td>Associate Degree of Arts, Business and Sciences/ (Science Studies)/Diploma of Conservation and Land Management</td>
<td>Mornington Peninsula</td>
<td>Bachelor of Environmental Science (Marine Biology) / Bachelor of Environmental Science (Fresh Water Biology)</td>
<td>Up to 10</td>
</tr>
<tr>
<td>Associate Degree of Arts, Business and Sciences/ Approved other TAFE Diploma</td>
<td>Dandenong, Mornington Peninsula</td>
<td>Bachelor of Arts</td>
<td>Up to 10</td>
</tr>
</tbody>
</table>

**Table 9 Associate degree streams offered by Chisholm Institute: 2012**

**Table 10 Associate degree stream in Conservation and Land Management**
Katrina Halabarec, who has been a Tutorial Support Officer in the Chisholm Institute DAYD program since 2009, describes her role as one which combines student support and program coordination and administration, in consultation with the Deakin DAYD coordinator, Alistair McCosh. Katrina acts as the first point of contact for students, provides tutorial support and ensures that technical equipment is working and rooms are set up for ‘Deakin Day’ every Thursday. A typical Deakin Day has students participating in an online lecture in one of the core units (for example, Learning for a Knowledge Society, or e-Literacy for Contemporary Learning) between 9.00am and 10.00 am, followed by a face to face tutorial between 10.00am and 12 noon. After lunch there is another core unit lecture between 1.00pm and 2.00pm, and a tutorial between 2.00pm and 4.00 pm.

The tutorials provides students’ with the opportunity to go over any aspects of the lecture they did not understand, or would like to pursue in more detail, as well as a time to work with other students and develop their communication skills through presentations, discussions and debates. Morning tutorials tend to feature a key reading from the course and a discussion. Afternoon tutorials are more hands-on – for example, a writing workshop to prepare students for their major essay. Students undertake their diploma studies along with other diploma students throughout the week, but efforts are made to keep the diploma and associate degree units running along parallel paths (perhaps by bringing examples relevant to the vocational units into the associate degree work). Assessment of the associate degree units is undertaken jointly by Chisholm and Deakin staff. For example, the Tutorial Support Officer assesses the essay plan and bibliography, and the Deakin lecturer assesses the final draft essay. Deakin and Chisholm staff meet to moderate assessment and to determine grades.

Katrina describes the relationship with Deakin as positive and constructive, and believes that both institutions are ‘in there for the long haul’. She has observed the relationship between the Deakin DAYD coordinator, academics and the eight Tutorial Support Officers from the partner TAFE Institutes, develop into a close knit team. She appreciates the ‘great admin support’ and the collegiate attitude of the Deakin academic staff whom she describes as ‘a fabulous team and inspiring to work with’. Her students are similarly positive about their experience. In the first two years, the DAYD program was marketed to students who had just enrolled in a diploma or advanced diploma as an additional option. Many have said that they would not have considered university study if it were not for the offer to complete the associate degree as part of their TAFE studies.

4.4.3 Success and sustainability factors

The Deakin associate degree is just into its fourth year. So far the majority of graduating students have elected to articulate to a bachelor degree and enrolments have more than doubled between 2010 and 2012. It is clearly too early to say whether the initial success will be sustained. However, there are several factors which offer the program a chance of long-term sustainability. The first is that the Deakin-TAFE relationship is perceived by both parties as a true partnership. The TAFE Institutes feel that their needs are taken into account and their expertise fully utilised in implementing the program. Deakin academics have come to see that the standards achieved by the TAFE associate degree students are on a par with those enrolled in the on-campus Warrnambool program. Second, Deakin has invested in
building its relationships with each TAFE Institute, negotiating individually rather than adopting a ‘one size fits all’ attitude. This individual relationship-building is underpinned by a full time DAYD coordinator who travelled 95,000 kilometres around the state between 2009 and 2011 to nurture the Deakin-TAFE partnerships. Third, the program provides a cost-effective solution to the delivery of higher education in thin regional markets. Having associate degree students enrolled through eight different sites across Victoria provides the critical mass necessary to sustain a program as well as a set of local support bases for students who may not have otherwise taken up a higher education place. Fourth, as well as being supported on their home territory, students are linked with each other across the state – virtually through the online lecture sessions in which they can interact with their peers in the same industry/disciplinary areas, and face to face on statewide excursions through which they get a sense of belonging to a larger student body.

A possible threat to Deakin’s associate degree partnerships

In May 2012, the Victorian state government announced severe cuts to the funding rates for many VET qualifications. Some qualifications suffered reductions of between 30 and 80 per cent – funding rates fell between $9 and $12 per student contact hour (SCH) to as low as $2 per SCH. Victorian TAFE and dual sector Institutes are currently weighing up the implications of these funding cuts – estimated at a total of $300 million across the sector in 2013. Although the regional subsidy has been reinstated, non-metropolitan TAFE institutes say that it is insufficient to make up for the loss in SCH funding. Three of Deakin’s DAYD partners — Sunraysia, Goulburn-Ovens and Advance TAFE — are likely to cut delivery of diploma programs in accounting and business administration (now funded at $4 and $2 per SCH). Chisholm Institute, which offers Conservation and Land Management ($7 per SCH) and Children’s Services ($5 per SCH), may also struggle to retain numbers as student fees are increased to make up the shortfall. Enrolments in the associate degree, which were small during the formative stage of the DAYD partnership program, had been projected to grow quite significantly given the positive initial responses from students to the delivery model and good completion levels. However, the new Victorian government funding regime now threatens Deakin’s capacity to meet the commitments it made in its application for structural adjustment.

4.5 Associate degrees at RMIT:

Integral to an RMIT education is learning through action and experience, whether that comes through assessed work placements, studios, projects or clinical practice. We aim to foster independence of thought and action, to encourage synthesis of knowledge to find solutions and to provide the sense of achievement in completing a complex assignment for which the student has been responsible. The creation of authentic assessable experiences of this type whether individual or team-based, in a domestic or an overseas location, requires a level of investment and organisation above and beyond the standard classroom experience. It is this investment that we must make a focus for our student experience at RMIT.

Source: RMIT 2010, p. 14

The first RMIT associate degree, in graphic technology, was accredited in November 2003, shortly after the associate degree was incorporated into the AQF. In July 2005, three additional programs – in business information technology, computer science and
engineering technology – were accredited for delivery in 2006 (RMIT Academic Board June 2005, p. 1). At this stage, without Commonwealth Supported Places, the RMIT focus was on international on-shore enrolments, with a view to providing pathways into bachelor degrees for students entering an associate degree with an IELTS of 6.0 (at that time degree entry was IELTS 6.5). Although the 2005 Academic Board policy paper did refer to the possibility of offshore delivery of associate degrees, students at the RMIT Vietnam campus, and those enrolled through partnership arrangements in Singapore and China, were to be directed to ‘Higher Education’ diplomas:

... packaged and offered concurrently with an English language training program, for students who have an IELTS of 5.5 [...] to provide an articulated pathway to the Bachelor degree (RMIT Academic Board 2005, p. 4).

Shortly after this policy paper was approved, RMIT moved to implement a new strategic plan: *RMIT 2010: Designing the Future* (RMIT 2005). The Vice Chancellor’s introduction reminded the RMIT community of its beginnings and the continuing relevance of the original vision for the RMIT in the 21st century:

The core of RMIT’s success in education has been to provide students and industry with focused outcomes relevant to industry and professions. The approach has been one of cultivating minds while also building skills, to paraphrase the University’s motto *Perita manus, mens exculta* – a skilled hand, a civilised mind. This approach remains vital. The major objective for many of the students, domestic and international, who seek post-secondary education, is to gain a professional or vocational education that will allow them to move swiftly to apply themselves to the fields in which they are interested (RMIT 2005: 1).

In 2007, the Deputy Vice Chancellor submitted a revised associate degree policy paper to Academic Board, citing two Strategic Plan priorities as the context for RMIT associate degrees:

Priority 2: Position RMIT as the first choice provider of work- and industry-relevant learning; and
Priority 4: Ensure flexible, useful pathways and learning opportunities for students (RMIT 2007, p. 1).

The policy paper referred to two strategic drivers in the development of an RMIT approach to associate degree. The first was the RMIT Academic Plan 2006-10, which is regarded as a ‘turning point in establishing a more strategic approach for Associate Degrees’. The paper goes on to say that:

This [Academic Plan] identified Associate Degrees as a key element in RMIT’s dual sector advantage. Importantly, it highlighted how RMIT’s Associate Degrees could be used by industry to fast-track employees through educational pathways and at the same time address industry’s need for high level paraprofessional skills. RMIT’s Integrated Engineering Pathway and IBM Cadetships are two examples of accelerated industry-based pathways. Further information on RMIT’s industry-based pathways is at Appendix C. It also marked the beginning of serious attention to our domestic market for Associate Degrees (RMIT 2007, p. 2, emphasis added).

The second driver was a $400,000 grant from the Commonwealth’s Collaboration and Structural Reform (CASR) Fund to develop associate degrees for accelerated industry-based pathways. The paper notes two key aspects to this project:

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48 There is mention in the 2005 RMIT policy paper of employer reserved places.

49 The policy references in the 2005 RMIT Academic Board paper were to the RMIT 2005-7 Business Plan goal of improving pathways (RMIT Academic Board 2005, p. i).

Associate degrees in Australia: a work in progress
Firstly, the Associate Degree in Engineering Technology will be mapped against national vocational qualifications to determine cross-credit arrangements. It will also be professionally accredited with Engineers Australia giving it national and international recognition (ibid).

The engineering associate degree program architecture resulting from project became a defining characteristic of the RMIT associate degree. ‘Horizontal articulation’ was considered to be of equal importance to providing pathways into higher level degrees and defines the RMIT associate degree as a distinctly vocational qualification. The following RMIT associate degree program design guidelines specify the ways in which the vocational and academic aspects of the program are to be implemented:

1. They should provide a guaranteed pathway into one or more relevant Bachelor Degrees (vertical articulation). Students will receive two years advanced standing for a Bachelor Degree in the same discipline. In addition students will receive credit into other relevant degrees (to be determined on a case by case basis).

2. They should provide a guaranteed pathway into one or more relevant Diplomas of Advanced Diplomas (horizontal articulation). All Associate Degrees should be mapped against relevant national and state vocational qualifications and clearly identify entry and exit points. Students will receive a guaranteed level of credit for relevant Diplomas (up to one year) and Advanced Diplomas (up to 1.5 years). In addition students will receive credit into other relevant TAFE qualifications (to be determined on a case by case basis).

3. They should be designed around a common core of courses in the first year in with specialisation in the second year to enable pathways into one or more Bachelor Degrees aligned with the five RMIT industry priorities: Aerospace and Aviation; Automotive; Media and Communications; Built Environment, Construction and Infrastructure; and Health and Community Services.

[...]

8. The title will be Associate Degree in Discipline with specialisation (if relevant) indicated in brackets e.g. Associate Degree in Engineering Technology (Advanced Manufacturing).

9. They should support RMIT’s industry engagement strategy by being aligned with employers’ needs and be explicitly recognised by industry (through professional accreditation where appropriate). They should also incorporate work integrated learning and where possible workplace delivery.

10. They should be sufficiently differentiated and clearly marketed in relation to both Advanced Diplomas and Bachelor Degrees (RMIT 2007: 1)\(^{50}\).

The vocational nature of the program was underlined by the decision that associate degrees would be managed by RMIT TAFE schools and delivered by teachers employed under the state vocational award. The academic orientation of the program was specified in the remaining six program design guidelines which align associate degrees with the architecture of a bachelor degree and the regulations for RMIT accredited qualifications:

4. Courses will comply with the 12 credit point requirement.

5. Associate Degrees can be developed from new or existing courses and will normally include 16 courses.

6. At least one course will be a student elective.

7. Course assessment will use the higher education grading system (HD, D, Cr...).

[...]

\(^{50}\) Available on the RMIT website at: [http://www.rmit.edu.au/browse;ID=e95bz9ik3xjyz](http://www.rmit.edu.au/browse;ID=e95bz9ik3xjyz)
11. The development, delivery, review and termination of Associate Degrees will follow the established processes in place for Higher Education programs.

12. RMIT Program Quality Assurance (PQA) processes and systems (use of Student Feedback including course level surveys and staff student consultative committees and program annual reporting) will apply (ibid).

4.5.1 Programs and enrolments

Since the Commonwealth government included associate degrees in the envelope for Commonwealth Supported Places in 2007, RMIT enrolments have doubled or nearly doubled each year to a total of 1826 EFTSL in 2012 (see Table 11).

<table>
<thead>
<tr>
<th>Year</th>
<th>CSP</th>
<th>International</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>70</td>
<td>51</td>
<td>121</td>
</tr>
<tr>
<td>2008</td>
<td>110</td>
<td>98</td>
<td>208</td>
</tr>
<tr>
<td>2009</td>
<td>180</td>
<td>139</td>
<td>319</td>
</tr>
<tr>
<td>2010</td>
<td>280</td>
<td>207</td>
<td>487</td>
</tr>
<tr>
<td>2011</td>
<td>581</td>
<td>538</td>
<td>1119</td>
</tr>
<tr>
<td>2012</td>
<td>1220</td>
<td>603</td>
<td>1823</td>
</tr>
</tbody>
</table>

The range of associate degrees offered at RMIT has been extended, and a total of 13 programs were offered in 2012. A further seven programs were accredited for introduction in 2013. Current and projected programs, and their year of introduction, are shown in Table 12.

Footnote: Demand-driven funding promised a continued rate of growth in government funded associate degrees, however, the 2011 Commonwealth Government decision to cap funding for all ‘sub-degree’ programs – diplomas, advanced diplomas and associate degrees – has led to a changed planning framework. The Commonwealth move was in part a response to concerns from TAFE Directors Australia that universities were encroaching on VET territory. It also sought to ensure that the increase in enrolments at AQF level 6 did not represent cost-shifting from the states to the Commonwealth. The RMIT case for continued growth in associate degrees has so far met Commonwealth criteria. Although the allocation was smaller than requested, it is nevertheless sufficient to maintain programs and grow new programs in areas of skill shortage.
### Table 12 Current RMIT associate degrees

<table>
<thead>
<tr>
<th>Year</th>
<th>Business*</th>
<th>Design &amp; Social Context*</th>
<th>Science, Engineering &amp; Health*</th>
</tr>
</thead>
</table>
| 2008 |           | Associate Degree in Design (Furniture) | Associate Degree in Information Technology  
|      |           |                          | Associate Degree in Engineering Technology (Network Engineering)#  
|      |           |                          | Associate Degree in Engineering Technology (Mechanical)#  
|      |           |                          | Associate Degree in Engineering Technology (Civil Engineering)#  |
| 2009 |           |                          | Associate Degree in Engineering Technology (Electrical/Electronics)  |
| 2010 | Associate Degree in Business |           |                               |
| 2011 |           | Associate Degree in Fashion and Textile Merchandising | Associate Degree in Applied Science |
| 2012 | Associate Degree in Legal Practice (Paralegal) | Associate Degree in Professional Writing and Editing  
|      |           | Associate Degree in Fashion Design and Technology | Associate Degree in Aviation (Professional Pilots)  |
| 2013 |           | Associate Degree in Screen and Media  
|      |           | Associate Degree in Graphic Design | Associate Degree in Health Sciences  
|      |           | Associate Degree in Interior Decoration and Design | |
|      |           | Associate Degree in Visual Merchandising | |

* Three programs accredited in 2003 (in business information technology, graphic technology and computer science) were discontinued in 2008. The original Associate Degree in Engineering Technology was reaccredited in 2008 as the four listed engineering technology specialisations.

# RMIT engineering associate degrees are accredited by Engineers Australia for entry to engineering occupations at the level of Engineering Technologist.

### 4.5.2 Student profile and market orientation

- Associate degree students are young, predominantly school leavers, drawn from domestic and international markets. Of the 2011 enrolments:
  - 70 per cent are aged between 18 and 20 years of age;
  - 76 per cent are male, 24 per cent are female;
  - 54 per cent of 2011 enrolments are in engineering, of whom 17 per cent are female;
  - 61 per cent are Australian domestic students;
  - 35 per cent are international onshore students;
  - 4 per cent of students are from New Zealand or on other special visas;
  - 80 per cent of the domestic students have a Melbourne metropolitan home postcode.
Although the northern suburbs of Melbourne are considered to be an important source of students for RMIT, current Melbourne based associate degree students are drawn predominantly from the outer eastern and southern suburbs.

As the suite of associate degrees at RMIT continues to grow, the original industry orientation has been affirmed. Programs are aligned to specific industry needs, designed to address skill shortages in some areas and to provide for emerging and niche occupations and industries whose skill needs cannot be met through national Training Package qualifications at AQF levels 5 and 6. The following three examples illustrate the way in which RMIT associate degrees are designed to address skill shortages, and niche and new occupations and industries.

**Associate Degrees in Engineering Technology**

Engineering associate degrees have been designed to address the shortage of professional and paraprofessional engineers, which is a currently an issue in almost all engineering specialisations. Several reasons are advanced for the shortage of graduates to fill engineering vacancies, including: fluctuating demand related to the Global Financial Crisis (GFC); a lack of applicants for engineering degrees with sufficient maths and science skills; a poor curriculum fit between VET diploma and advanced diploma qualifications and engineering degrees; and continuing difficulties recruiting girls into engineering degrees (Australian National Engineering Taskforce (ANET) 2012). One of the recommendations made in this ANET report is for the ‘revitalisation of the paraprofessional qualifications at AQF level 6, Advanced Diplomas and Associate Degrees’ on the grounds that ‘[t]hese qualifications provide entry to Engineering Associate occupations and the opportunity for graduates to progress to further studies and become engineering technologists and professional engineers’ (ANET 2012, p. 18).

Engineering associate degrees are regarded by RMIT as an appropriate strategy to increase the supply of engineering graduates. First, associate degrees offer a solution to the difficulties in securing effective articulation arrangements from advanced diplomas – for example, as reported in another ANET report (King et al 2011), they can be specifically designed to align with relevant degrees. Second, associate degrees support students with lower than required levels of maths and science. Students undertake more structured learning in smaller classes over a longer semester (16 weeks compared to the normal degree semester of 12 weeks) and take studies designed to provide them with the required maths level needed to: (a) practice as an engineering technologist; and (b) articulate to professional engineering at year three of the bachelor degree.

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52 On 07 November 2011, the Australian Senate referred the shortage of professional engineers to the Senate Education, Employment and Workplace Relations Committee. A report is due on June 30 2012. Engineers Australia (EA) reports that: ‘The flow of new domestic professional engineers, engineering technologists and engineering associates graduating from Australian universities and TAFE colleges cannot meet growth in the demand for engineers’ (Kaspura 2011, p. 72). EA estimates a shortage of 20,000 professional engineers across all areas and most levels of specialisation, particularly in civil, mechanical, electrical and structural engineering at entry mid-career levels (Kaspura 2011, p. 76).

53 This report from the Australian Council of Deans of Engineering argues that: ‘The mismatches and gaps between the content of these qualifications and engineering degree programs are seen to be the biggest barrier to successful articulation. The degree graduation rate of VET-qualified students is, on average, significantly less than that of school-leavers’ (King et al 2011, p. i).
Articulation rates are high, with an overwhelming majority of domestic graduates across the four RMIT engineering technology associate degrees reporting that they were in full-time study four months after graduation (2010 and 2011 Graduate Destination Surveys). In 2010, an evaluation of articulation from engineering associate degree to degree programs resulted in curriculum changes aimed at smoothing the pathway to higher education as well as strengthening vocational outcomes. These changes included incorporating:

- Instruction in the use of specialised (CATIA) design software in the Associate Degree in Engineering Technology (Mechanical);
- Auto CAD studies in the first year of the Civil and electrical streams to support employment at engineering technologist level as well as articulation to degree studies;
- An Engineering Project course in the second year of the four engineering associate degree streams to provide an integrated capstone experience aimed at increasing readiness to take on engineering technologist occupations and to move into the degree program54;
- Adjustment to the sequencing of courses to provide second year students with access to Automation concepts prior to commencement of their Engineering project; and
- The introduction of MATLAB – a specialised mathematics software application used in degree programs, into the associate degree (Sharma 2010, p. 7-8).

It is noteworthy that students who had articulated to degree level engineering reported favourably on the practical nature of the core first year course, Engineering Management, regarding it as better preparation for engineering work than the Professional Practice course in the undergraduate degree which they study in third year (Sharma 2010, p. 7).

**Associate Degree in Applied Science**

The Associate Degree in Applied Science has been developed in close consultation with relevant industry and professional associations and enterprises, including the Red Cross Blood Bank, the Ovarian Cancer Biomarker Research Group, Austin Health, Melbourne Pathology, the Food Industry Training Board, Nestle, Dairy Australia, and Prince Henry’s Institute. The currency of industry knowledge and skills in the program is maintained through regular consultation with industry advisory committees. The associate degree comprises two major streams in food and biomedical sciences. Both areas are undergoing rapid technological change which is creating the need for new skill sets and generating new occupational categories at professional and paraprofessional levels – for example, in the food industry there is a need for highly developed practical skills in food handling and processing, and in biosciences there are paraprofessional career opportunities in diagnostics, medical research, veterinary, and biological and biotechnology laboratory research. There is a strong focus on work-integrated learning to ensure that graduates are work-ready; for example, students are allocated a laboratory place and spend a minimum of 80 hours engaged in projects which deal with workplace problems. Additionally graduates of the associate degree are eligible for entry with up to two years’ credit in RMIT degree programs including the Bachelors of Biomedical Science (Laboratory

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54 To support articulation, the Engineering Project is designed and developed in collaboration with Higher Education Schools. Guest speakers from industry were invited to give insights about current industrial scenarios. Student mentors are provided to students. Additionally, engineering academics present lectures to orient students to higher education studies.
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Medicine/Pharmaceutical Science), and the Bachelors of Science (Food Technology & Nutrition/Biotechnology).

The Associate Degree in Applied Science also aims to support implementation of the National Health Workforce Innovation and Reform Strategic Framework for Action 2011-2015 (Health Workforce Australia 2011) which calls for a reconfiguration of health workforce arrangements and the education and training programs that prepare and support them. Both associate degree streams offer broad-based industry courses which support the shift towards interprofessional education and practice ‘where health professionals from different backgrounds learn with, from and about one another to improve collaborative team-based practice and the quality of care delivered’ (Health Workforce Australia 2011, p. 19).

Associate Degree in Legal Practice (Paralegal)

This new associate degree, introduced in 2012 with an allocation of 50 EFTSL, proved to be very popular with applications well exceeding available places. Development of the program was actively supported by major legal institutions in Victoria including the Law Institute, the Institute of Legal Executives, Victoria Legal Aid, Berry Family Law, Slater & Gordon Lawyers, Maurice Blackburn Lawyers, and other legal firms. The first intake of students comprises full-time year 12 graduates, and provision has been made for online delivery for existing paralegal staff to upgrade their qualifications and receive recognition for existing skills and knowledge.

Paralegal occupations include legal support staff, legal assistants, law clerks and legal executives. In a law firm, paralegal staff assist lawyers by carrying out professional legal work under supervision of a lawyer. Increasingly, paralegals are also employed in a wide variety of law related roles in legal and business environments including conveyancing and property law, consumer protection, public administration, probate, family law, intellectual property, trade practices, employment and corporations’ law. The RMIT associate degree aims to develop practical skills relevant to work across this growing paralegal environment, including case analysis, legal research, file management, legal writing and drafting, interview and negotiation skills, and skills in identifying and analysing legal concepts and principles. There is currently no national Training Package qualification to meet the growing range of specialist paralegal skill and knowledge roles, and the current Victorian state accredited advanced diploma (previously offered by RMIT) is likely to be phased out at the end of its accreditation period – particularly now that the Victorian legal community has shown support for an associate degree.

The development of the paralegal associate degree is aligned to two areas of national micro-economic reform. In February 2009, the Council of Australian Governments’ (COAG) added legal profession reform to the COAG micro-economic and regulatory reform agenda, and it is expected that the use of paraprofessionals in legal services will increase, in much the same way as allied health professional roles have increased in health care. In 2010, the Parliamentary Report of the Senate Legal and Constitutional Affairs Committee made recommendations that would increase the demand for paraprofessionals in providing legal services, including a recommendation for a ‘triage’ approach to providing legal services, alternative dispute resolution, and other measures to improve public access to the legal system. The development of paralegal occupations was seen as a means to achieve these objectives.
Meeting Commonwealth targets

RMIT’s market orientation also supports Commonwealth targets for increased participation in bachelor degrees. Participation levels for domestic students from low SES backgrounds varies across associate degree programs, with a number exceeding the RMIT average of 15.63 per cent low SES as measured by postcode, and the 2012 improvement target of 15.88 per cent.55

Table 13 Low SES students in RMIT associate degrees as a percentage of total enrolment: 2011

<table>
<thead>
<tr>
<th>Program</th>
<th>Low SES: commencing students</th>
<th>Low SES: all students</th>
<th>NESB students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associate Degree in Information Technology</td>
<td>31.3%</td>
<td>21.0%</td>
<td>22.2%</td>
</tr>
<tr>
<td>Associate Degree in Applied Science</td>
<td>16.7%</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Associate Degree in Engineering Technology (Civil Engineering)</td>
<td>19.7%</td>
<td>18.8%</td>
<td>na</td>
</tr>
<tr>
<td>Associate Degree in Engineering Technology (Electrical/Electronics)</td>
<td>20.0%</td>
<td>na</td>
<td>13.3%</td>
</tr>
<tr>
<td>Associate Degree in Engineering Technology (Network Engineering)</td>
<td>28%</td>
<td>18.4%</td>
<td>na</td>
</tr>
<tr>
<td>Associate Degree in Engineering Technology (Mechanical)</td>
<td>8.3%</td>
<td>10.0%</td>
<td>8.0%</td>
</tr>
<tr>
<td>Associate Degree in Design (Furniture)</td>
<td>13.6%</td>
<td>11.8%</td>
<td>Na</td>
</tr>
<tr>
<td>Associate Degree in Business</td>
<td>28.0%</td>
<td>18.4%</td>
<td>5%</td>
</tr>
<tr>
<td>Associate Degree in Fashion and Textile Merchandising</td>
<td>8.0%</td>
<td>na</td>
<td>na</td>
</tr>
</tbody>
</table>

na = data not available

The RMIT improvement target for participation of students from a non-English-speaking background (NESB) is 5.05 per cent. Again, associate degree enrolment data shows that the program is supporting achievement of participation targets.

4.5.3 Developing an associate degree community of practice at RMIT

The RMIT associate degree is achieving critical mass with thirteen programs offered in 2012, and five new programs introduced during 2013. The student load under the funding agreement with the Commonwealth Government for sub-degree qualifications is 1704 EFTSU. RMIT associate degrees have the potential to become a significant part of the program profile. Through adopting a policy which requires that associate degrees address emerging paraprofessional skill needs, are aligned with cognate VET qualifications, and act as a vehicle for improved pathways, the RMIT experience can also help to exemplify, to the Australian tertiary sector, how a two year tertiary qualification can address an interrelated educational, economic, social agenda.

By mid-2010, when my Fellowship program commenced, RMIT’s three colleges had each embraced the strategy to grow associate degree provision. The College of Science, Engineering and Health (SEH) was developing three new associate degrees. The College of Design and Social Context (DSC) was replacing the associate degree in graphic technology with a new program in graphic design (in response to changes in occupational needs), and

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55 This low SES participation rate target is the basis for the 2012 RMIT Mission-based Compact with the Commonwealth Government.
developing an additional seven programs for introduction in 2012 and 2013. The College of Business was transitioning from a Diploma in Commerce designed for international onshore students to a general Associate Degree in Business open to international and domestic students. The College was also in the process of designing an Associate Degree in Paralegal Practice, introduced in 2012.

However, developments in each of the three colleges were taking place in relative isolation, and individual schools were also making independent decisions about curriculum and pedagogy. While all proposals were considered by the RMIT Academic Board, the review here was in relation to the integrity of the individual qualification rather than the integrity of the associate degree offering. And while the SEH College had produced a comprehensive six volume manual\(^{56}\) (RMIT SEH 2008) covering its own engineering and information technology associate degrees, this practice was not adopted by the other two colleges\(^{57}\), nor expanded as a university wide resource. Further, as new programs were being framed, issues of interpretation emerged, and long held assumptions about the nature of a degree (and, it was believed by implication, an associate degree) were influencing developments in a way that brought the features of different programs into contradiction with each other. Examples include:

- **Diverging views on the length of a semester.** Degree and postgraduate programs were delivered over a 12 week semester, and some academic managers in the DSC College were of the view that this standard should apply to associate degrees. On the other hand SEH College associate degrees were delivered over a 16 week semester, in part because Engineers Australia determined that this longer delivery period was required to cover core technical and mathematical content to the standard for accreditation.

- **Differences about the status of associate degrees and their constituent courses.** In the SEH and DSC colleges, associate degrees were regarded as ‘stand alone’ qualifications whose courses were consistent with those of relevant degrees, but not the same. In the College of Business the Associate Degree in Business comprised the same courses as the first two years of the degree\(^{58}\).

- **Forms and level of student engagement.** RMIT degree courses typically involve three hours face to face contact (or equivalent) per week across the 12 week semester. To meet the needs of a more diverse student cohort, associate degree program teams have scheduled up to five hours student-teacher contact. This additional time is thought by some academic managers to be excessive and to mean that student will not develop independent study skills.

- **Nature of assessment.** Some academic managers believe that associate degree assessment regimes should with be the same as related degrees and assessments and marked by degree teachers. Associate degree teachers see the value in alternative forms of assessment to ensure relevance to real-world problem solving to meet the needs of students exiting into the workforce on graduation\(^{59}\).

Overall it was clear that, in addition to the need for information for secondary schools and employers, RMIT faced a challenge in communicating with internal stakeholders about what

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\(^{56}\) Volume 1 contained guidelines and instructions for the design and development of associate degrees in general and volumes 2 to 6 referred to each of the individual programs. The curriculum and pedagogical guidelines contained in this manual are further referred to in chapter 6, section 6.3.2.

\(^{57}\) The production of the SEH Manual was undertaken as part of the project funded by the Commonwealth government’s CASR funding.

\(^{58}\) Business College degrees all comprise a common core of seven courses in first year, plus one stream specific elective, followed by pathways majors in the second year. Delivery of these courses to students enrolled in the associate degree is over a 16 rather than 12 week semester.

\(^{59}\) It should be said that despite such issues, most associate degree program teams have reported favourably on the level and spirit of collaboration from degree program teams over articulation arrangements and cooperative delivery in the second year. Further, teachers in these degree programs have expressed their own concerns about the lack of clarity about the rules of engagement.

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an RMIT associate degree is – and equally, what it is not. The need for a coordinated approach was particularly pressing in the DSC College where three of the six VET schools were engaged in new developments, with the other three planning to develop programs during 2011-2012. In 2010, the DSC Deputy Director VET for DSC, who had taken on responsibility for supporting VET schools developing associate degrees, decided to establish an informal network involving her six schools. Its purpose was to facilitate communication and sharing of information. In 2011, discussions between the DSC College Deputy Director VET and her counterparts in the other two colleges led to an agreement to set up collegiate university wide mechanism to support all VET schools and provide a platform for negotiation of a consistent approach to associate degrees. At the same time, my own discussions with associate degree managers and teachers revealed their interest in communicating with other program teams, and their concerns about lack of consistency. And so we joined forces to submit a proposal for an RMIT Learning and Teaching Investment Fund (LTIF) grant to establish an RMIT-wide network.

The submission was successful and the RMIT Associate Degree Network was established in May 2011 with the following aims:

- Promote a shared understanding of RMIT Associate Degrees as paraprofessional and pathways qualifications;
- Establish an ongoing RMIT Associate Degree Network to support Associate Degrees implementation;
- Build a shared capability and engagement across the three Colleges that actively supports Associate Degree development and implementation; and
- Identify emerging issues and needs influencing quality delivery and market positioning of RMIT Associate Degrees, and advise on appropriate leadership strategies and coordination mechanisms (Leavold 2012, p. 2).

The Network attracted a membership of program managers representing all RMIT associate degree programs, plus VET Heads of School and Program Directors, who identified three key issues associated with the strategic and operational platforms for Associate Degrees at RMIT:

- The lack of an institution-wide repository of knowledge and information on associate degrees which was hampering the efficient development of a consistent product;
- The lack of defined procedures, timelines and design rules specifically attached to approval for Associate Degrees meant that the final stages of the development journey were often improvised; and
- Development was taking place within individual schools or Colleges. It was not joined up across the University, and diverse interpretations of the RMIT approach to Associate Degrees were evident (Leavold 2012, p. 3).

From the outset, Network members also agreed that the work of the Network could not be completed within the six month LTIF grant timeframes, and that cultural change was a central dimension of the Network project. The final report to the Dean Learning and Teaching on the Associate degree LTIF project points out, ‘it is too early to call clear outcomes that go to cultural or behavioural change’ (RMIT Associate Degree Network 2012, p. 6). Nevertheless the progress made on several fronts, and the enthusiasm of those who contributed to the Network, has set the scene for the ongoing development of a viable community of practice. Six sets of outcomes were identified in the final report and these, and related action, are summarised below.
Outcome 1 Creating a shared language to support internal RMIT collaboration on Associate Degrees

The Associate Degree Network drafted a Statement of Associate Degrees at RMIT, drawing on three key sources: the Australian Qualifications Framework descriptor for associate degrees; the RMIT policy on associate degrees approved in 2007; and the accumulated understanding developed over the course of the LTIF project from June to December 2011 (see Figure 8).

The Statement seeks to define the associate degree as both different from, and related to, degree programs in the same or similar cognate areas. It makes clear that it is a qualification with occupational outcomes recognised by relevant industries. Its aim was, and is, to communicate the features of the associate degree (as per the AQF and RMIT policy) to associate degree and degree teachers, and to help establish an agreement among academic managers about matters currently in dispute.

The draft Statement was considered and endorsed for circulation within RMIT in May 2012 by the Dean of Learning and Teaching and the three colleges’ Associate PVCs Learning and Teaching. It has since been utilised by the RMIT VET Committee – a sub-committee of Academic Board – as input to a strategic conversation on associate degrees as a component of RMIT’s tertiary offerings. The VET Committee endorsed the emphasis in the 2007 associate degree policy on employment outcomes for graduates, links with industry, and reference to national industry competency standards, and called for a major marketing campaign to inform our stakeholders of these unique aspects of the RMIT associated degree (RMIT VET Committee minutes, June 2012). The Committee made several recommendations for action, including:

- Review of the associate degree architecture detailed in the 2007 policy paper, comprising a common core in first year and specialised courses in second year. This configuration was regarded as too restrictive to address the potential range of paraprofessional skill and knowledge requirements;
- Development of revised design guidelines framed around the principles of flexibility, responsiveness and adaptation in a 192 credit point qualification;
- Engagement with academic leaders regarding the unique opportunity offered by the adoption of associate degrees and the value of the distinctive vocational pedagogy and delivery models as pathway to paraprofessional work and further study; and
- Investigation of options for future associate degree development including targeting existing workers and offering recognition for work-based skills and knowledge and flexible delivery options; international delivery through partnerships with global enterprises and online delivery through OUA (ibid).

Figure 8 Statement on RMIT Associate Degrees

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60 At RMIT ‘strategic conversations' are a device used by boards and committees as a framework for debate and discussion on matters of importance to the university’s directions.
Statement on associate degrees at RMIT

Purpose
The following statement on associate degrees at RMIT has been drafted by the RMIT Associate Degree Network. It is intended for internal RMIT use. The primary purpose of the statement is to define the key characteristics of an RMIT associate degree and support consistency in the design of associate degrees across RMIT.

The Associate Degree at RMIT
An RMIT Associate degree is designed as a stand alone AQF level 6 qualification to achieve two outcomes: to provide students with skills and knowledge for immediate application and value in the workplace; and to offer horizontal and vertical study pathways to related studies. Major pathways into and from the associate degree are illustrated in the attached diagram.

Associate degrees accredited by RMIT are generally based on 16 courses of 12 credit points and graduates can receive credit for up to 192 credit points (equivalent to two years duration) into a three or four year degree program in a related discipline. Target groups include international applicants; school leavers; graduates of VET qualifications; and members of the workforce.

As a paraprofessional qualification, the RMIT Associate Degree is based on a combination of high level technical skills with the theoretical knowledge from one or more disciplines. It has a unique curriculum that enables students to develop competency in critical skill areas, a greater capability to apply a depth of knowledge, and breadth of skill to demonstrate initiative, judgement, autonomy, and responsibility. The pedagogy of the RMIT associate degree is student-centred, enabling students to engage in self-directed learning for the application of knowledge and skills in work and further study.

To enable students to reach the level of cognitive, technical and creative thinking skills required to achieve vocational outcome and address longer term workforce needs the associate degree is delivered over the equivalent of two 16-17 week semesters per year. This extended learning time and delivery by staff with vocational qualifications and experience, plus the focus on applied learning and assessment with an emphasis on vocational skill development, clearly distinguishes the associate degree from the first two years of a degree program.

Associate Degree at RMIT: target groups and pathways

Source: RMIT Associate Degree Network, May 2012
Outcome 2 Building across RMIT shared capability for, and engagement in, Associate Degree development and implementation

The LTIF project final report concluded that:

The Network provided an important forum for developing and sharing insights about Associate Degree program architecture, pedagogy, development and implementation; [offering] situated professional development opportunities, with practical outputs, outcomes and impacts flowing from grappling with knowledge and practice of immediate relevance to Network members’ work contexts.

A significant outcome of the Associate Degree Network is the fostering of ongoing informal and informed networks of practitioners who are now more able to engage on common ground and support each other’s work (RMIT Associate Degree Network 2012, p. 7).

The Network hosted two professional development events in 2011. The first was a forum which hosted presentations from other institutions about their models for the qualification. The forum attracted 110 program managers and teachers who joined discussions with colleagues from other colleges and schools about curriculum and pedagogical approaches to associate degree \(^\text{61}\). The forum also featured a poster competition. Each associate degree program team was invited to submit a poster promoting their program to one or more client or stakeholder groups (for example, secondary teachers, students, industry, peers). This exercise prompted team level debate and discussion, and also generated program information suitable for production as marketing posters.

The second professional development event was a workshop led by a former member of the AQF Secretariat, Ms Suzy McKenna, on the associate degree as a level 6 AQF qualification. The workshop explored relevant AQF descriptors to draw out the similarities and differences between associate degrees, advanced diplomas and bachelor degrees. The participants in the workshop reported that this activity was of great assistance in framing up and aligning associate degree courses to other relevant qualifications, and in articulating how the courses addressed paraprofessional skill and knowledge requirements.

Outcome 3 Establishing leadership capability for associate degree development and implementation

The Associate Degree Network provided a forum for a range of associate degree leaders: program managers, designers and course coordinators. Twenty-three staff members from all Colleges and key support units participated in the Network, representing all RMIT Associate Degree programs. The relevance of the Network in purposefully addressing pressing issues was testified through consistently high attendance and through the Network’s outputs in 2011.

Outcome 4 Advancing RMIT’s associate degree strategy

The Associate Degree Network progressed RMIT’s strategic interest in the associate degree market by laying the groundwork for improved clarity, consistency and certainty for those developing and implementing RMIT associate degrees (RMIT Associate Degree Network 2012, p. 5). Two key Network activities mentioned above – the workshop on the AQF level 6 qualifications, and the forum involving other associate degree providers – assisted in clarifying the general nature of an associate degree and the room contained in the AQF for

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\(^{61}\) The outputs from these small group discussions are presented and analysed further in Chapter 6, section 6.3.2.
interpreting the Descriptor to address local needs and directions. In doing do, these events helped to frame discussions about how the RMIT associate degree strategy aligned to the overall strategic directions to 2015. As the final report on the LTIF funded project noted, the Network discourse about how the associate degree could combine features of vocational and disciplinary learning had also advanced the RMIT position in relation to the findings of the 2008 Bradley Review which:

... emphasised the importance of reconceptualising the tertiary education space by moving beyond a limiting binary distinction between VET and higher education. For RMIT as a multi-sector provider, the Associate Degree provides a particularly sturdy bridge to both strong vocational outcomes from the qualification in its own right, and to study at AQF level 7 and above (Leavold 2012, p. 6).

Outcome 5 Framing the marketing task for RMIT associate degrees

This was an important aspect of the landscape explored during the Network’s discussions in 2011. While marketing and market positioning forms a priority agenda item for the Network in 2012, a number of matters are now much more clearly defined as a result of the Network’s focused attention, including:

The need to delineate the differentiating characteristics of an RMIT associate degree – a task commenced with the narrative statement about RMIT’s associate degrees (Figure 8);

The importance of informing, and marketing thoughtfully to, secondary school students about the attributes of an RMIT associate degree;

The importance of informing employers about the attributes of an RMIT associate degree; and

The importance of engaging employers so that their input to RMIT associate degree design underpins the vocational outcomes of the programs.

Above all, the Network has drawn attention to the need for marketing to prospective students and employers to account for the fact that the associate degree is a new, rather than a familiar, tertiary product. Feedback from the VETLink Forum, overwhelming anecdotal evidence from RMIT staff who have launched associate degrees, and research conducted as part of the Fellowship, consistently demonstrates that among both school leavers and employers there is generally limited (or no) understanding of the particular attributes of an associate degree. From a marketing perspective, this requires both an explanation of the associate degree in broad terms, and for RMIT it must entail an explanation of the differentiating characteristics of an RMIT associate degree.

An outcome from the VETLink Forum is the interest among other Victorian associate degree providers in developing and implementing a marketing strategy that takes to prospective students and employers a readily accessible explanation of what an associate degree is, both in terms of pedagogy and vocational and further study outcomes. The practicality of turning this widespread interest into something tangible remains to be fully investigated.
Outcome 6 Identifying 2012 priorities for professional learning and further work

The 2011 LTIF funding framed the Associate Degree Network as a professional development vehicle and this remained at the core of the Network’s agenda in 2012. Additionally, the Network has determined that it should play a key role in pursuing RMIT’s strategic positioning in the associate degree market, and in establishing a firmer base for understanding the place of associate degrees in RMIT’s qualification firmament. The Network’s agenda for 2012 included the following key items:

- Improving data collection and analysis on key items such as: demographic characteristics of enrolling students; entry level academic aptitudes of enrolling students; retention rates; vocational outcomes for associate degree graduates; academic progression of associate degree graduates who are selected into RMIT undergraduate programs;
- Building a consolidated understanding of the pathways from RMIT associate degrees to RMIT undergraduate degrees, recognising that selection processes and credit arrangements differ across the University;
- Establishing mechanisms for describing and enhancing associate degree pedagogy;
- Providing well-structured, as well as semi-formal, opportunities for reflective sharing about associate degree development, implementation and teaching practice; and
- Generating an understanding of what kind of industry engagement practice will best support the development, delivery and review of RMIT associate degrees.

4.5.4 Associate degrees in the RMIT strategic plan

As a university of technology and design, RMIT will focus on creating solutions that transform the future for the benefit of people and their environments. We will collaborate with partners to ensure the global impact of our education and research, and we will reach out through our presence in cities across the world to make a difference.

(Vision statement, RMIT Strategic Plan 2011-2015)

In April 2012, the RMIT Vice Chancellor, Professor Margaret Gardner, addressed senior RMIT VET staff about the RMIT Strategic Plan. The audience included heads of school, program managers and senior educators, many of whom are involved in the design and delivery of associate degrees and anxious to know how their new programs are regarded in relation to the directions set down in the RMIT Strategic Plan (RMIT 2010). The following summary of the Vice Chancellor’s address, based on my notes of the occasion, sketch out the strategic role for RMIT associate degrees as a form of vocational learning envisioned for the ‘global university of technology and design’.

Professor Gardner spoke about RMIT’s origins as the Melbourne Working Men’s College and its history in providing a ‘pragmatic education which brings together the theoretical and the practical’ in a way which was, and remains, quite distinctive from its nearest higher education neighbour, the University of Melbourne. These two institutions represent different traditions in tertiary learning. Melbourne (and other major universities established across Australia in the mid to late 1800s) emerged from the European university tradition of scholarly practice, and RMIT from the tradition of the artisan guilds in which excellence in
skill and knowledge is measured by its usefulness: ‘an educational philosophy with a deep history and meaning in the contemporary world’.

RMIT is committed to a form of learning which is connected, engaged and pragmatic, and based on authentic experiences which resonate in the world of work in technology and design: fields of endeavor which are about the synthesis of different approaches to solve real-world problems — literally designing solutions. This is the framework for RMIT as a global university: globally spread but not scattered, focused on its specialisations, and located just about everywhere in these specialist fields.

The need now is for RMIT to rethink its curriculum and pedagogy: to find ways to integrate theoretical and practical learning so that our programs have salience with our strategic goals. This is a new and unique challenge — which means, in the Vice Chancellor’s words ‘striking out in a new direction, with no map. There is no-one else to follow in the direction we are taking’.

It is in this globally connected context that the associate degree is significant to RMIT. In engineering, allied health, communications technology, robotics and business, the defining characteristics of many occupations are being redrawn — particularly those which sit in an ill-defined space at the boundary between the skilled trades and the professions, but which are critical to the practical applications of new knowledge. In this context, the associate degree is, for RMIT, a robust stand-alone qualification which spans the space between VET and higher education: a space in which new directions in tertiary curriculum and pedagogy may be explored and framed.

4.6 Secondary school and industry perspectives on associate degrees

During the period of the Fellowship program and the drafting of this report, I spoke to a number of teachers, program coordinators and education managers at institutions delivering associate degrees. Almost all expressed the concern that ‘no-one knows anything about associate degrees’. They referred to discussions with employers who had not heard of the qualification and to year 11 students who had vague notions that an associate degree was ‘something like a degree’ (said with an upward inflection of doubt). Careers teachers noted that year 12 students seemed better informed about the existence of associate degrees — though not necessarily as an option for themselves. This anecdotal evidence was borne out in our surveys of senior secondary students and employers in Melbourne’s northern corridor. If it was not for the assiduous work of career teachers who hunt down information through personal tertiary networks there would be little information readily available to young people in a forms they are most likely to access.

Data reported here on stakeholder views of associate degrees is drawn from careers teachers, year 11 students and employers in the northern region of Melbourne, a significant target area for RMIT student recruitment and one in which several successful school-industry-tertiary partnerships have been forged since the early 1990s. Contact was made with local schools and industry through the RMIT Northern Partnerships Unit (NPU), which is the current iteration of a series of school-tertiary-industry partnership initiatives in northern Melbourne 62. For this study, focus groups were conducted with nine careers teachers and

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62 NPU projects help to maintain RMIT’s profile with major stakeholder groups, and provide senior secondary students with opportunities to consider a range of career options. These and previous partnership initiatives have played an important part in linking tertiary institutions with major stakeholder groups, including local government, industry associations,
30 year 11 students⁶³ from secondary schools in the inner and outer northern suburbs (Coburg, Preston, Thornbury, Epping, Lalor and Whittlesea). Students also completed a short survey on the sources of information they use when planning their post-school careers. Fifteen employers participated in a focus group conducted as part of a regular networking breakfast organised by the NPU. Additional employers were contacted through NORTH Link, a northern region business network and regional economic development advocacy group⁶⁴. Five employers nominated by NORTH Link were interviewed, as were the NORTH Link executive and project directors.

This chapter addresses the following questions. What do major stakeholder groups know about associate degrees? Where do they go to find such information? What information sources do they trust? And what information formats do they trust?

Because this was a small scale investigation the data cannot be generalised; however, it provides an indication of stakeholder views as a basis for further investigation.

4.6.1 Careers teachers

The nine careers teachers who participated in focus group reported on a range of sources of further study and careers information, relying most heavily on that provided by government and tertiary providers. The resources provided by the Victorian Department of Employment Education and Early Childhood Development (DEECD)⁶⁵ were popular and widely used. Frequent mention was made of the job chart reproduced in Figure 9 which careers teachers found to be very useful in explaining the concept of alternate pathways. Much of the career teachers’ time in terms one and two each year is taken up with researching information about the various courses that the universities and TAFE institutes offer, and for this reason the careers practitioners’ information sessions organised by tertiary providers are very important. Most of the teachers used institute and government websites as a primary source of information, but as one teacher commented, ‘kids won’t use the website as much; they still like having that booklet in front of them and that needs to be up-to-date and easy to go through’. Students are quickly put off web-based information is sites are not kept up-to-date. Out-of-date web information is not infrequent, and for this reason career teachers tend to work through websites with students so they can quickly re-direct them to more relevant sources

University and TAFE careers booklets are regarded as a most important source of information. One careers teacher commented that the biggest day at their school was when the careers booklets arrived. ‘The students can’t wait to get them. They take them away and even take them home to their parents’. Above all, careers teachers relied on information from their own networks, and from networking opportunities, provided through Local Learning and Employment Networks (LLENS)⁶⁶ – ‘they have been around a long time and

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⁶³ Year 11 students were targeted as this is the stage at which students are usually exploring a range of options and alert to information sources.

⁶⁴ NORTHLink was established in 1995 and acts as a network for employers in the cities of Banyule, Darebin, Hume, Moreland, Whittlesea and Yarra. See: http://melbournesnorth.com.au/about-north-link/who-we-are

⁶⁵ See for example the Careers and Transition Resource Kit online at http://www.education.vic.gov.au/school/teachers/teachingresources/careers/resourcekit/Pages/default.aspx

know how the system works’. The Northern Partnerships Unit annual Making Choices Brunch was also regarded as a valuable resource for senior students.67

Careers teachers regarded the Victorian Tertiary Admissions Centre (VTAC) guide as a reliable source of information and noted the importance of information in the VTAC guide being backed up by accurate information on education institution websites. There have been times when the VTAC guide refers to institution specific forms and guides and they are not available on the institution’s website. Sometimes when the careers teacher calls the institution on behalf of their students they do not get informative responses. One teacher noted with polite restraint that it can be very frustrating, even if it doesn’t happen often.

Diplomas and associate degrees: a congested market?

The careers teachers in the focus groups had found that their students were not well aware of associate degrees. They did understand the concept of pathways from certificates III and IV through to diplomas and advanced diplomas, but could not work out how and where an associate degree fits into that conception. Several teachers commented on the need for quality of information on qualification types – for example, something that explained the type of learning and assessment typical of a certificate, diploma, associate degree, and degree, and where each might lead in terms of work and further study. Students were also confused by the fact that different qualifications in the same qualification type took different amounts of time to complete (for example, different diplomas can take 12 months, 18 months or two years to complete).

There was agreement that considerable work was needed to clearly explain what associate degrees are, and how they fit into the constellation of tertiary qualifications. One teacher referred to ‘congestion’ in the tertiary market: ‘here is a new qualification at AQF level six alongside the advanced diploma – how do we explain the difference to our students? Although the associate degree has been around for about seven years we still can’t get our hands on anything which clearly explains what’s in it for our students’. All teachers in the focus groups commented on the fact that information about associate degrees was sketchy, and that even though they knew of associate degrees, their own knowledge was sketchy. As one teacher said: ‘... at least 80 per cent of careers teachers would probably know they existed, but of those, only 50 per cent would actually know what they are’.

Another teacher commented that there were some associate degrees where the benefits for students were clear and that once the options were explained students could see that it was a valid pathway. For example, in engineering, ‘the fact that maybe their maths is a little weak, it’s really the way to go to really test if you want to go into the full engineering course, or to be able to go into a paraprofessional [role].’

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67 The event includes eight minute, fast-paced interactive workshops run by industry professionals. See: http://www.rmit.edu.au/browse;ID=p9v022mw7bj
Careers teachers’ views on how information about tertiary programs be improved

Most of the time, most tertiary providers produce accurate and timely information on tertiary studies. The local provider singled out for particular praise was Kangan Institute. A number of careers teachers commented that information produced by universities is often ‘too wordy’. The teachers would prefer a well-designed PowerPoint presentation with short clear dot point messages for use with class and at parent information evenings:

Make sure it is accurate, up-to-date and in a format that is easy to understand. Use diagrams and illustrations to show how pathways work. Create resources that we can use in the classroom and that can be targeted also to students and parents.

The careers teachers also pointed out how careful tertiary providers needed to be when they produced new information to make sure they presented the whole picture. This is particularly important for some students who are the first in their family to go to university or TAFE and who rely solely on the school for advice. As one teacher said, apparently small changes can devastate students. For example:

In 2010, a tertiary provider moved from the Advanced Diploma of Fashion to an Associate Degree, between the time their information book was printed and when the VTAC guide came out. There were 30 kids at one school who wanted to do the Advanced Diploma and there were tears ... because they thought it was gone and did not understand that there was now an associate degree instead.

Given that little was known about associate degrees, it was likely that students would have many questions and it was important that teachers were on hand to explain and help students to access more detailed information. Also, because year 10 and 11 students value the opinions of ex-students who return to the school to talk about their experiences, this would be a good way to convey what it was like to take on an associate degree. From the careers teachers’ perspective, the important information about associate degrees to get across to year 11 and 12 students included:

- The fact that the class sizes would be smaller and they have more time to get help from their teachers;
- It is an introduction to higher education that also has vocational outcomes after two years;
- Graduates of an associate degree can get into the third year of a degree; and
- Student fees are covered by HECS.

For example the Kangan Course Finder facility which is on the institute home page and is quick and easy to use: http://www.kangan.edu.au/
4.6.2 Senior secondary students

A total of 27 Year 11 students completed the survey about careers and further study. The majority were 16-17 years of age (one was 15 and two were 18). There were 19 girls and eight boys in the sample. The majority intended to complete year 12 (63 per cent) and 32 percent intended to complete year 11. The students were fairly evenly divided about what they would do when they left school. Students were asked to tick one or more of the sentence endings in Table 14 to show what they might do when they left school.
Table 14: Year 11 student responses about post-school destinations

<table>
<thead>
<tr>
<th>At the moment …</th>
<th>No of times listed</th>
<th>Listed by % of sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>… I am thinking about a job</td>
<td>15</td>
<td>55.6</td>
</tr>
<tr>
<td>… I am thinking about an apprenticeship</td>
<td>5</td>
<td>18.5</td>
</tr>
<tr>
<td>… I am thinking about a traineeship</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>… I am thinking about a TAFE diploma</td>
<td>3</td>
<td>11.1</td>
</tr>
<tr>
<td>… I am thinking about a degree</td>
<td>15</td>
<td>55.6</td>
</tr>
<tr>
<td>… I am thinking about an associate degree</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Only a small number of students were thinking about an apprenticeship and none listed the associate degree as something on their further study radar.

Year 11 student decision making about post-school options

Responses to questions about preferred sources of information about careers and tertiary study confirmed the importance of careers teachers, and underlined the importance of targeting careers teachers with information about associate degrees. As shown in Table 15, in answer to the question, Where do you go to get information about tertiary study and careers? (Tick all sources that you used), the most often listed source was careers teachers (listed by 96 per cent of the respondents), compared to subject teachers (listed by 59 per cent) and parents (37 per cent). University and TAFE websites and brochures ranked at about the same level as friends as sources of information. University open days were only listed four times, just ahead of newspapers and television. (Note that the survey was administered in May and June, and Year 11 students are less likely to have attended open days which are typically held in August.)

Table 15 Preferred sources of career and further study information

<table>
<thead>
<tr>
<th>Source of information on careers and further study</th>
<th>No of times listed</th>
<th>Listed by % of sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents</td>
<td>10</td>
<td>37.0</td>
</tr>
<tr>
<td>Subject teachers</td>
<td>16</td>
<td>59.3</td>
</tr>
<tr>
<td>Careers teachers</td>
<td>26</td>
<td>96.3</td>
</tr>
<tr>
<td>Friends</td>
<td>7</td>
<td>25.9</td>
</tr>
<tr>
<td>University and TAFE websites</td>
<td>6</td>
<td>22.2</td>
</tr>
<tr>
<td>University and TAFE brochures</td>
<td>7</td>
<td>25.9</td>
</tr>
<tr>
<td>University and TAFE open days</td>
<td>4</td>
<td>14.8</td>
</tr>
<tr>
<td>Newspapers</td>
<td>3</td>
<td>11.1</td>
</tr>
<tr>
<td>Television</td>
<td>3</td>
<td>11.1</td>
</tr>
<tr>
<td>Employers</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other source of information</td>
<td>2</td>
<td>7.4</td>
</tr>
</tbody>
</table>

In the focus group discussions, students who expressed clear career choices said that they would go straight to a university website for information. One student noted that he found the Melbourne University website easy to use, particularly the course search facility. By contrast, it appeared that those who were unsure about career destinations went to the careers teachers for advice and help. Students were confident that careers teachers would
have up to date booklets and information from each university, outlining all the courses on offer and the information for applying for those courses.

Students at one secondary college had individual pathways plans which were created in discussion with the careers teacher, allowing them to prepare for their further study and set their academic goals.69

The survey also asked students to indicate what influenced them most and least when they were thinking about what they wanted to do when they left school, by saying whether seven areas of influence were important or not important, on a five point scale. Table 16 records the percentages of responses which ranked each influence as important or strongly important.

Table 16 Important influences on career and further study choices

<table>
<thead>
<tr>
<th>I am influenced by the following when I am thinking of what I want to do when I complete secondary school…</th>
<th>Important (per cent)</th>
<th>Strongly important (per cent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>My own interests</td>
<td>26</td>
<td>70</td>
</tr>
<tr>
<td>My areas of skill</td>
<td>60</td>
<td>30</td>
</tr>
<tr>
<td>What my parents would like me to do</td>
<td>19</td>
<td>7</td>
</tr>
<tr>
<td>The sort of careers that other members of my family have followed</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>What my friends are interested in</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Advice from a careers teacher</td>
<td>33</td>
<td>11</td>
</tr>
<tr>
<td>Advice from a subject teacher</td>
<td>41</td>
<td>7</td>
</tr>
</tbody>
</table>

The respondents regarded the most significant influences on their career choice as their own interests and skills – responses which could be expected from young people who have been encouraged through their schooling, and perhaps also by their parents, to think for themselves and pursue their own interests. What is interesting is that the answers here confirm the pattern in Table 15 which shows that students perceive advice from subject and careers teachers to be more influential than their parents’ preferences. In answers to questions about who provided them with useful careers advice, students’ rated the usefulness of careers teachers’ information higher (85 per cent agree/strongly agree) than parents (59 per cent agree/strongly agree). The usefulness of university websites was rated at 59 per cent agree/strongly agree.

In the focus group discussions students were very firm about the fact that career choices were their own and that other people’s opinions were not overly important. One student explained she had pressure from her mother to take a particular path, but when the student made it clear she wasn’t interested her mother had accepted this. Most students indicated that they were given a significant amount of autonomy in their career and study choices from their family:

... they’re not going to be the ones doing it. So if they tell me to do that and I don’t like it, what’s the point? I’m not going to do well in the end.

While the small numbers in this survey mean that the responses cannot be generalised, the trend in the student responses confirms those of their teachers regarding where information should be targeted. This is not to say that university websites and brochures are

69 See Appendix 5 for further information on the careers strategy at this secondary college.
not important. Rather it suggests that information may need to be targeted at different sources to capture the attention of young people at different stages in their decision making. A wider survey to capture data from year 10, 11 and 12 students would be necessary to draw firmer conclusions.

Secondary students and associate degrees

Most students had not heard of an associate degree, and the few who had did not really know what it was or what it involved: ‘I’ve heard of it but I don’t know what it is’. Some students were aware of the ‘Deakin At Your Doorstep’ program due to a television advertising campaign, but no-one had heard of other programs such as RMIT’s associate degrees. It was clear that very little or no information about associate degrees is filtering through to year 11 students from any source. When asked to imagine what an associate degree might involve, students gave the following answers:

- It sounds like more work (than a degree);
- It just sounds like something added;
- It sounds like a junior degree;
- Not as good as a full one; and
- Not the full degree, just something … close to it.

When asked what they thought the difference would be between an associate degree and a degree, students made some educated guesses. For example:

- The pay cheque? I suppose you’d be better paid, or you’d get better employment options if you earned a degree, rather than just an associate degree.

- A degree sounds sort of like it gives you more options as a whole than an associate degree does. An associate degree sounds like you’ve done the work but you’re not fully qualified as a degree would be. It sounds like a degree opens up more doorways and more pathways to continue. Whereas an associate degree just seems like you’ve got less options, maybe the same variety but less options to take.

- You do it on the side, don’t you? You can do it on the side from a course?

- like an add on ... so when you go for your job you say okay, I’ve done my full degree in teaching but I’ve also done my associate degree in first aid, or childcare or that sort of thing. It will add to your being picked for that job

- But it’s not only for like possible career options as well...So if I found myself with some spare time to do one or something, I could like do one in African politics or something, just for the sake of learning

Overall students demonstrated a reasonably clear understanding of bachelor degrees, and where a degree could lead. Their perceptions that associate degrees were of less/lower market value indicates a pressing need for accurate information.
Student advice to tertiary providers about program information

The key piece of advice from the students who participated in the focus groups was that universities and TAFE Institutes should change the way they present information in print and on their websites. They found course/program descriptions to be too dense, and filled with ‘unimportant, irrelevant stuff’. Sifting through layers of text just to find the specific information they were seeking was a source of frustration.

- A lot of the time they have big paragraphs of just random stuff you don’t want to know about, so you have to read everything just to find the thing you want
- There’s not a lot of information out there – relevant information, I find. I’ve read through all these paragraphs and got nothing from it.

They also wanted university and TAFE websites to provide additional and detailed information.

- I could have found that out just by talking to my careers teacher. I went onto the website to find stuff that he couldn’t tell me

Some students argued that course/program information was not aimed at an audience their age: ‘it will probably mean something one day, but it doesn’t mean much to us now’. Another commented that:

It seems like it’s focused on an older group. Like they’re using older vocabulary. It doesn’t feel like they’re aiming at people our age.

And when another student said that ‘it reads like you’re writing it for yourselves and not for us’, there were nods all around the group.

The message from these students was to keep course and program information simple, relevant and straight to the point; free from what they saw to be irrelevant or extraneous information and text. They were unanimous about what information should be included in a course description:

- Prerequisite subjects, ATAR score and any additional requirements;
- What you will do in the course/what it will involve;
- What you get out of it and what it can lead you to, that is, what kinds of employment opportunities and career pathway will you gain by completing the course; and
- Alternative study pathways to achieving the same goals if you are cannot meet the requirements for that specific course.

One student suggested that instead of having to search through university and TAFE websites one by one, it would be very useful to have a single site that compared similar courses ‘side by side on the one page’ so that they could compare the courses against criteria such as those listed above. Students had not found anything like this in their web searches.
4.6.3 Employers

Over the period of my Fellowship there have been growing indications that sections of Australian industry are aware of, and interested in, the potential of associate degrees. This is particularly so in engineering, where Engineers Australia and Manufacturing Skills Australia (which together govern standards for engineering education from certificate to postgraduate levels) are active in setting associate degrees standards as members of the Australian National Engineering Taskforce. The Minerals Council of Australia is similarly active, planning to launch national associate degrees in mining and geosciences, in partnership with four universities (Australian Financial Review 30/4/12) 70.

However, none of the small to medium enterprise (SME) employers we interviewed knew anything associate degrees. Those attending the Business Improvement Group (BIG) breakfast meeting expressed confusion about the introduction of ‘yet another’ middle level qualification. They were all familiar with degree qualifications relevant to their own businesses and relied on degrees as a benchmark of capability. A product design company owner who had himself completed a five year engineering qualification had recruited his professional workforce from the same university because he was familiar with, and confident of, the program outcomes. This employer thought a two-year university qualification was degrading the degree. Another participant agreed, saying that ‘an Associate Degree muddies the water. What you just described sounds like a TAFE qualification – isn’t it easier to just go with a diploma?’

Other participants were more positive about the concept of the associate degree as a work oriented practical qualification, and regarded one participant’s suggestion that the associate degree would work well ‘if students did a co-op year in industry between first and second year’. All participants said it was essential that information about associate degrees was made available to employers. Otherwise what would they make of young people whose CVs were based on the qualification? As an employer commented:

If I have an application on the desk that says Associate Degree, I am not clear. I am clear about a degree. The applicant should make it clear in the letter of application. Why they did this? What they intend to do? What does it do for them?

This employer suggested that graduates of associate degrees be provided with standard text that they could include on their CVs so employers would be better informed.

There was also unanimous agreement that tertiary providers should consult with potential employers when designing their programs. They agreed that getting access to busy SME employers was difficult, but possible through associations such as BIG and ‘well worth the effort’ 71.

70 The Minerals Industry National Associate Degree (MINAD) project aims to classify paraprofessional roles in mining that ‘share the workload with traditional four-year graduates’; and develop ‘two new industry-supported, nationally consistent and nationally accessible Associate Degree programs in the disciplines of mining engineering and minerals geoscience’. See: http://www.minerals.org.au/minad_coordinator/

71 The Fellowship evaluator who attended the breakfast meeting made the point that universities usually related to a small proportion of large employers, while 75-80 per cent of the workforce is employed by SMEs.
The responses from five employers who participated in phone interviews were similar. None had heard of associate degrees and expressed concern that there was no readily available information.

**HR manager of an aviation engineering firm**

The HR manager of an aviation engineering company that employs 140 professional engineers and 260 trade, management, administrative and sales staff, said she was ‘completely in the dark’ about associate degrees. She was relieved when told that was the most common response from employers, saying ‘Phew, I thought I was missing something everyone knew about’. She described the company as having a ‘give it a go’ approach in recruiting new staff in non-technical areas, explaining that they would take on someone who appeared to have what they wanted and train them to company standards.

We took on a young lady, Julie, who came here for work experience a couple of years ago. We kept her on and put her through a traineeship program. She’s in our accounts payable and accounts receivable department and is fantastic. Then there’s Gemma. We met her at a careers night at RMIT or Monash, I can’t remember which. We were really impressed by her approach and attitude and we took her on board and she’s great as well. From my perspective I’m just thrilled that we’ve got these young people now starting to work for us.

Recruitment of graduate professional engineers was done through careers nights and similar events rather than through advertising, as ‘it lets us form an opinion in a less artificial situation than an interview’.

Just recently we took on young Sam who approached me at the Avalon Air Show – he was there for work experience, came and saw us and said is there anything available? We said look there might be something in the pipeline, so give us your details and let us know when you graduate. He just started last week.

The company also offered apprenticeships in mechanical trades, and did some in-house post-trade training. The HR manager could see that an associate degree could be of value to the company in bridging the gap between trades and professional staff: ‘someone who has the practical skills and can also take on design projects and talk with the engineers’.

To get the word out there about associate degrees, the HR manager thought they needed to be launched:

Launch may be the wrong word to use, but you sort of have to get this message out. Get employers to an event and then you know it can be a bit of a word of mouth thing and then follow up with written information.

Employer and professional associations were also regarded as a reliable way to inform employers of new developments in education.

For example, in engineering associate degrees you could get together with Engineers Australia. Through the publications of such associations, you would need just short articles — they could be saying “have you heard about this associate degree”, with just a short description and this would be enough to start the ball rolling.
Water Authority Organisational Development Manager

The Water Authority manages water supply catchments, treats and supplies drinking and recycled water, removes and treats sewage, and manages waterways and major drainage systems. They employ engineers, environmental scientists, management, administrative and maintenance staff, and also provide some trade and operational training.

There are some roles where we need people to come in and hit the ground running — particularly in the more senior areas and project management. But we have quite a lot of capacity to take people who aren’t fully capable of performing the role when they come in and we will then invest that time and energy in training them to get up to speed over the first year or so.

While the Water Authority has little trouble recruiting professional staff they do lose mid-career employees:

We’re pretty lucky in that we have an attractive brand. We don’t have difficulty attracting graduates and people in their first couple of years of employment. It’s when people start to get experience and then because we’re bound by pay scales that are more aligned to government as opposed to private industry that’s when we start losing people.

Having had associate degrees explained, the Organisational Development manager agreed that they could be relevant to the operational roles at the Water Authority (for example, in waterway maintenance and sewerage recycling) where ‘people don’t need degree level based knowledge’. She identified technical roles for which an associate degree could be relevant, and also noted that it could be a useful skill development pathway for qualified and experienced trades employees.

Regarding the best way to get information to employers, this manager maintained that email is ‘by far the best – at least for me’:

Because we get so many industry and professional organisation brochures, I end up with a pile of brochures and magazines to read and by the time I get around to them they’re always out of date – because they don’t fit into a handbag, so I don’t take them home with me. I much prefer electronic information – especially if it’s something I can read on the train on the Blackberry.

In making this comment the manager noted that there was maybe a gender bias in information preferences. Her male counterparts did seem to prefer hard-copy information and would ‘pile it into their briefcases’:

I guess what it says to somewhere like RMIT looking at how you’d best target employers, there is no single approach. You’ve really got to use different approaches to different people.

General Manager for a product and equipment manufacturer

The company has a long history as a supplier to pipeline, rail and mining industries. They employ 15 professional and operational staff who have ‘a diverse product knowledge and manufacturing experience in commodity products, manufacturing, project management, design and development, feasibility studies as well as service and maintenance’. The company is looking for ‘people who have the capacity to act independently within the boundaries of their job role’.

Previously the company policy was to micro-manage employees, but following a restructure and outsourcing of manufacturing component of the business, they are relying on employees to be self-managing. That’s a shift in our company — we’ve changed from what we used to look for. We now want people to make decisions and act autonomously in their roles. I think the biggest issue is what we call ‘getting good people’. People that have got drive, people who can think for themselves. You know
you give people boundaries and their - it's up to them to make some decisions and carry out their role without being directed. Of course there are certain areas like accounting and engineering that you need background knowledge. But the majority of other roles can be taught on the job, as long as people have a willingness to learn. So we’re often not looking for a particular qualification, rather for a set of skills and attributes.

The company uses qualifications as an indicator of capability and attitude and regard degrees as a useful indicator of an individual’s preparedness to ‘stick at something’. The general manager though that an associate degree could also be a useful indicator for applicants for service and maintenance positions. It would depend on appropriate information being made available. She did not have a firm preference for paper-based or electronic sources, but did comment that it needs to be ‘clear, short and to the point’.

**National Human Resource Manager for metal manufacturer and supplier**

This company manufactures and supplies products to niche markets in Australian and New Zealand construction, building, manufacturing and mining industries. The head office in Melbourne employs 80 staff with a total of 200 staff across all sites. The HR manager says that the company’s ageing workforce is an issue as is finding suitable applicants in a labour market at almost full employment:

We find it particularly difficult within our professional and semi-professional ranks. We struggle to find or attract what we would consider to be appropriately qualified and competent applicants. We recruit at two levels: the first level is where we’re looking for people with a satisfactory level of competency in terms of written and spoken English. Beyond that certainly within our professional and semi-professional ranks we struggle to find people with the relevant tertiary background to support their alleged practical experience.

This national HR manager regards qualifications as essential as a starting point:

I think the point of a qualification is that it’s a ‘must have’. Once that box is ticked we would then look more closely and scrutinize their experience and the work that they’ve actually undertaken. In manufacturing we have certainly reduced the blue-collar workforce, but we have increased at the engineering level. We have brought in mechanical and process engineers really to help support our reduced workforce. The best way for me to describe it is we’re just working smarter now rather than necessarily harder.

Although the HR manager had heard of associate degrees, they had not been considered as an option because their professional staff were engineers rather than engineering technicians. At other levels where qualifications were relatively unimportant, there would be little reason to find associate degree level skills and knowledge of any specific value, though perhaps a useful recruitment indicator.
Manager of NorthLink i-Step Skills Shortage program

Through his role as manager of a NorthLink program established to address skill shortages, this interviewee has developed an understanding of the skill needs of SME employers and the implications for education and training. He explains the i-Step program:

Through [NorthLink’s] contacts with industry, it became evident that one of the things that was restricting economic growth in the north was a shortage of skilled labour. So they applied to the state government and got funding for a 12 month project which has enabled them to employ myself and a part-time assistant. What we do is we receive vacancies from employers and then we get access to jobseekers from any source we can. [So far] over 50 per cent of the vacancies have been in the metal trades: fitter and turner or boilermaker or metal fabricator. Computer numerical control machinists are also in high demand. We’re not restricted to trades. There’s a company starting up in Tullamarine as a pet care facility. They’re looking after animal carers and animal attendants.

The employers he is working with are generally looking for someone who can ‘hit the ground running’:

… even though they will need guidance and instructions, they are looking for those basics. One company I’m thinking of, they want someone with a mechanical aptitude, good at maths and can use a computer. But for them, the most important thing is willingness to learn and attitude. They’re a major company and that’s what they’re looking for. Increasingly there is one characteristic that is fairly common across the board: we don’t want people that just want a job. We want people who are really interested in doing this sort of work and this is what they want to do.

In his experience, apart from trade-related licenses, employers are less interested in qualifications than demonstrated competency. While larger companies may use VCE, diploma or degree as a screening device, SME employers will rely on references (particularly from known referees) and their impression at interview of the likely capabilities of the applicant. The manager of the NorthLink i-Step program said that in 12 months of working with a range of medium to small companies, non-trade qualifications were rarely mentioned, and associate degrees are clearly ‘completely off the radar’.

4.7 Questions of status and identity

Sectoral locations and purposes

The associate degree tends to be located in a space between what is definitively ‘vocational’ or ‘academic’, with different iterations serving some of the needs of both. In the US the associate degree is widely regarded as a short-cycle higher education (transfer) program and delivered by community colleges which also deliver vocational qualifications (Moodie 2003, p. 6). These same community colleges also deliver vocational (terminal) associate degrees which do not qualify for entry into a degree. In the UK, the foundation degree is delivered by universities and colleges of further education (Moodie 2003, p. 7) and regarded as both a transfer and vocational/terminal qualification. In Europe, where it is classified as a ‘short-cycle’ qualification\(^{72}\), along with the foundation degree, diploma and higher certificate, the

\(^{72}\) The introduction of short-cycle qualifications in Europe coincided with the emergence of non-university tertiary institutions in the 1960s and 1970s to meet the growing demand for higher education and high-end vocational qualifications: the first period of European higher education modernisation. In 1973 the OECD defined short-cycle awards as ‘post-secondary education of a mainly terminal character designed to train students for middle-level manpower positions’ (OECD 1973). By the end of the 20th century, aspirations on the part of non-university institutions, and embedding of the concept of life-long learning, saw a shift in attitudes and short-cycle awards were increasingly seen as integral to higher education access and entry.
associate degree is regarded as having a dual purpose: training graduates for employment as well as preparing them for further education (Slantcheva-Durst 2010). In the Netherlands the associate degree is regarded as ‘the missing link between the professional higher education sector, the vocational institutions and the labour market’ (Daale 2010, p. 181).

The earlier iteration of the Australian associate degree was located in three sectors: delivered on secondary school campuses by TAFE and higher education teachers. The first AQF-recognised associate degree was placed in the higher education sector, at the same level as the higher education and vocational advanced diplomas. Since 2010, when the AQF was revised as a non-sectorally designated ten-level framework, the associate degree has been regarded as a level 6 qualification which can be accredited by universities, other higher education providers with self-accreditation status, and by national accreditation authorities.

My analysis of Australian associate degrees has revealed them to be interestingly varied. They range from programs which are essentially the first two years of a degree program (for example, Northern Metropolitan Institute of TAFE in Victoria), paraprofessional qualifications which also offer entry or credit into degree qualifications (for example, University of Southern Queensland, RMIT), and qualifications comprised of higher education course content and an embedded VET diploma, loosely coupled (for example, Deakin University).

As a pathway to higher education and a point of occupational entry, the associate degree is increasingly aligned to government policies which aim to: expand access to higher education; increase higher education participation by underrepresented groups; resolve the gap between vocational and professional skill development; and address paraprofessional skill shortages. In this policy environment, driven by changing economic demands and the need for social cohesion under conditions of increasing diversity, previously separate strands of policy – skill formation and higher education – are converging, with the UK and US using their ‘more vocationally orientated tier of tertiary education to increase access to higher education’ (Wheelahan in TDA-LH Martin 2011, p. 13). As Wheelahan goes on to note:

In each country, the institutions claim that their provision is more vocationally focused than universities, can produce graduates who are more work-ready and can meet skill needs and shortages more effectively (and often more cheaply). They argue this is because of their closer links to industry.

The second rationale is they argue that their provision is more student-centred and can help expand access to higher education for under-represented students from disadvantaged backgrounds. This is because they have more emphasis on preparing students who are academically ‘under-prepared’ and can offer a more individualised learning experience through smaller classes and more supportive pedagogy (ibid).

The 21st century remit for higher education institutions is a challenging one: they have to be as vocational as they are scholarly. It is equally challenging for governments to get their policy settings right; and the burden of the policy expectations vested in the associate degree leave it at risk of failure due to restrictive operating conditions — as appears to be the case in the UK. After 10 years in the tertiary marketplace, while the foundation degree has had success as a pathway to degree studies, it is still struggling to address specific skill shortages. As Greenbank (2010) argues, this is due to conflicting national policy objectives and a lack of flexibility for providers to select objectives to meet local needs. On the other hand, as the Australian case studies illustrate, here the associate degree is taking on different characteristics in response to regional conditions and needs. With no national policy imperatives pinned to its implementation, the Australian associate degree is
exhibiting hybrid vigor. Its history is multiple and its purposes are being constituted through local practice. At the same time the AQF specification which locates the associate degree at the intersection of the tertiary sectors constitutes a single and singularly interesting platform for its different iterations. On the one hand it is aligned to higher education, and on the other is clearly vocational: being linked to further degree studies and advanced diplomas which deliver industry competencies.

The associate degree as a vehicle for reform

The fact that the Commonwealth government has not specifically employed the associate degree to foster its own strategic initiatives appears, on the balance of evidence, to be a good thing. A higher education growth strategy based on participation targets, demand driven funding, and integration of regulatory arrangements, leaves the decisions about curriculum and pedagogy to institutions in the context of student needs and interests and local labour market conditions. The associate degree in Australia can take different forms. It can be: primarily a pathway to higher education for regional students – as it is at Deakin University; a point of entry to paraprofessional work – as it is at Charles Sturt; or a combination of the two, as it is at RMIT. The associate degree initiative underway in NSW aims to enhance pathways into higher education. The Minerals Council of Australia (MCA) Minerals Industry National Associate Degree (MINAD) Project aims to address the shortage of mining engineers and geoscientists. The associate degrees are envisaged as programs which will be delivered in VET, dual sector and higher education institutions and as programs which will encourage employers to undertake new workforce design (MCA 2012). National government intervention at the micro-policy level of curriculum reform and program design did not prove to be successful in Australia after 20 years of trying, and does not appear to have been any more so in the UK and Hong Kong where associate degrees are underpinned by interventionist policy agendas. In the post-Bradley era, the impact of government on educational design and delivery is indirect: meted out through Structural Adjustment Fund incentives for new initiatives, such as Deakin At Your Doorstep, and through enrolment and cohort targets and AQF standards.

Overall, the Australian orientation to the associate degree offers a promising scenario for reform. The associate degree shares an AQF level-space with the advanced diploma – closely aligned by volume of learning, objectives and outcomes. It is also closely associated with its near neighbour, the degree: as the analysis in the previous section shows, distinguished by the thinnest of epistemological margins. By adopting a single ten-level structure in which qualifications are defined by learning outcomes and complexity rather than membership of a sector and type, the AQF refuses to take, or even imply, a position on the nature of the curriculum and pedagogy through which the associate degree is materialised as learning and teaching practice. Indeed it encourages curriculum designers and teachers to set assumptions aside and explore this new territory armed with a compass rather than a road map: looking for possibilities rather than known destinations. This expansive orientation to the role and identity of the associate degree is particularly fitting for an institution such as RMIT: a university which started its life as The Working Men’s College and which is now embarking on a global journey as a university of technology and

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As we have seen, the Deakin associate degree incorporates selected nationally recognised diploma qualifications.

This project is funded by the Commonwealth government through the Workforce Innovation Program – for details see: http://www.minerals.org.au/file_upload/files/employment/MINAD_ProjectCoordinator_March_2012.pdf
design. RMIT’s motto, ‘Perita manus, mens exculta’ (a skilled hand, a civilised mind) signals a mission to bring together divided curricula and partial pedagogies. Having regard for its past and its future, it is entirely appropriate that RMIT should have adopted the associate degree as a flagship strategy in its move from ‘dual sector’ into ‘integrated tertiary provision’.
Chapter 5 Orientations to tertiary learning

The analysis, in chapter 3, of successive policy efforts to establish tertiary pathways, showed a remarkable lack of success. My contention is that at least in part this is due to previous national policy settings which have failed to secure a sustainable base for changes in practice; and that the current policy settings, arising from the Bradley Review, do provide a sustainable base for change. However, the power of traditional differences – and perceptions of difference in the value of knowledge and skill, profession and craft, university and TAFE – live on, and may continue to be a barrier to innovation.

In this chapter, I unpack these differences in perception and practice as a framework for understanding how to work with difference and capitalise on the range of learning options available through a mixing and matching of different orientations to learning: through the creation of robust hybrids.

5.1 Contemporary constructions of difference

In a 2003 paper exploring the relationship between associate degrees and the (vocational) advanced diploma, one of the reviewers commissioned to explore options for an associate degree within the AQF, summed up the differences between higher education and vocational training as follows:

An academic education tends to mean that study is “theoretical, learning related, (implying that the purpose of an academic course is to proceed to further study), liberal (implying an open ended purpose), norm referenced implying competition with others rather than achievement of specific objectives and general.” (Ball in Phillips 34: 2003). Vocational outcomes are defined as competency based, with qualifications which are grounded in work related outcomes and industry skill requirements, implying definite objectives with specific outcomes usually defined by a set of competency standards within a Training Package. (Gientzotis 2003, p. 4)

The notion that the two orientations to knowledge and skills referred to above are fundamentally different has cut a deep ravine between the sectors. However, as Gientzotis goes on to observe: in 21st century tertiary learning, the differences are becoming somewhat less salient than they may have been, or seemed to be, in the past:

... Increasingly academic courses are being determined by vocational outcomes, shaping their content and determining the range of courses being offered by higher education institutions. In VET the generic and foundational skills base of competency at all levels are focusing increasingly on transferability of skills, innovation and the application of a range of knowledge based skills (ibid).

This is not to say that the distinctiveness of the goals and purposes of the two tertiary sectors has diminished. Indeed it is to be expected that learning and teaching in the two sectors will continue to be accounted for and organised in different ways. The issue at stake is not the fact of difference in curriculum and pedagogy. It is the ways in which differences are constructed and interpreted, and the influence of published constructions of difference on perceptions of what is possible – particularly perceptions in higher education.

Somewhat curiously, while different forms are elsewhere in our culture and economy accommodated and enabled, in tertiary education they are considered to be a quite significant challenge. In particular, differences in curriculum and pedagogy are problematised as a difficulty standing in the way of articulation, credit transfer and other forms of program collaboration. Commonly, the challenge is regarded as a consequence of VET sector curriculum policy, in particular the adoption of a competency-based training
(CBT) model. As an Australian VET researcher recently remarked: ‘[a] steady stream of criticism has followed CBT wherever and whenever it has emerged, and its introduction as part of the national training reform agenda in Australia was no exception (Hodge 2010, p. 1).

The CBT model is not well understood in universities which have ‘generally eschewed competency-based training and assessment’ (Smith & Bush 2006, p. 387), and equally generally, failed to develop their corporate knowledge in regard to these VET sector practices. CBT has been widely critiqued by teachers and researchers as inconsistent with elements of higher education philosophy and practice and overly focused on the needs of the workplace (Quirk 1993). Vocational educators and researchers have been critical of CBT for undermining the unity of workplace knowledge (Hodge 2010, p. 1) because it transposes ‘work duties and tasks into a set of standardised learning sequences’ (Chappell et al 1995, p. 176). Other critiques have seen the move to CBT as ‘classroom Taylorism and educational engineering’ that should be resisted by educational professionals (Brown 1991, p. 34), while VET researchers pointed to the variable quality of competency standards as a practical issue for VET providers (Sweet 1994), and to the failure of competencies to capture the variability and complexity of actual work performances that they claim to represent (Billett 2001). The area of most sustained criticism amongst educators arose in response to what was regarded as the potential in CBT ‘for reducing the role of knowledge in education and training’ (Mulcahy & James 1999, p. 20). Robinson (1993) adopted the metaphor of the panopticon to argue that CBT individualises and isolates students, subjecting their learning to constant surveillance (ibid). University leaders were vigorous in their opposition, on educational grounds, to the application of CBT to professional education and training (Chappell 1993; Wilson 1992), although the AVCC did support its application to vocational education and training (ibid).

The introduction of National Industry Training Packages as the key mechanism for regulating training delivery in the National VET system was greeted with fervent opposition by a considerable number of academics and VET teachers. The general antipathy towards competency-based training was magnified and focused. Training Packages were declared to be Taylorist and anti-educational: devices which rob students of access to knowledge, as the following extracts illustrate.

Training Packages have little to contribute to the learning process and are, in effect, highly detailed job descriptions... the core of the problem is that Scientific Management provides the conceptual underpinning of Training Packages. This is a fundamental flaw that needs to be more widely recognised, and then acted upon (Hunter 2001, p. 9).

Training packages consist of prescriptive, reductive and atomistic lists of competencies. They strip knowledge from learning in VET, and result in impoverished learning in which learners do not acquire the ‘learning to learn’ skills necessary for today’s complex, changing world (Wheelahan 2004, p. 9).

Training Packages have been widely interpreted as poorly constructed curricula; regarded by some critics as unduly restrictive; and regarded by others as providing inadequate guidance about learning content. Teachers, who play little role in the process of industry standard setting, have frequently pointed out that their own (local) industry experience is overlooked as a source of advice in the process (White-Hancock 2005). Educators and practice-based researchers also deplore the language in which competencies are expressed,

75 It is true that Training Package qualifications can end up looking like poorly constructed curriculum. More than anything else I would argue that this is what happens when teacher professional development does not specifically address program design. Inadequate state government funding for TAFE Institutes in recent years has exacerbated such problems.
arguing that it is unduly complex, abstract and difficult for teachers to interpret. Writing ten years after the advent of Training Packages, Grace argued that their ‘excluding’ language form has become entrenched with little hope of improvement (Grace 2006, p. 9).

5.1.1 Addressing the challenges

Overall, the public debate about the regulation of vocational training has been poorly-informed. Thoughtful and scholarly analyses of Training Package structures, functions and effects often lose out to anecdote and hearsay. However, beyond the polemics about the evils of competency-based training lies the work of educators who are pursuing more effective cross-sectoral linkages within the current and likely future regimes. From these educators come research reports which voice discomfort about some features of the VET system, and uncertainties about how best to work with VET qualifications. These concerns need to be carefully considered if notions of a more integrated tertiary sector are to be achieved. Three key challenges identified in recent research on cross sectoral relations are explored here in an effort to identify the issues at stake and move the debate to the point where we can focus on solutions.

Challenges of difference #1: selecting articulating students

The first challenge relates to the use of non-graded assessment in the Australian VET sector. To be awarded a national Training Package qualification, learners must be able to demonstrate their competence against specified performance standards and are awarded a single grade of ‘competent’. The use of this non-graded assessment system has been identified as a barrier to credit transfer as ‘as it does not allow higher education admission processes to determine the level of attainment of VTE students’ (PhillipsKPA 2006b, p. 14), something which becomes a particular issue in high demand courses for which there are more applicants than places. The PhillipsKPA study of credit transfer cites a Victorian Qualifications Authority study which found that ‘some higher education institutions specifically exclude consideration of students who do not have graded assessments’ (ibid). There have been calls for modification of the competency-based non-graded assessment system: for example, in the High Level Review of National Training Packages (Schofield & MacDonald 2004), and in a Queensland government exploration of options for grading within a competency-based assessment system (DETA Queensland 2005).

VET institutions in several states and Victorian dual-sector universities have introduced a range of local practices including supplementary graded assessment to enable VET students to achieve a grade point average for the purposes of credit transfer. At RMIT University an integrated grading system uses rubrics through which achievement of the units of competency performance criteria provides a grade of competent, and specified higher standards (which may be determined in consultation with higher education staff or industry, or both) provide for grades of ‘Competent with Credit/Distinction/High Distinction’\(^\text{76}\). Despite these local initiatives, there are some in VET who continue to resist graded assessment as incompatible with their competency based approach (PhillipsKPA/DEST 2006a, p. 35).

Challenges of difference #2: dealing with different orientations to learning

\(^{76}\) See: [http://www.rmit.edu.au/browse;ID=my02q5ww3m3e1](http://www.rmit.edu.au/browse;ID=my02q5ww3m3e1)
The second challenge is more difficult to unravel as it stems from the different ways in which curriculum is structured in each of the sectors. As the Phillips KPA study observed:

> Mapping of equivalence of student outcomes between the sectors becomes much more difficult when the way in which curriculum is designed, described and assessed in each sector is very different (PhillipsKPA/DEST 2006, p. v).

For example, even if a diploma includes areas of skill and knowledge that are essentially similar to a degree in a related field, higher education teachers argue that they have no way of knowing that the skills and knowledge in the diploma are in fact covered in a way which is consistent with their treatment in the degree. Diploma graduates may start their degree studies with credit and find that they in fact do not share the knowledge base of students continuing from earlier years of the degree. The problem is regarded as one of ‘differing conceptions of learning between the two sectors’ (Smith & Bush 2006, p. 388). Smith and Bush elaborate as follows:

> While VET in Australia today is resolutely vocational and skill-based, university education is generally understood to encompass a much broader field. There are challenges posed by suspicion, snobbishness and market rivalries; but these have tended to mask the real difficulties associated with different teaching and learning approaches. (ibid, emphasis added)

Three issues are identified in this report. First is the fact that while university learning and assessment emphasises individuals’ cognitive development and critical thinking, competency-based training is focused primarily on skill development (ibid). Second, there is a difference in the way each sector addresses generic skills. University graduate qualities are regarded as broader than the VET sector’s key competencies (now employability skills) (Smith & Bush 2006, p. 392). Third there is the issue of competency-based assessment. Smith and Bush are not as concerned with the problem of selecting ‘the best’ articulating students, as they are addressing a different situation: one in which a competency-based qualification (Certificate IV in Training and Assessment) is ‘embedded’ within a teacher-training degree program. For them the problem is the form of competency-based assessment which ‘focuses on gathering sufficient evidence to prove competence and moves away from an emphasis on specific assessment events’ (Smith & Bush 2006, p. 389). Added to the dilemmas posed by evidence rather than event-based assessment is the fact that some evidence must be demonstrated under workplace, rather than classroom, conditions to meet industry (as distinct from disciplinary) requirements.

The particular challenge discussed by the authors of the research paper is the delivery and assessment of an embedded VET qualification within the educational milieu of a teacher-training degree. The data collected through the study indicates that the majority of students were happy with their dual award and could see how the two parts of the program complemented each other. The response from academics was more mixed. Most were either positive or ‘neutral’ towards CBT, and three appreciated the rigour, clarity and relevance of the CBT’s criterion referenced assessment, with one academic commenting: ‘It

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77 While the Certificate IV in Training and Assessment is the minimum qualification required to deliver nationally recognised VET qualifications, some TAFE Institutes and dual sector universities now ask for a diploma or higher teaching qualification. Additionally, secondary teachers require a four year degree for registration AND a Certificate IV if they are to deliver nationally recognised VET qualifications via a VET-in-Schools program. Embedding enables both qualifications to be completed within four years.

78 Data was collected via: a questionnaire administered to VET teacher trainees in the degree/certificate IV program and follow-up telephone interviews; and telephone interviews with academics at nine universities delivering similarly embedded qualifications.
makes learning more meaningful … at university we don’t do the applied side very well. We focus on theory and writing skills.’ This can be a big barrier for some students (Smith & Bush 2006, p. 396). Another academic maintained that the competency based/criterion referenced assessment was the only ‘authentic assessment in the course’ (ibid). However others reported encountering difficulties and disconcertments working in this domain. Two academics referred to colleagues who ‘resented being told how to assess subjects, as they were used to more autonomy’ (Smith & Bush 2006, p. 398). Another academic reported that they disguised the fact that the Certificate IV units were competency-based when submitting their program for accreditation so that they could get through the relevant committees without incident (ibid). There is a sense from some responses from academics that they feel that VET does not go deep enough: that the focus on skill development is entirely or almost entirely at the expense of the transformative learning which forms the basis of critically aware professional work.

**Challenge of difference #3: securing trust**

The third challenge goes to the heart of the matter: the standing of the national VET system’s regulatory mechanisms in the eyes of the higher education sector. It is discussed in a paper published just before the endorsement of the new AQF, in which concern is expressed about the capacity of the new AQF to bring the sectors closer together:

> The strengthened AQF will contribute to clearer relationships between qualifications, and it will also, in different ways, pressure all sectors of post-compulsory education and training to do things differently so that there is greater alignment between them. However, it is not clear that the current mooted reforms to the AQF will solve the contradiction between the two models of curriculum that are, as it will be argued, incommensurable (Wheelahan 2011, p. 324, emphasis added).

Wheelahan explains the contradiction here as one between the ‘curriculum input models’ (Wheelahan 2011, p. 327) characteristic of the school and higher education sectors, and the ‘VET competency-based training models of curriculum’ where ‘outcomes of learning … are described as workplace tasks and roles’ (ibid). While this issue is aligned to the ‘differing conceptions of learning’ (Smith & Bush 2006) described in the previous example, its effects are felt at the level of institutional recognition as distinct from teacher practice. The distinction being drawn is between ‘input’ and ‘outcomes’ driven curriculum, as Wheelahan goes on explain:

> Qualifications that are based on inputs assume that they cannot be defined independently of the syllabus, processes of learning and assessment and the institutional setting in which learning takes place. This usually requires a high level of trust between all stakeholders...

> Qualifications that are based on outputs sever the link between the institution and learning outcomes because they are based on the premise that learning outcomes can be defined independently of when, how or where learning takes place (Wheelahan 2011, p. 327, emphasis added).

The issue at stake here is the severing of the link between the institution and definition of learning outcomes. In the national VET system, these are expressed as competency standards and are defined by Industry Skills Councils, not by educational institutions. Whereas input or process based systems ‘use shared agreement among stakeholders (such as professional bodies) about content, learning and assessment … outcomes-based systems are premised on the specification of ‘objective’ criteria in a national framework’ (ibid). By bringing new national government agencies into the business of determining educational standards, the national VET system profoundly challenged long established education-
industry power relationships which were derived and managed by associations and institutions according to their own rules and procedures. The introduction of national industry competency standards disrupted the system of trust vested in institutions and replaced it with a system based on ‘technologies of trust’ (Smith 2006, p. 315) consisting of Training Package competency standards and qualification rules, training provider standards and the Australian Qualifications Framework. This is a regulatory regime for a mass system involving different forms of institution from multiple economic and cultural sectors including government owned and private training providers, industry organisations and enterprises. It is a system characterised by Wheelahan as a ‘low trust’ environment:

National criteria are needed where there is low trust and the ‘rules’ are used to regulate behaviour between stakeholders and to regulate buying and selling in a qualifications market. In fluid labour markets, the qualifications themselves become signifiers of the knowledge, skills and attributes of individuals (Wheelahan 2011, p. 327).

In other words, national rules and procedures replace institutional processes when the nature of the institution delivering services is no longer universally ‘knowable’ – as for example the small number of Australian universities was, until the mid-1980s: fewer than 20 institutions located mainly in capital cities, mainly old, and mainly offering studies in the traditional disciplines. Even today, the trustworthiness of the qualifications in the thirty-eight Australian universities is a factor in their reputation as institutions according to shared understandings of academic value and important emblems (individuals’ qualifications, and positions, institutional ranking and the like).

The current VET system is of a different order: 4844 registered training organisations (RTOs) constituted under legislation, company law and incorporated association law. They offer training in 18,353 nationally endorsed units of competency, arranged as 1,716 nationally recognised Training Package qualifications; 1571 nationally accredited courses; 2473 accredited course units/modules and 954 registered skills sets. These RTOs are formally knowable through their registration status and scope of registration in relation to the 18,353 units of competency. The ‘technologies of trust’ and their regulatory caretakers are described as follows by the Industry Skills Council Forum in a 2008 publication titled ‘Training Packages: a story less told’:

Australia’s 10 Industry Skills Councils (ISCs) are responsible for developing and continuously improving industry’s Training Packages. Working directly with enterprises throughout Australia, they codify the skills and knowledge needed by the nation’s workforce into units of competency and national qualifications. Strict quality criteria for endorsement of Training Packages have been established by the National Quality Council, and sees ISCs engage with regulators and licensing bodies, the system’s training providers, industry associations, and international organisations to ensure Australia’s workforce ‘stays ahead of the pack’ (Industry Skills Council Forum 2008, p. 4).

79 Data from http://training.gov.au/ - extracted in May 2013. Nationally accredited courses are those in industry/occupational areas in which there is no Training Package qualification available. Registered skill sets are groups of units of competency required for specific areas of competency such as administration of medication; first aid and occupational health and safety which may be required by professionals in the course of their work, but for which a full qualification is not required. In addition to those skill sets developed by Industry Skills Councils and registered on training.gov.au, there is an infinite number of potential skill sets offered by individual RTOs who have the relevant units of competency on their scope of registration.

80 The Industry Skills Council Forum represents the eleven Australian Industry Skills Councils responsible for the development of Training Packages. The Forum was established in 2005 as a vehicle for collective action to enhance the quality and relevance of Training Packages. See: www.isc.org.au
Importantly, the institutional initiators and regulators of, and stakeholders in, the various standards are not the educational institutions themselves. They are government authorities and agencies, national industry associations and licensing bodies. Despite including VET provider representatives in developing and regulating Training Packages, industry competency standard setting and regulation is a government and industry task, not an educational role. Having previously determined learning outcomes as well as learning processes, some teachers and trainers still feel excluded from an important component of the VET system. They regard ISCs as ‘the other’ and Training Packages as an imposition rather than a trustworthy training tool. University academics remain largely untouched by and ignorant of the VET system. There is little encouragement to delve into the black box of standards-based training – particularly when their VET counterparts have rarely been afforded the time and support necessary to rigorously unpack the system themselves, and remain somewhat at odds with it.

There are no signs that current VET regulatory system as a whole is on the wane, and Training Package qualifications now cover training related to over 80 per cent of the occupations counted in Australian statistical collections. If we are to create the sort of seamless tertiary learning needed to produce graduates with the mix of skills and knowledge needed to transact their lives in a complex and changing culture and economy, our educational sectors must move forward on the basis of mutual respect and systemic trust. Moreover, the formalisation of the AQF under legislation, and the advent of TEQSA as an authority which exercises its regulatory authority through the audit of external standards (in contrast to the self-assessment regime of AUQA), means that standards based regulation is about to expand to include higher education. Here is even more reason why academics must understand and become adept at working effectively with externally generated standards.

5.2 Coming to terms with competency-based training

The negativity about competency-based training, and perceptions of significant or incommensurable differences between the sectors, persist in some part due to misunderstandings about the nature of Training Packages and their role in the national VET system. There are few studies of Training Packages and, despite the free availability of every piece of official national training data on www.training.gov.au, there are few incentives for the uninitiated to explore this uncharted territory. And so: I embark on a brief excursion into the nature of the Training Package as a contribution to mutual understanding.

5.2.1 Unpacking the Training Package

First and foremost it needs to be said that the Training Package is not a form of vocational curriculum. It is a device to facilitate regulation in an education and training system comprising many different types of training provider operating under market conditions. The Training Package model replaced curriculum at the level of regulation, with the aim of reducing the time taken to accredit nationally recognised training and to introduce greater flexibility in training delivery.

It is important to distinguish between curriculum as a regulatory device, and curriculum as a concept which encapsulates the logic underpinning courses of study and the learning, teaching and assessment experiences they generate. Equally, it is important to understand that Training Packages did not do away with this concept of curriculum. Misunderstanding
on this point has been fuelled by a quite widely cited assertion that Terry Moran, CEO of ANTA between 1994 and 2002 and a key architect of the Training Package concept, claimed that Training Packages spelled the end of curriculum. 81 In fact, as Moran has since explained, his point was that the advent of Training Packages spelled the end of state regulation of training curriculum. He argued that regulation of training outcomes via industry competency standards, rather than via curriculum processes, returned control of the curriculum (qua learning and teaching experience) to colleges and teachers (Moran, personal interview 23 May 2003, cited in Smith 2006).

The restrictions of state accredited curriculum became a pressing concern for Australian VET in the mid-1990s as the Commonwealth government attempted to create a national vocational system out of eight quite distinctive state/territory TAFE systems. The federated model under the Australian National Training Authority (ANTA), established in 1992, was a compromise between the states’ constitutional authority over education and the Commonwealth’s control over taxation. In moving to a national VET system, the states ceded no powers, instead entering into training reform agreements in return for increased funding.

One state power which created a roadblock to training reform was the power to accredit training courses, thereby exercising statewide control over learning and assessment processes and outcomes, and creating eight different sets of courses and outcome standards. Although the states agreed to cooperate in developing national curriculum (promising the consistency and interstate transferability of qualifications desired by national companies), they did not agree to a national system of accreditation. Instead the following lengthy process ensued:

1. National Training Board (NTB) led a national consultative process to identity skills and knowledge required for selected occupations;
2. Development of units of competency ‘packaged’ 82 into qualifications by the NTB;
3. Qualifications endorsed as ‘national curriculum’ by the National Standards and Curriculum Council representing national, state and industry interests; and
4. Qualifications were forwarded to each of the states/territories for translation into eight curriculum documents and accreditation as state training curricula.

The first three steps would take up to 12-18 months. The fourth step involved further consultation with employers, unions and government stakeholders and drafting of documentation to meet state accreditation requirements – usually another 18 months. As the delays in course accreditation increased 83, industry and Commonwealth government frustration mounted. Additionally, state accredited courses prescribed every aspect of the learning process: the number and type of classes, teaching methods, assessment tasks, materials, resources and text references, in addition to outcomes. This level of prescription removed any flexibility to cater for different learner or industry needs. What had been manageable in a system made up of a TAFE Institutes delivering a relatively small number of

81 For example, the following extract from a 2002 paper: ‘A pronouncement by the then Chief Executive Officer of ANTA five years ago to the effect that following the introduction of Training Packages, curriculum no longer existed, has remained to haunt proponents of Training Packages ever since (Lewis, pers comm, 2001)’ (Smith 2002, p. 7)
82 The NTB’s informal use of the term ‘training package’ to describe the groupings of industry standards is thought to be the origin of the not quite accurate name which has endured to this day despite attempts from time to time to change it.
83 In 1996, ANTA officials estimated that there was a two-year backlog of national curriculum, with a development cost estimated at $45 million, awaiting state accreditation.
state accredited courses⁸⁴, became increasingly unworkable as the system grew and diversified. As the report of the High Level Review of Training Packages was to observe six years after their introduction:

Standardised curricula containing recommended teaching, learning and assessment practices are much less useful in a VET environment characterised by increasing diversity of contexts, clients, learning sites and practitioners—a development which was foreshadowed some eight years ago in moving from national curriculum to Training Packages (Schofield and MacDonald 2004, p. 11).

The notion of an alternative process for the regulating training emerged through the Commonwealth government review of the ANTA agreement, commissioned by Paul Keating in August 1995, as required under the ANTA legislation (Taylor 1996, p. 1). The Review’s report included a diagram illustrating the lengthy chain of national and state VET regulation in place at the time. The proposal for reform was a system based on three points of regulation to be exercised through standards for training delivery, provider recognition and qualifications standards. Taylor identified curriculum development, course accreditation and assessment as provider responsibilities. Given national (higher level) regulation of the standards for each of these training activities, the review recommended they be managed and regulated at a provider level (see Table 17).

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⁸⁴ Between 1974 and 1992, there were more ‘unaccredited’ (that is, locally designed and managed qualifications) delivered by TAFE Institutes than there were state accredited qualifications. Flexibility to meet enterprise needs (and learner needs for access, preparatory and prevocational training), was vested in local non-accredited programs (precariously so given a general lack of recurrent funding).
The mechanism for regulation of training outcomes was to be industry competency standards ‘packaged’ according to AQF specifications. Thus was the Training Package conceptualised: the specifications for a set of qualifications (which may include certificate levels I-IV, diplomas, advanced diplomas, graduate certificates and graduate diplomas), the specifications for each individual unit of competency, and guidelines for their assessment. The critical change was a shift in training regulation from processes to outcomes. The Industry Skills Council Forum explains the regulatory regime as follows:

Training Packages work on a simple yet fundamentally different premise to accredited courses. Despite the name, they do not prescribe how an individual should be trained. Rather, they specify the skills and knowledge an experienced person needs to perform effectively in the workplace - simply put, they prescribe the ‘outcome’ or competency. Industry establishes these units of competency. Teachers and trainers develop learning strategies—the ‘how’—depending on learners’ needs, abilities and circumstances (ISC Forum 2008, p. 2, emphasis added).

The point here is that Training Packages regulate what students must achieve in order to receive an award, but not how they achieve these outcomes. As Wheelahan and Carter point out, teachers have considerable discretion in constructing programs of study and choosing learning resources (Wheelahan & Carter 2001, p. 308). In fact, all decisions about curriculum processes (such as learning sequences, content, starting and end points) are taken locally. A work-based learner who is applying their learning in everyday work practice will engage in different forms of learning from a college-based student attending classes and learning through demonstration and simulated work practice. A program may involve assessment of existing competency, a combination of assessment and ‘gap training’, or a program of study followed by assessment of competency. Students with prior work experience can receive up to a full qualification through an assessment only pathway. Since the 2007 Council of Australian Governments (COAG) agreement on competency-based

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85 There are now 70 or so Training Packages which take much the same form now as in 1998, with the addition of details of their own history and revision on the basis of a five year major review cycle and continuous minor changes, and instructions for providers regarding the management of transition to updated qualifications. An increasing number of Training Packages also include specifications for Skill Sets: nationally endorsed groupings of competencies to meet specific skill needs.
completions for trade qualifications, apprentices can receive their qualification in shorter than the specified indenture time by providing evidence of competency rather than evidence that they have studied certain topics. And this is an important difference between VET and higher education curriculum. The point of departure in designing a learning plan in VET is the set of national industry standards against which evidence of competency is judged. It is possible to be highly skilled and to have the required contextual knowledge without necessarily being across the foundational concepts of the related discipline. Which is not to say that foundational knowledge is unimportant; rather that it becomes important in particular learning contexts – not all (a point of discussion which I will return to in chapter 7).

Unpacking the unit of competency

Units of competency are the building blocks of Training Package qualifications. They are specifications of the minimum skill and knowledge standards required to perform designated tasks within the relevant occupation. Like any set of standards, units of competency are an abstraction from reality rather than a description of actual practice. They also represent a compromise between multiple positions on what should constitute the standard. They represent a lowest common denominator – minimal rather than aspirational. Units of competency are not topics for teaching – they are performance standards which express what a person needs to do and know to demonstrate they are competent (ISC Forum 2008, p. 2). It is up to trainers/teachers, in consultation with their industry advisory groups, to decide how to reach the required standards for certification and how to assess achievement of these standards.

Despite concerns expressed in academic critiques, competency standards do not do away with knowledge. What they do is embed knowledge in work performance and classify knowledge as, ‘required’ or ‘underpinning’ – all in an ‘institutional’ language (Grace 2006) which has made users and critics unhappy, and added fuel to the claims that knowledge is absent. Even so, it is not too difficult to find evidence of knowledge in units of competency – indeed within the elements themselves. It all depends on the nature of the competency. Often units selected for critique have been those associated with relatively simple work tasks – such as handling mail in an office, which are expressed in terms which may be regarded as self-evident. For example the unit of competency BSBINM202A Handle Mail, from the Business Services Training Package, has three elements:

- ‘Receive and distribute incoming mail;
- Collect and despatch outgoing mail;
- Organise urgent and same day deliveries’.


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86 The expression of the standard for each unit is found in the ‘Elements’ which describe the competency as a set of component parts. This is what needs to be achieved in order to be assessed as competent. ‘Performance criteria’ for each element specify the minimum level of performance required for competence.
However, even in this simple work task there is embedded knowledge, as follows:

**Table 18 Required knowledge: BSBINM202A**

<table>
<thead>
<tr>
<th>REQUIRED KNOWLEDGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Australian geography and postal codes</td>
</tr>
<tr>
<td>• key provisions of relevant legislation from all forms of government that may affect aspects of business operations, such as:</td>
</tr>
<tr>
<td>- anti-discrimination legislation</td>
</tr>
<tr>
<td>- ethical principles</td>
</tr>
<tr>
<td>- codes of practice</td>
</tr>
<tr>
<td>- privacy laws</td>
</tr>
<tr>
<td>- occupational health and safety (OHS)</td>
</tr>
<tr>
<td>• organisational policies and procedures specific to handling electronic mail</td>
</tr>
<tr>
<td>• procedural requirements for receiving/despatching and prioritising correspondence</td>
</tr>
<tr>
<td>• range of mail services available</td>
</tr>
</tbody>
</table>


The standards of work performance coded through this unit of competency are beneficial to the smooth running of a business. They also offer a young person entering the workforce a framework in which to develop their skills. Additionally the performance criteria offer work supervisors a straightforward and simply expressed checklist for use in coaching a new employee. For example, the performance criteria for element 1 of the unit: ‘Receive and distribute incoming mail’ are:

1.1. Ensure that incoming mail is checked and registered in accordance with organisational policies and procedures
1.2. Identify titles and locations of company personnel and departments
1.3. Identify and distribute urgent and confidential mail in accordance with organisational requirements
1.4. Sort and despatch mail to nominated person/location in accordance with organisational requirements
1.5. Record and/or report damaged, suspicious or missing items and take appropriate action in accordance with organisational policies and procedures (BSBINM202A Handle Mail)

More complex areas of competency have correspondingly elaborated knowledge requirements and also knowledge based competency; for example, **BSBDES301A Explore the use of colour** from the Business Services Training Package. As outlined in the extract from the unit in Table 19, the unit comprises three elements of competency.

- The first element concerns research skills and theoretical knowledge;
- The second is about exploring concepts of colour in practice, and
- The third is about the application of colour knowledge to communicate concepts and ideas.

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87 Units of competency also provide students and workers a checklist for self-assessing their performance, but there is a tendency to hide units from end users on the grounds that they are confusing. Informal experiments suggest that this is not necessarily the case, and that workers find units of competency to be less complex and offensive than do some teachers.

88 This unit appears in multiple qualifications within the Business Services Training Package and is also imported into other Training Packages to support and assess competency development in visual arts, interior design, floristry, furnishing, cultural arts and set design. See: [http://training.gov.au/Training/Details/BSBDES301A](http://training.gov.au/Training/Details/BSBDES301A)
In all three elements there is reference to aspects of critical thinking, evaluation, experimentation, testing and challenging of ideas, investigation, review and reflection.

**Table 19 Elements and performance criteria: BSBDES301A Explore the use of colour**

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
</table>
| 1. Source information on colour and **colour theory** | 1.1. Identify and access sources of information on colour and colour theory  
1.2. **Evaluate** and collate information to build a knowledge of colour and its application in different contexts |
| 2. **Experiment** with colour | 2.1. **Test** different colours and colour combinations through experimentation  
2.2. Use own ideas as a way of testing, **challenging** or confirming colour theory  
2.3. Ensure safe use of materials, tools and equipment during experimentation with colour |
| 3. Communicate **concepts** and ideas through use of colour | 3.1. **Investigate** how colour might be used to communicate a particular idea or concept  
3.2. Select materials, tools and equipment relevant to the idea or concept  
3.3. Apply colour in a way that communicates the concept or idea based on own knowledge of colour and colour theory  
3.4. **Review** and **reflect** on own use of colour and what it communicates  
3.5. Seek and obtain feedback from others about the way colour has been used and its success in communicating the concept or idea  
3.6. Present and store work any samples in a way which takes account of the need for professional presentation and potential relevance for future work |


Similarly the specification of required skill and knowledge (see Table 20) refers to the need to interpret and make judgments as well as performing technical tasks and to the need to know ‘different colour theories and their applications to different contexts’. The unit does not specify any particular theoretical framework. Instead it nominates broad areas of knowledge, leaving decisions about particulars to the curriculum designers and teachers, whose field of expertise this is. The specification nevertheless makes it clear that competency in the use of colour in a work context is underpinned by conceptual as well as contextual knowledge.
Table 20 Required skills and knowledge: BSBDES301A Explore the use of colour

<table>
<thead>
<tr>
<th>Required Skills and Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>This section describes the skills and knowledge required for this unit.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Required skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>o literacy skills to read and interpret information about colour and colour theory</td>
</tr>
<tr>
<td>o numeracy skills to calculate quantities and proportions of different colours</td>
</tr>
<tr>
<td>o visual literacy skills to make judgements about the way that different colours work together and in conjunction with other elements.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Required knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>o colour attributes and colour relationships</td>
</tr>
<tr>
<td>o different colour theories and their applications to different contexts</td>
</tr>
<tr>
<td>o emotional, cultural and situational aspects of colour</td>
</tr>
<tr>
<td>o individual interpretation and choice in relation to the use of colour, and the potential limitations of theory</td>
</tr>
<tr>
<td>o materials, tools and equipment required to experiment with colour in relevant contexts</td>
</tr>
<tr>
<td>o ways in which other practitioners use colour in their work.</td>
</tr>
</tbody>
</table>


The salient difference between a unit of competency based on work standards and a course document based on learning outcomes is that the unit refers directly to work practice rather than disciplinary knowledge which may later be applied at work. The extract below (Table 21) from the unit of competency ACMCAN311A Care for Small Animals from the Animal Care and Management Training Package (ACM10), illustrates this point.

Table 21 Unit descriptor and applications: ACMCAN311A

<table>
<thead>
<tr>
<th>ACMCAN311A Care for young animals</th>
</tr>
</thead>
<tbody>
<tr>
<td>This unit of competency covers the process of monitoring the general health and wellbeing of young animals that may be either rescued native wildlife or captive animals being naturally or artificially reared.</td>
</tr>
<tr>
<td>The unit is applicable to wildlife animal keepers or carers who are expected to perform tasks under supervision.</td>
</tr>
<tr>
<td>In addition to legal and ethical responsibilities, all units of competency in the ACM10 Animal Care and Management Training Package have the requirement for animals to be handled gently and calmly. The individual is required to exhibit appropriate care for animals so that stress and discomfort is minimised.</td>
</tr>
</tbody>
</table>


This workplace orientation is further elaborated in the Elements and Performance Criteria for the same unit (Table 22). Areas of knowledge that would, in a curriculum-based course, be organised into disciplines and sub-disciplines (such as anatomy & physiology, animal husbandry, animal metabolism, organisational studies, legal studies) are delocated, to use Wheelahan’s term, from those systems of meaning. However, they are not left dangling. To reiterate my take on conceptual and contextual knowledge, in a unit of competency knowledge is re-located in a system of meaning which has work practice as its reference point. It is not just a matter of knowing how, for example, to care for a young animal. it is a matter of being able to use knowledge to ‘exhibit appropriate care’, and as the performance criteria (Table 22) specify, to do so ‘in accordance with OH&S requirements’ and ‘to ensure the health and wellbeing of animals’.
Table 22 Elements and performance criteria: ACMCAN311A

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
</table>
| Identify and assist with animal care needs | 1.1. Suitable environment for rearing young animals is prepared and maintained in accordance with occupational health and safety (OHS) requirements.  
1.2. Appropriate care program is developed to ensure the health and wellbeing of animals.  
1.3. Assistance is provided in operating and maintaining controlled environments in accordance with facility policies and procedures.  
1.4. Risks to animals associated with artificial rearing are identified and minimised. |
| Monitor health and nutrition requirements for young animals | 2.1. Dietary and feeding requirements of young animals are prepared and stored in accordance with facility policies and procedures.  
2.2. Growth and general condition of animals are monitored.  
2.3. Weaning procedures are followed for nominated species where appropriate.  
2.4. Pre-release activities are conducted under supervision, where appropriate.  
2.5. Records are maintained in accordance with facility policies and procedures. |

Source: http://training.gov.au/Training/Details/ACMCAN311A

The required knowledge for this unit (Table 23) can be mapped back to disciplinary bases. However, it is not taught through conventional disciplinary structures (from general principles to particulars), but through its application to work practice – linked to relevant tasks and processes.

Table 23 Required knowledge: ACMCAN311A

<table>
<thead>
<tr>
<th>REQUIRED KNOWLEDGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>• anatomy structure and physiology features of the relevant animal groups related to caring for young animals</td>
</tr>
<tr>
<td>• concepts of imprinting and socialisation</td>
</tr>
<tr>
<td>• feeding and husbandry requirements for artificially raised animals</td>
</tr>
<tr>
<td>• formula types for common species</td>
</tr>
<tr>
<td>• housing requirements for mother and young where relevant</td>
</tr>
<tr>
<td>• normal and abnormal animal behaviour</td>
</tr>
<tr>
<td>• pre-release activities</td>
</tr>
<tr>
<td>• range of risks to animals being artificially fed</td>
</tr>
<tr>
<td>• release strategies</td>
</tr>
<tr>
<td>• relevant facility policies and procedures, including OHS, animal welfare, ethics, hygiene standards and other industry guidelines</td>
</tr>
<tr>
<td>• relevant federal and state or territory legislation and codes of practice</td>
</tr>
</tbody>
</table>

Source: http://training.gov.au/Training/Details/ACMCAN311A
Assessment of competency is about producing evidence that one has learned to do things to the specified standard. Where and how this competency was acquired, and indeed how it is assessed, is less material than the fact of demonstrable competence. This is another delocation: assessment can be separated from teaching (though not from learning), and learning itself can be delocated from the academy. Statements that have caused consternation to VET and higher education teachers alike include those such as ‘Assessors should ensure that candidates can …’, followed by a string of verbs. Such statements suggest activities to be undertaken in a non-academic setting (as in Table 24) and assessed through methods such as observation and oral questioning rather than project reports and exams. They also bring disruptions to academic calendars in which summative assessment is undertaken at the end of a course rather than at the beginning and during study.
Table 24 Evidence Guide: ACMCAN311A

| Overview of assessment | The evidence required to demonstrate competence in this unit must be relevant to workplace operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit. Assessors should ensure that candidates can:
| | o provide appropriate environments and care programs to meet the needs of a range of young animals
| | o assist in artificially rearing animals
| | o monitor the health and nutrition of young animals to ensure their overall growth and wellbeing
| | o prepare animals for release into a captive or natural habitat environment.
| | The skills and knowledge required to care for young animals must be transferable to a range of work environments and contexts and include the ability to deal with unplanned events.

Method of assessment

| The assessment strategy must include practical skills assessment. Suggested strategies for this unit are:
| o written and/or oral assessment of candidate's required knowledge
| o observed, documented and first-hand testimonial evidence of candidate's application of practical tasks
| o simulation exercises that reproduce normal work conditions
| o third-party evidence
| o workplace documentation
| o portfolio.
| This unit may be assessed in a holistic way with other units of competency relevant to the industry sector, workplace and job role.

Source: http://training.gov.au/Training/Details/ACMCAN311A

5.2.2 Addressing some lingering concerns

Some of the most trenchant concerns expressed when Training Packages were introduced have diminished over time. However, others linger on as points of objection and untrustworthiness in the negotiation of cross-sectoral arrangements. I conclude this excursion into the inner workings of the Training Package by proposing alternative positions on key concerns, which may help to bring opposing parties onto the same side of the ledger.

Training Packages produce ‘thin curriculum’

‘Thin curriculum’ has been regarded as the product of the Training Package’s focus on workplace tasks and, as the argument goes, a ‘lack of opportunity’ to develop underpinning knowledge.

VET teachers, many still reeling from the changes in their work associated with the introduction of ... have been among the critics of Training Packages. They fear the ‘thin’ curriculum associated with strict
adherence to workplace tasks and the lack of opportunity for students to develop underpinning knowledge and reflective and critical approaches to the area of study (Smith 2002, p. 5).

This lack of opportunity needs to be unpacked. Is it the specification of knowledge or training delivery which constitutes an obstacle to reflective and critical learning? The knowledge specification in a unit of competency is contextual – underpinning rather than explicit and central to the teaching effort. Making the link between skills and ‘underpinning’ – or embedded – knowledge requires a well designed learning plan, skilled teachers and time.

The ‘thinness’ or ‘thickness’ of training curriculum is determined by two related factors: first, the amount of money (and hence time) available to support curriculum design, and second, teacher competency in working with Training Packages. In removing curriculum from the regulatory regime, ANTA also shifted at least a proportion of the allocation of Commonwealth funding for national curriculum development into determining outcome standards. Teachers who had previously followed national prescriptions for learning and assessment (translated into their state’s version of the national model) now had to develop their own. A review of the implementation of Training Packages observed that it was ‘based on an implicit assumption of a capacity for teachers and trainers to develop the necessary curriculum through which these outcomes can be achieved for a specific set of learners’ (Down 2003, p. 1). The separation of a national standards-based regulatory regime from local program design was also based on an assumption that training providers were funded to take on the curriculum development task and that teachers had appropriate allocations of time for these tasks. This was rarely the case in the early days of Training Packages, and recent reductions in state funding (particularly in Victoria) suggest that the situation is unlikely to improve. Additionally, whether or not these curriculum capabilities are addressed through the mandatory VET teacher qualification (TAE 40110 Certificate IV in Training & Assessment) depends on considerable curriculum expertise on the part of those delivering that qualification. It also depends on expertise in working out how to provide the time for reflective learning about curriculum processes amidst the clamour for compliance from state training authorities which have a tendency to audit records of program inputs rather than quality outcomes.

While such concerns about the quality of training curriculum do need to be heard, they are concerns to do with funding and teaching conditions, rather than the nature of the training regulatory device itself. They need to be tackled as such. VET curriculum design requires the same level of institutional support as higher education curriculum design.

*Training Packages deskill teachers and tell them what to assess*

The argument that Training Packages are responsible for deskillling teachers is commonly based on the fact that teachers do not determine training outcomes (for example, Wheelahan & Carter 2001; White-Hancock 2002; Smith & Bush 2006). The implication of this
argument is that teachers were previously skilled in determining the outcomes of their programs. However, I am unable to find a time in the modern state or federal training system in which this was the case for accredited training. Prior to Training Packages, teachers delivered to tightly bound curricula in which outcomes and teaching and learning processes were prescribed. Indeed, the lack of experience that teachers of accredited TAFE courses had in curriculum design has contributed to the difficulties experienced in interpreting Training Packages and working out how to design learning from a road map comprising only outcome standards (though, as noted above, time and funding have been more significant impediments in this regard). Training Packages do tell teachers what to assess — that is made very clear in the specification of elements and performance criteria. However, the apparent freedom of academics to determine both the what and how of assessment in higher education programs masks the reality of external professional standards on which assessment is based in areas such as engineering, medicine, nursing, accountancy, computer science and teacher training. In the end, the degree of control is not greatly different between the sectors.

Training Packages do not allow grading of assessment

A 2006 review of credit transfer issues and options called on the National Quality Council to ‘hasten efforts to develop and implement processes of graded reporting of assessment of student outcomes for VTE programs at least at the certificate IV and diploma levels’ (PhillipsKPA 2006, p. 30). No attempt was made to implement this recommendation — and just as well. Any attempt to design and quality assure national grading overlaid on a competency-based system would have foundered amidst competing stakeholder views and produced a nightmarish degree of complexity. Moreover, current practice demonstrates that national grading standards or guidelines are unnecessary. There is a number of state level guidelines (for example, Western Australia 2006) and institutional policies (for example, RMIT 2008) which provide grading strategies which are compatible with competency-based qualifications.

Training Packages privilege the workplace

Training Packages do privilege the workplace — and work-based learning — making a clear statement about the role and purpose of vocational education. The introduction of Training Packages made quite visible a set of relations between learning and work which are muted in higher education by an orientation in the first instance to a body of knowledge rather than its applications in the labour market. Indeed these relations were previously somewhat muted in TAFE before 1998 by the practice of converting workplace knowledges and practices into disciplinary or quasi-disciplinary knowledge and school practices. The reality of competency-based learning and assessment is the presence of the workplace — not just at the end of the program of study but right there in the academy, as a full partner to the training process. Where this constitutes a lingering concern regarding the possibility of VET-

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91 As noted previously, TAFE teachers had considerable control over the content and outcomes of non-accredited courses (for example, foundation, pre-vocational, youth-at-risk, special funding courses) which proliferated during the 1980s. However, these courses, which did not provide their graduates with a qualification with currency in the labour market, faded away when their one-off funding allocations dried up and the norm of statewide curriculum prevailed.

92 I would not claim that this accommodation of higher education regimes by VET is a solution to the problem. There are other ways of avoiding articulation, such as limiting available places — in my experience often a way of masking nervousness on the part of academics about whether the VET grades are valid. Strategies to address this and other dilemmas are canvassed in the next section.
higher education relations, it cannot be put to one side, because it is what Training Packages are designed for: to support learning which is directly related to workplace performance.\(^{93}\)

However, if we look at the situation symmetrically (that is, by applying the same rules of observation and definition to both sides of the situation) another perspective emerges. From this symmetrical perspective, privileging of the workplace simply describes and delimits the scope of the Training Package model in much the same way that the privileging of disciplinary knowledge does for degree and postgraduate studies. Accordingly, there is a case for mutually beneficial neighbourly relations. Rather than discarding Training Package qualifications and competencies as inferior frameworks for learning, higher education may benefit by deploying them alongside, and as components of, other qualification types to meet increasingly diverse learner needs. This suggests that we become much more upfront about acknowledging the vocational role of higher education and the potential for VET teachers to contribute to this mission – not simply by articulating students from VET but by being a partner in the delivery of vocational undergraduate programs.

This is not a new idea. Reflecting on the state of play over ten years ago, Wheelahan and Carter had the following to say:

> The notion that higher education does not need to meet the needs of industry is not supported by the facts. According to the ABS (1998) 96 percent of those enrolled in higher education in 1997 were enrolled for vocational reasons – they are studying to obtain work. Higher education is increasingly required to take this into account in constructing courses, although it may be said, with mixed success. The market imperative is clearly having an impact: those courses that can guarantee entry to prestigious or desirable occupations attract high numbers of the best qualified applicants for university. What is not occurring is that the expertise of TAFE in imparting practical skills to learners is not being used by higher education. There is a growing view that the mission of VET could include the development of employment related skills as part of undergraduate degrees, as well as ensuring that TAFE graduates receive an adequate education in generic skills (Wheelahan & Carter 2001, p. 314-5; emphasis added)

If we accept that an overwhelming number of higher education students have enrolled for vocational reasons, higher education institutions may be failing to meet a significant part of their own mission if they privilege disciplinary theory. Equally, as Wheelahan and Carter maintain, TAFE graduates must receive an adequate education in generic skills – and indeed, in the interests of career development and their own lifelong learning, they should have access to the foundational knowledge required for further study. The intersection between the differences in disciplinary-based higher education and work-based vocational training, and the convergence between the applications of practical skill and theoretical knowledge in the workplace, is precisely the arena the associate degree occupies. This points to its capacity to facilitate tertiary learning across the two sectors. The dimensions of this arena are taken up in chapter 8 through the exploration of options for an integrated tertiary curriculum and pedagogy.

\(^{93}\) There is a related concern often expressed in relation to the workplace orientation of Training Package qualifications – that they are unable to address emerging skills and start-up industry needs. This concern cannot be put aside either. It is another inevitable design feature. National competency standards are based on an analysis of current skill requirements. Even if Industry Skills Councils are nimble in revising and updating standards, qualifications remain tied to updated iterations of the skills of current occupations: updated certainly, but unable to step into entirely uncharted territory. This suggests that there is a gap in the training market – for a qualification which can offer short-term vocational outcomes and capabilities related to broad emerging skill areas.
5.3 The political economy of convergence

When the associate degree was first recognised within the AQF, the distinction between it and the diploma and advanced diploma was described in the following terms:

... a shift from the technical and applied focus of the Diploma and Advanced Diploma to a greater emphasis on foundational knowledge and academic skills and attributes. At the same time learning outcomes require the development of generic employment related skills relevant to a range of employment contexts (Gientzotis, 2003, p. 4).

In identifying foundational knowledge and generic employment related skills as the distinctive basis of an associate degree, Gientzotis goes on to remark that:

...increasingly academic courses are being determined by vocational outcomes, shaping their content and determining the range of courses being offered by higher education institutions. In VET the generic and foundational skills base of competency at all levels are focusing increasingly on transferability of skills, innovation and the application of a range of knowledge based skills. The importance of general cognitive abilities and behavioural dispositions rather than technical expertise is recognised as contributing to the development of innovation and responsiveness in the workplace (Gientzotis 2003, p. 4).

The need for just this convergence between the characteristics of qualifications at the VET-higher education intersection has been identified in enquiries into skill requirements in the Australian economy since at least the mid-1980s when unions and employer associations worked together on initiatives to restructure awards and job descriptions in response to changing needs. The 1995 Industry Task Force on Leadership and Management Skills (the Karpin Task Force) into the Australian supervisory and management skills base found that ‘Australian managers have strong functional skills (business efficiency and technical skills) but lack cross-functional, strategic and corporate skills’. Skill gaps included leadership, teamwork, strategic skills, a learning focus, the capacity to manage a diverse workforce, and an international orientation (Karpin 1995). It is to be expected that qualifications leading to ‘middle level’/paraprofessional occupations will exhibit increasing hybridity, and also that distinguishing a clear boundary between ‘vocational’ and ‘professional’ skills and knowledge will become increasingly difficult. It is not surprising that the AQF discussion paper found that:

Responses from the institutions did not explain specifically how associate degrees differ specifically from advanced diplomas and diplomas offered within higher education, or how they differ from VET programs designed to provide for high levels of credit transfer into higher education degree studies (Allen & Gientzotis 2002, p. 9).

It is likely that institutions were struggling to express the increasingly finely drawn differences between the three qualifications, particularly in the absence of an agreed national specification for the associate degree.

The taxonomy in the 2011 AQF provides a vocabulary with which to describe sameness and difference between qualifications at different (and same) levels. Consequently, it informs decision making about program design and accreditation and the ways in which institutions communicate the purposes and outcomes of qualifications with their stakeholders. However, what also becomes clear from an analysis of the qualification descriptors is the extent of convergence between types of knowledge and skill, and the manner and contexts in which they are applied. Often the differences are of degree rather than type. Even where there is a difference in the type of knowledge and skill, it can be challenging to clearly...
articulate the implications of the described differences for learning, assessment and work practice.

5.3.1 The associate degree and its near neighbours

The following extracts from the advanced diploma, associate degree and bachelor degree statements of purpose illustrates the distinctions in purpose and application of knowledge and skills between the three qualifications.

Table 25 Purpose of advanced diploma, associate degree and degree in the AQF 2011

<table>
<thead>
<tr>
<th>ADVANCED DIPLOMA AQF LEVEL 6</th>
<th>ASSOCIATE DEGREE AQF LEVEL 6</th>
<th>BACHELOR DEGREE AQF LEVEL 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>... qualifies individuals who apply specialised knowledge in a range of contexts to undertake advanced skills or paraprofessional work and as a pathway for further learning</td>
<td>... qualifies individuals who apply underpinning technical and theoretical knowledge in a range of contexts to undertake paraprofessional work and as a pathway for further learning</td>
<td>... qualifies individuals who apply a broad and coherent body of knowledge to undertake professional work and as a pathway for further learning</td>
</tr>
</tbody>
</table>

Extracts from AQF 2011, pp. 40, 42, 44

The purpose of all three is the application of knowledge and skills for work and further study. The differences are found in the type of knowledge and skill (text coloured in red in Table 25) and the contexts in which it is applied (text coloured in blue). These are shades rather than kinds of difference. The statement of purpose for the advanced diploma shows that it is related to advanced skills and paraprofessional work, applying specialised knowledge, whereas the associate degree is more distinctly paraprofessional – applying underpinning technical and theoretical knowledge which edges the purpose of the qualification towards that of the degree and its application in professional work.

Table 26 AQF descriptors: knowledge

<table>
<thead>
<tr>
<th>ADVANCED DIPLOMA AQF LEVEL 6</th>
<th>ASSOCIATE DEGREE AQF LEVEL 6</th>
<th>BACHELOR DEGREE AQF LEVEL 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduates of an Advanced Diploma will have specialised and integrated technical and theoretical knowledge with depth within one or more fields of work and learning</td>
<td>Graduates of an Associate Degree will have broad theoretical and technical knowledge with some depth in the underlying principles and concepts in one or more disciplines</td>
<td>Graduates of a Bachelor Degree will have broad and coherent body of knowledge, with depth in the underlying principles and concepts of one or more disciplines as a basis for independent lifelong learning</td>
</tr>
</tbody>
</table>

Extracts from AQF 2011, pp. 40, 43, 45
An analysis of the statements of knowledge, skill and application amplify the areas of commonality and difference. In regard to the type of knowledge characteristic of each, there is some commonality between the advanced diploma and associate degree (text coloured in red in Table 26), and between the associate degree and degree (text coloured in purple).

The ‘technical and theoretical knowledge’ of the advanced diploma and associate degree can be classified as contextual knowledge – that is codified work practices, technical protocols, and experiential knowledge mobilised for problem solving. Contextual knowledge is evoked by situations and events, and tied to a task or a goal. It is more or less organised and procedural according to the degree of precision and complexity of the task (Brezillon & Pomerol 1999, p. 1).

The broad knowledge with ‘depth in the underlying principles and concepts in one or more disciplines’ of the associate degree and degree can be classified as conceptual knowledge94. This is knowledge organised through disciplinary frameworks with strong boundaries which distinguish one discipline from another, and a level of abstraction which separates the knowledge from particular applications in practice.

What we find in the associate degree is a mixture of contextual and conceptual knowledge. Arguably the qualification is based on a hybrid form of knowledge which brings theoretical and bounded disciplinary systems of meaning up against occupational knowledge where meaning is derived from situation and application. This presents a new and intriguing challenge for associate degree curriculum designers and accrediting agencies. It raises the question of how competency and disciplinary based knowledge is practiced in combination – in other words, how to institute a pedagogy which provides graduates with the practical, cognitive and meta-cognitive competencies/capabilities to move into work and/or further study at AQF level 7 with equal success.

When we turn to the skills and applications descriptors (Tables 27 and 28) we find increasing commonality across the qualifications and levels (text coloured in green) with communications, cognitive, creative, analytical and technical skills fundamental to all three qualifications.

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94 The concepts of contextual and conceptual knowledge used here are adapted from a presentation by Leesa Wheelahan at the AVETRA Conference Melbourne, April 2011. Wheelahan draws her conceptual framework from Bernstein (2000) and uses it to argue that there are limitations of Training Packages because they are based on a particularisation of theoretical knowledge which delocates it from its systems of meaning and ties it to specific contexts. I use the contextual/conceptual knowledge classification for different purposes here and would argue that particularisation of theoretical knowledge in Training Packages represents a delocation of knowledge from one system of meaning (abstract/disciplinary) and its relocation in another (practice based) system. I do agree with Wheelahan’s contention that vocational curriculum needs to ‘face both ways’ – providing students with access to the theoretical knowledge that underpins vocational practice within a field, and to the tacit, context-dependent knowledge of the workplace’ (Wheelahan & Moodie 2011, p. 2).
Table 27 AQF descriptors: skills

<table>
<thead>
<tr>
<th>ADVANCED DIPLOMA</th>
<th>ASSOCIATE DEGREE</th>
<th>BACHELOR DEGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>AQF LEVEL 6</td>
<td>AQF LEVEL 6</td>
<td>AQF LEVEL 7</td>
</tr>
</tbody>
</table>

Skills

Graduates of an Advanced Diploma will have:
- cognitive and communication skills to identify, analyse, synthesise and act on information from a range of sources
- cognitive and communication skills to transfer knowledge and skills to others and to demonstrate understanding of specialised knowledge with depth in some areas
- cognitive and communication skills to formulate responses to complex problems
- wide-ranging specialised technical, creative or conceptual skills to express ideas and perspectives

Graduates of an Associate Degree will have:
- cognitive skills to identify, analyse and evaluate information and concepts from a range of sources
- cognitive, technical and creative thinking skills to demonstrate a broad understanding of knowledge and ideas with some depth in a discipline
- cognitive, communication and analytical skills to interpret and transmit responses to sometimes complex problems
- communication skills to make a clear and coherent presentation of knowledge and ideas with some intellectual independence

Graduates of a Bachelor Degree will have:
- cognitive skills to review critically, analyse, consolidate and synthesise knowledge
- cognitive and technical skills to demonstrate a broad understanding of knowledge with depth in some areas
- cognitive and creative skills to exercise critical thinking and judgment in identifying and solving problems with intellectual independence
- communication skills to present a clear, coherent and independent exposition of knowledge

Extracts from AQF 2011, pp. 40, 43, 45

Table 28 AQF descriptors: Application of knowledge and skills

<table>
<thead>
<tr>
<th>ADVANCED DIPLOMA</th>
<th>ASSOCIATE DEGREE</th>
<th>BACHELOR DEGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>AQF LEVEL 6</td>
<td>AQF LEVEL 6</td>
<td>AQF LEVEL 7</td>
</tr>
</tbody>
</table>

Application of knowledge and skills

Graduates of an Advanced Diploma will demonstrate the application of knowledge and skills:
- with depth in areas of specialisation, in contexts subject to change
- with initiative and judgment in planning, design, technical or management functions with some direction
- to adapt a range of fundamental principles and complex techniques to known and unknown situations
- across a broad range of technical or management functions with accountability for personal outputs and personal and team outcomes within broad parameters

Graduates of an Associate Degree will demonstrate the application of knowledge and skills:
- with initiative and judgement in planning, problem solving and decision making in paraprofessional practice
- to adapt knowledge and skills in a range of contexts and/or for further studies in one or more disciplines
- to adapt fundamental principles, concepts and techniques to known and unknown situations
- with responsibility and accountability for own learning and work and in collaboration with others within broad parameters

Graduates of a Bachelor Degree will demonstrate the application of knowledge and skills:
- with initiative and judgement in planning, problem solving and decision making in professional practice and/or scholarship
- to adapt knowledge and skills in diverse contexts
- with responsibility and accountability for own learning and professional practice and in collaboration with others within broad parameters

Extracts from AQF 2011, pp. 40, 43, 45
5.3.2 Distinguishing between qualifications at the same AQF level

The differences between the three qualifications are both significant and subtle, and those between the two level 6 qualifications – the advanced diploma and associate degree – even more so. A recent textual analysis of the AQF descriptors for the advanced diploma and associate degree identifies the words which are more closely aligned or unique to one or other qualification:

The Advanced Diploma’s top four descriptive words are: specialised, knowledge, technical and depth. The Associate Degree’s top four descriptive words are: knowledge, concept, technical and broad. For the Advanced Diploma specialised and depth are unique. For the Associate Degree concept and broad are unique.

Words used in the Advanced Diploma but not used in the Associate Degree are: change, integrated, synthesise, team, manage and specialised. Words used in the Associate Degree but not used in the Advanced Diploma are: discipline, evaluate, interpret and underpin (McLean 2012, p. 10).

The differences conveyed in the use of these descriptors are important, clearly distinguishing the advanced diploma as a qualification suitable for existing advanced skills workers undertaking a higher qualification for career advancement. The use of ‘depth’, ‘synthesise’, ‘team’, ‘manage’ and ‘specialised’ in the advanced diploma is quite significant in this regard. These are words which relate to prior work experience (depth, synthesise, specialised) and responsibility for work processes and people (team, manage). Equally this means that advanced diplomas are not a suitable qualification for school leavers whose previous (part-time) work is unlikely to have included the level of experience assumed for entry to level 6 work-based qualifications. However, these qualifications have been offered to school leavers with entry on the basis of an ATAR score rather than on the basis of prior skills and experience, because there has been no suitable paraprofessional entry qualification. Accordingly, rather than duplicating an existing level 6 qualification, the associate degree is filling a gap in the qualifications structure and opening new paraprofessional pathways for school leavers.

It is this distinction in purpose between Training Package qualifications and the associate degree which makes sense of the design of associate degrees for school leavers in fields such as engineering, business, design, art, fashion and textiles, where there are paraprofessional positions suitable for entrants to the industry.

Further, while the structures of Training Package qualifications (for example, diplomas and advanced diplomas) are fixed, and competency requirements are aligned to current skill requirements, the associate degree can be designed to facilitate entry to emerging paraprofessional occupations in which skills are changing rapidly95.

5.3.2 Communicating distinctiveness in a field of similarity

At the same time as skill knowledge and application differences are made clear, the AQF descriptors also acknowledge similarities, as McLean notes:

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95 This is not to say that associate degrees are limited to a school leaver market. They can be designed to facilitate career progression for existing workers in emerging skill areas and fast track students through first year/entry level areas of skill and knowledge on the basis of prior experience. Associate degrees can also cross-reference learning outcomes to skill levels expressed in national industry competencies without being tied into national course structures. In this way they offer institutions a strategy to meet emerging skill needs in niche occupations – for example, in small to medium enterprises which frequently complain that national qualifications do not meet their needs.
... while each qualification has its unique words forming descriptors it should not be ignored that there were also eight words that are shared in the top twelve descriptors these are: knowledge, technical, depth, skill, broad, analyse, concept and, complex (McLean 2012, p. 10).

There is nothing new in the commonality of skill and knowledge applications across different occupational levels and classifications: these are all core skills/key competencies which are applied differently in different occupations and occupational levels, and differently again in further study. What is new is the challenge of communicating clear explanations to potential students of the distinction between the two level 6 qualifications, and the relationship of each to the degree. There is also a pressing need to communicate with potential employers about the capabilities they should be able to expect in a graduate of each qualification.

Being able to distinguish between, and relate, the three qualifications at a level of curriculum design and accreditation becomes ever more important now that the AQF is a single ten-level ‘taxonomic structure of levels and qualification types ... defined by a taxonomy of learning outcomes’ (AQF 2011, p. 11), rather than sectoral alignment. For example, it no longer makes sense to distinguish between the level 6 qualifications as Engineers Australia does: naming an advanced diploma as a ‘competency based level 6 program’, and an associate degree as ‘curriculum-based’ (http://www.engineersaustralia.org.au/about-us/program-accreditation#AP2). This commonplace distinction, also used by VET and higher education educators, makes the point that one program has outcomes that are derived from industry competency standards, and the other has outcomes derived from learning objectives which are developed by teachers drawing on their knowledge of disciplinary content. The advent of associate degrees, incorporating competency-based and disciplinary skills and knowledge, demands a new way of explaining where each qualifications sits in the marketplace. Given the lack of information in the marketplace about associate degrees, there is an urgent need for coordinated action to inform stakeholders about the range of qualifications in the paraprofessional space.
Chapter 6 Transition in (and to) a mass tertiary system

In a media article about her 2012 research into effective learning and teaching strategies for students from low socio-economic backgrounds\textsuperscript{96}, Professor Marcia Devlin points out that ‘students from poorer backgrounds are entering Australian universities in numbers not seen before in this country’. Devlin asks: ‘are universities ready?’ (Devlin 2012). The answer is, in most cases, not yet. Increases in the participation of under-represented groups in university education since 1988 have been steady rather than dramatic\textsuperscript{97}, and the apparent congruence between student aspirations, and the purpose and pedagogical orientation of undergraduate programs, has not been greatly unsettled. However, achieving the Commonwealth participation targets will place new and complex demands on universities. A greater variety of undergraduate program types, leading to a wider range of graduate employment destinations, will need to accommodate an increased diversity of learner needs, aspirations and expectations.

The need to assist students to effectively manage the transition to university is well documented. Sustained research programs have provided the framework for a number of innovative evidence-based programs to support students in their transition to university. Evaluations of these programs show that they do help ease the difficulties faced in acclimatising to university life and learning\textsuperscript{98}. However they leave the essential nature of the Australian university sector relatively untouched – it is not yet ‘everybody’s business’ (Wilson 2009; Kift, Nelson & Clarke al 2010). With notable exceptions, the prevailing academic culture of Australian universities remains as it was in the 1960s when we started the slow move from an ‘elite’ to ‘mass’ system (Trow 1979).

The Australian Government policy, Transforming Australia’s Higher Education System (Australian Government 2009), promises:

\begin{quote}
Real action for real participation—attainment, access and engagement: transforming access to higher education through a major package designed to radically improve the participation of students from low socio economic backgrounds (low SES) in higher education, and enhance their learning experience (Australian Government 2009, p. 9, emphasis added).
\end{quote}

Clearly the realisation of this promise demands more than additional funding to increase student numbers. The question of how to improve participation and enhance learning experience goes to the heart of university curriculum and pedagogical practices. Research findings clearly point to the need for widespread change to invite in and retain students who, in past generations, would have taken a completely different pathway into a career.

\textsuperscript{96} See: http://www.lowses.edu.au/index.htm. This research, funded by the Learning and Teaching Excellence Branch of DEEWR, identified and documented successful initiatives and created resources to assist institutions to implement policies, programs and practices to support students from low SES backgrounds.

\textsuperscript{97} Indeed, as the Bradley Review points out, the 2008 access and participation rates for low SES groups, of approximately 16 and 15 per cent respectively changed little since 2002 (Australian Government 2008, p. 30). Between 2008 and 2010 the increase was again small – from 16.2 to 16.8 per cent (DEEWR 2010, Appendix 5 Equity Performance Data http://www.innovation.gov.au/HigherEducation/HigherEducationStatistics/StatisticsPublications/Pages/Students.aspx). Further, the Bradley Review noted that low SES student participation is unevenly spread across types of universities and different courses with poor representation in Group of Eight universities, and in architecture, law and creative arts courses, and in medicine, dentistry and economics. Low socio-economic status students also comprise the majority of students in enabling courses (Australian Government 2008, p. 30). Hence a genuine increase in low SES student participation in undergraduate programs may require a significant effort on the part of some institutions and programs.

This reform is about a major package of initiatives which must include new approaches to learning and teaching – and forging and maintaining links with the world of work into which the majority of degree graduates will exit.

The transition referred to in this chapter is twofold. On one hand is the student transition into university – from school or VET – and on the other is the transition to be made by universities into institutions capable of functioning as part of a mass system. The transition of students is about better links between schools, VET and universities and more accessible information about options. The transition of universities themselves is all about new ways of working with a wider range of learners. These two transitions are addressed in this chapter as a framework for canvassing the ways in which the associate degree could support a reorientation of university curriculum and pedagogy.

6.1 Preparing new cohorts of students for university

6.1.1 Perceptions and aspirations

We also have noted that, whether undergraduate or postgraduate, commencing students arrive at university with baggage and expectations, regarding which we have a duty to be cognisant, as well as varied levels of preparation and doubts about university life. Not surprisingly, many new students are either not overly familiar with, or have completely ill-informed preconceptions about, what might be encountered in the course of their choice (Nelson et al 2006).

Like the newly arrived university students in the study cited above, the year 11 students who participated in our focus group discussions came with varying perceptions of university and other tertiary options, and of what they needed to do to achieve their goals. Our students came from five northern Melbourne schools – here coded as schools A, B, C, D and E. All students had access to school-based careers advice and were broadly familiar with the level of training required for different careers. Those from schools A, B, C, and D were studying VCE, and the majority confidently nominated university as their preferred destination. Those from school E were mainly VCAL students, with a minority studying VCE with a VET in Schools option. Most students from all schools had a broad career direction in mind, but were unsure about where they study and what specific course they might apply for.

The main preoccupation of the VCE students was making sure they selected year 12 subjects which would keep their options open:

I remember when I was really young; I wanted to be an archaeologist — just because I was keen on the whole dinosaur thing. Then I sort of grew up, I started enjoying woodwork in Year 8 and then I thought it’s more of a TAFE course and I thought well if I want to keep more options open, I’ll go to science courses. If I get a good ENTER score, I can take a real pathway that leads off that, whether it’s a science course, or it can be a law course. I can have the ENTER score that will lead me to it. Not that I want to do a law course or, in […]’s case, a physics course. I’d like to stay in the vet science area. But if I don’t get into vet science, or I find it’s not right for me, I can go into other medical based courses. Which I will be prepared for from university (Male student, School D Focus Group, June 11 2011)

Three focus groups were conducted: a regional group of nine students from schools A, B and C (March 2011); school D, (June 11 2011); and school E (June 23 2011). Using the ABS Socio-economic Indexes for Areas (SEIFA) Index of Relative Socio-economic Advantage and Disadvantage (IRSAD), the schools have been classified as follows: School A = low to medium SES; School B = low SES; School C = medium SES; School D = medium SES; School E = low SES.
‘I’ve picked chemistry, physics, psychology, health and human, maths methods and English’ and explaining ‘... my first choice is doctor, but if I don’t get into it, there’s always optometry, dentistry, even engineering, because I chose physics’ (Female student, School C focus group, March 2011).

The students insisted that choices about further study and careers were theirs to make: that their parents would offer advice but did not make the decision for them. Indeed, the discussion suggested that families influence career choices at a subtle and embedded level, as the following two examples illustrate. The first is the response from a female student in School D when questioned about her further study and career aspirations.

**Student:** Well yeah, I was very young when I decided I wanted to be a lawyer. Maybe because my grandfather’s a lawyer, so I always found that really interesting. But then when I was in Grade 6 I thought I’m going to be a fashion designer, I’m going to be awesome and then you know... I’m like no; I can’t be bothered sewing and so I’m going to do law.

**Interviewer:** Okay, are there school subjects that have sort of reinforced the idea of law?

**Student:** Yeah I guess so. Last year, business management... I already knew that [law] was one of my strengths, so it really just reinforced the fact that I could get there and be a lawyer. Also work experience at my grandfather’s law firm... It was really good, especially because there were two other people on work experience that week with me. They do commercial law, so I got to look at all the different areas. They had real estate and banking, all these things. You’d draw up wills and deeds; and we’d go through the papers every morning and look for stuff, because they’d go through the papers normally and look for anything that has to do with any of their clients. So we just went through the process of what they would do in a normal day (Female student School D Focus Group, June 11 2011).

The second example is from School E where the majority of students interviewed (and the majority of senior students at the school) were taking a VCAL course, or a VCE which included a VET in Schools option.

**Interviewer:** In making this choice, what influenced you most? Did someone in your family suggest you should be going into motor mechanics?

**Student:** No, I chose myself.

**Interviewer:** So what led you to think ‘I can do this’? What were the things that influenced you most?

**Male:** Well kind of my dad, because he knows quite a lot about cars but I want to know more than him because I’m better than him.

**Interviewer:** So did he help you make the decision?

**Student:** No, he actually doesn't like me working on cars [...] but in my household everyone's into cars except for my mum and my sister. Yeah, my house is pretty crazy about cars. Being around a lot of mechanics all the time you get to learn new things and like I don't want to rely on someone else to fix my car. You don't want to get ripped off, so you know what you're doing and stuff (Male student, School E Focus Group 23 June 2011).

This student went on to explain¹⁰⁰ that his father had said that he should go to university, but that he, the student, thought that this was not really a viable option. No-one else in the family had gone to university, and his older brothers were employed in non-trade positions in car manufacturing and assembly. He wanted to follow them into familiar territory, but with a trade qualification.

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¹⁰⁰ The audio tape of this part of the discussion was impossible to decipher as a number of students started speaking at once. The student’s report of his father’s and his own further study preferences are based on the interviewers’ notes.
Parental expectations are clearly a significant factor in shaping students’ decisions to enrol in university study (James 2010, p. 3), but expectations and aspirations alone will not necessarily counter the ways that cultural capital is created and traded through daily practice. The working milieus family members bring home, the regular patterns of behaviour and conversation and familiar ways of being, are the fabric from which the threads of possible futures are drawn and re-woven – very often into the same or similar patterns. The lawyer does not necessarily need to encourage his grand-daughter to follow in his footsteps. He simply needs to project an attractive and accessible future through being who and what he is, and making the opportunity available for his grand-daughter to engage in a corner of the legal world through work experience. The father ‘who knows lots about cars’ may reiterate the wider community view that university is the best option. However, his son engages in what he and his family enjoys and makes a career choice which fits that world and his own view of himself. His father’s expressed preference is not reinforced by everyday practices and relations as is the female student’s preference.

Overall, our discussions with the students in this small sample served to confirm data on post-school destinations from previous and more substantial studies, and underline the issues to be addressed by tertiary institutions.

First, the majority of students are being encouraged by their parents and teachers to choose a university degree as their first preference. Careers teachers at the focus group schools explained their aim as helping students to keep the widest range of options open, and encouraging them to aim high. However, these careers teachers were careful to support students who clearly did have university study in their sights. The students in school E studying VCAL or VCE with VET in Schools options, with their career teacher’s support, had nominated careers which would lead them into an apprenticeship or other VET qualification. However, the proportion of young people actually entering a TAFE course is declining. Data from the Victorian On Track survey shows that the proportion of students selecting an undergraduate degree was 45.4 percent in 2009 (up from 41.6 in 2003), and those selecting a TAFE course declined steadily from 26 per cent in 2003 to 18 per cent in 2009 (DEECD 2010, p. 10). By 2011, the proportion of students entering university in Victoria had increased to 49.5 per cent. The number entering non-trade TAFE courses was steady at 18 per cent, and apprentice and trainee numbers again declined from 9.8 to 8.4 per cent (DEECD 2012, p. 3).

As the number of students entering university rises, continuing to outgrow enrolments in VET diplomas, questions are raised about the extent of fit between what is on offer and the aspirations of applicants. Given that students primarily perceive tertiary education to be about getting jobs (Beavis 2000, p. 88; Wheelahan & Carter 2001), and are increasingly opting for university-based work-preparation, we need to ask whether current undergraduate courses are relevant, as either general or skill specific preparation to the work roles which may be taken on by graduates. We need also to ask about the relevance of prevailing patterns of undergraduate life and learning to an increasingly diverse range of students.

Second, the availability of good careers information, the support of teachers with specialist knowledge and skills, and a place in the curriculum for careers education, are all critical aspects of the transition from school to further study and work. The students in our focus groups quickly identified their careers teachers as the primary source of advice about study and career choices. Their comments showed that careers teachers are a trusted source from...
which to get reliable and up to date information which they could use to discuss career options with their parents, and as a basis for decision making. It is also clear from our discussions that the process of supporting senior secondary students involves much more than dispensing information. The case study in Appendix 5 of this report shows how Thornbury High School tackles the task of supporting individual students. Each has a pathways plan which is used as the basis for ongoing discussions with careers teachers, which are regarded by the teachers as a process of building trust so that the students feel confident revealing their aspirations and engaging in authentic conversations about available options. According to recent studies, this student-centred, individualised approach is preferred over information-centred approaches that concentrate on the dissemination of more generic information on post-school options (Rothman & Hillman 2008, p. 26). This study also confirmed our own conclusions that students relied heavily on careers teachers as the authoritative source of information and advice.

These findings, together with those reported earlier (chapter 4, section 4) about student knowledge of emerging study options, including associate degrees, point to the need for changes in the ways in which careers information is designed and dispensed. While there is no shortage of data, there are issues with accessibility, usability and clarity. Multiple sources of information can be confusing and the only way to manage this is to support filtering strategies – such as those provided by careers teachers.

Finally our discussions with students confirmed that socio-economic status remains a potent factor in determining life-chances. There was a discernible difference between the choices being made by students in the medium SES schools (A, C, D) and those from the low SES schools (B and E). Students in School E were predominantly involved in vocational qualifications (VCAL and VET in Schools) and opting for apprenticeships or non-trade TAFE courses, while those in schools A, C and D were confidently deciding to enrol in an undergraduate degree. This is not to suggest that non-university tertiary study is of lesser value; rather that when decisions are mediated by socio-economic status both high and low SES students risk being dissatisfied by their chosen career, and low SES students with academic interests denied this option. Of course, this situation may change as universities pursue SES targets, and develop schemes to attract low SES students. However, on its own this will not improve the position of low SES students, as Marcia Devlin points out:

While a small number of Australian universities have significant experience with non-traditional students, the federal government policy changes mean new directions and new emphases for most universities. It could be argued that there is not, currently, widespread understanding of non-traditional students’ backgrounds, characteristics and experiences in Australian higher education and that, therefore, institutions and staff within them are not ready to respond en masse to the changes we are about to experience (Devlin 2010, p. 2).

6.1.2 Imagining oneself as a university student

We find [...] that some students appear to have a poor alignment between their objectives and the courses in which they are enrolled. This may be due to students having vague goals or misunderstandings; equally it may be due to courses simply not meeting their expectations in terms of

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101 This finding is supported by LSAY studies that found those from lower socioeconomic levels were more likely to be engaged in vocational courses and least likely to be engaged in any of the physical sciences (Thompson 2005, p. vi) (LSAY 42).

102 The expressed aspirations of the four students from low SES school B were not markedly different from those of the other three schools in the focus group.
relevance and quality. Helping students to clarify their personal objectives for undertaking higher education and improving the matching of the interests and aptitude of students to particular fields of study would be helpful. It is a difficult task to convey in advance the character of the university and course experience in any detail — these really need to be lived to be fully understood (James et al 2010, p. 10).

Recent research into the experience of young people entering university and during their first year confirms the powerful influence of cultural factors on undergraduate success. Broadly speaking, the more comfortable and ‘at home’ a student feels at university, the more likely they are to succeed. And those from families for whom university is a familiar destination are more likely to slot into an academic culture. Transition to university can be traumatic for quite well culturally prepared students, so addressing the cultural gap for first-in-family university students is a more difficult proposition. As James points out above, ‘it is a difficult task to convey in advance the character of the university and course experience’. This becomes ever more difficult the fewer trusted role models a student has to refer to. Without an understanding of what to expect in their new environment and the confidence they can ‘fit in’, students will be less likely to select a university course.

The particular challenge faced by universities is that open days, brochures and the like can only communicate information about ‘the other’. They cannot offer an experience as such. To make the transition to university a more real and realistic transition a number of universities have initiated programs which create more enduring links between the university and selected schools as a platform for offering secondary students a taste of university life. Three such schemes are reported below.

**Griffith University’s Widening Participation Strategy**

The Widening Participation Strategy commenced in 1996 with the aim of increasing the participation of students from communities in the university’s catchment area in which there has traditionally been a low university participation rate. These communities include three of the most disadvantaged local government areas in Brisbane, and are characterised by low post-school university transition (approximately half that for the metropolitan Queensland rate), poverty, high mobility rates, and a high proportion of students who are the first in their families to attend university. Uni-Reach comprises three related strands: an outreach program titled Uni-Reach; an admission and scholarship scheme (Uni-Start); and a first-year transition program (Uni-Key). The outreach activities, which involve Griffith students as mentors, are targeted at different year levels and include:

- **Science on the Go** – practical laboratory classes, science shows, field trips, technical demonstrations and science trivia challenge for primary and secondary students, delivered to the schools as part of their curriculum. Students and teachers also get access to the laboratory facilities, scientific instrumentation and equipment available at Griffith University.\(^{103}\)

- **Uni-Reach drama**, a program for year 8 students involves performances which address some of the key challenges that prevent young people from aspiring to university. Actors in the performance are themselves university students who have personal experience of overcoming disadvantage. After the performance, the actors engage with students in discussion about the issues.

The Uni-Start admission and scholarship scheme targets applicants for undergraduate places and enrolled students who have ‘experienced financial hardship, and/or education disadvantage that has impacted on their ability to achieve their full potential’\(^ {104}\). The Uni-

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Key transition and support program for first-year students from partner secondary schools, provides customised orientation, skills development and a mentoring program involving trained and supported peer mentors.\(^\text{105}\)

With funding from the Commonwealth’s Higher Education Participation and Partnership Program (HEPPP), Griffith is extending its strategy to include a fourth strand, Uni Skills, aimed at providing additional study support for all students from disadvantaged backgrounds, based on study groups which aims to:

… complement existing academic skills support and/or peer-mentoring programs already underway in some Academic Groups and Student Services. The Study Groups will provide students with a mechanism for discussing their academic program in some detail and their own progress with a Study Group Leader who has transited successfully into a higher level of program, as well as providing students with a mechanism for developing study skills and engaging in general university and personal life problem-solving.\(^\text{106}\)

The Uni-Reach program team received an ALTC citation in 2010\(^\text{107}\) for its contributions to student learning, and in 2011 was again recognised by the ALTC for its success in widening university participation.\(^\text{108}\)

*Compass at the University of Sydney*

The University of Sydney’s Compass program was launched in 2009 to promote participation in higher education to primary and secondary students. The program is a partnership between the university, the NSW Department of Education and Communities, and selected secondary and primary schools – originally within Sydney and from 2012 involving regional areas of NSW.

Since 2009, more than 15,000 students, teachers and parents have been involved in Compass events and activities – in their schools and communities and on the University of Sydney campus. A wide range of outreach and informational activities are supported, including campus visits, school-based curriculum activities, and teaching resources and professional development for primary and secondary teachers.\(^\text{109}\) Compass takes a longitudinal, cohort based perspective and starts working with students in partner schools in early primary school. The aim is to create sustained links between school and university which enable parents, teachers and students to select from a range of activities which complement the school program. Compass enable parents without tertiary qualifications to familiarise themselves with university life through purpose-designed campus visits, and through participation in activities with their children.

In 2012, the range of the Compass program extended to include ‘Building a bridge to university’: a $21 million program, launched with a $1.2 million HEPP grant. The program aims to improve students’ abilities in reading, writing and numeracy, with a focus on studies in science, technology, engineering and mathematics. It involves a partnership between the University of Sydney and the University of Western Sydney, Macquarie University, and the Australian Catholic University.\(^\text{110}\)

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**IBelong at RMIT University**

*IBelong* is a program within RMIT University’s Equity and Social Inclusion Plan. It is supported by a HEPPP Partnership base grant of $250,000. Partners and supporters of the program include the Australian Indigenous Mentoring Experience (AIME), Metlink, Melbourne Museum, the National Trust, the State Library, the Australian Centre for the Moving Image (ACMI), the Immigration Museum, RMIT student radio (SYNFM) and television (RMITV), professional and industry associations and RMIT alumni.

*IBelong* offers year 9 students from partner Schools Network Access Program (SNAP) schools the opportunity to participate in a taster program based on RMIT qualifications in the context of an urban experience. The program aims to address two aspects of disadvantage in the partner SNAP schools:

- Distance from the metropolitan centre which restricts the opportunities for students to know the city as a source of employment, education and culture; and
- The lack of an experiential basis for making further study and choices.

*IBelong* features include applied learning activities, exploring the city, and peer to peer learning. The program is referenced to career planning and aims to help students understand the nature of specialised industry-aligned tertiary programs which bear little resemblance to school-based subjects or to general undergraduate degrees and diplomas. In 2012 *IBelong* has involved 750 students from 15 SNAP schools.

Typically up to 100 year 9 students at a time are involved in a five day program of activities located on and around the RMIT city campus. They are able to select from discipline/industry based tester programs in art and design, photography and video making, computer science and IT, and allied health, as well as a folio preparation program, Design Bites. Exploring the city is integrated into the taster programs; for example, city locations are used as backdrops for photography and video exercises, visits are made specialist health facilities, and GPS is used to develop computer skills and find targeted locations. Partnership activities include:

- Visits to Melbourne Museum that includes a panel discussion with RMIT graduates employed by the museum on the topic ‘what makes a museum work?’
- Three day Art and Design taster developed in collaborations with The Smith Family, targeting middle years students from two SNAP schools;
- Three day radio production program developed in collaboration with RMIT student radio and the Australian Indigenous Mentoring Experience, incorporating investigative activities aligned with programs across RMIT’s three academic colleges;
- Use of National Trust facilities including the Old Melbourne Gaol, and increased career-related messaging within their activities (aligned with RMIT programs); and
- Priority access to ACMI activities and use of ACMI spaces for taster presentations.

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111 The *Schools Network Access Program* (SNAP) commenced in 2001, with 9 schools and 17 students, as a niche access program for aspirational and motivated students from disadvantaged secondary schools. SNAP students receive priority access to tertiary places and are supported by on campus and school engagement opportunities, and a peer support team of current tertiary students. In 2012, 1278 students commenced at RMIT through SNAP across 163 programs: 1015 in degree and 263 in diploma programs. See: [http://www.rmit.edu.au/programs/apply/equity/snap/schools](http://www.rmit.edu.au/programs/apply/equity/snap/schools)
Ensuring sustainability

These three different university initiatives are based on the premise that young people will be more likely to aspire to university if (a) it becomes a culturally accessible destination, and (b) they can imagine themselves in the role of ‘university student’. At a practical level, each program is underpinned by a partnership between the university and selected schools which is the basis for ongoing communication between staff as well as a platform for a sustained annual program of activities. Importantly, the activities supported through the programs go beyond providing information into developing a lived sense of possible futures.

Most critical of all is the fact that these programs are embedded in the respective universities’ recurrent funding base and not dependent on ‘special’ project-based funding. This is a key element of the success of Griffith’s Uni-Reach program, which has become a regular part of the university’s operations since its inception in 1996. If other HEPPP funded initiatives do not find a livelihood beyond the time of their external funding, we will find ourselves back in the cycle of failed attempts at widening tertiary access and increasing university participation which characterised Australian policy between 1988 and 2008.

6.2 Preparing universities for new student cohorts

Effectively, [low SES] students are not just ‘supported’ but positioned as requiring change, adjustment, upskilling, additional resources, and so on, in order to fit in to established patterns of participation. In its most positive sense, support services provide students with ways of coping with university, even mastering it. Typically, it is not the university, its teaching and learning programs or its administrative structures, which adjust to accommodate different kinds of students. It is these arrangements to which the curriculum focus within the first year experience community speaks. Still, many academics who deliver the university’s teaching programs would regard adjusting those programs to accommodate different kinds of students, as a threat to academic standards. In their minds, accommodating equity to that extent is in clear opposition to excellence (Gale 2009, p. 10, emphasis added).

The programs featured in the preceding section are about preparing students for what they will experience at university. As Gale remarks in the above extract: it is not the university that is changing – it is the potential students’ self-image, aspirations and understanding about the university they may enrol in. However, available evidence makes it quite clear that while such preparation may help in making university an imaginable destination, it may not be sufficient to withstand the relative strangeness of university learning and teaching. Students who are used to a well-scaffolded school routine can find the size and physical unfamiliarity of the campus, the formality of the lecture, and the anonymity of being one amongst hundreds (or thousands) quite alienating, as revealed the following comments from university students interviewed as part of a 2008 UK study.

... trying to find out who people were, where you should be. I know everybody’s an adult when they come to university but I just felt ‘oh God!’ When you walk in you haven’t a clue what building to even start looking for someone.

Although you’ve got tutorials, and tutors because you didn’t actually know any of them, it was just like a number on a door, it wasn’t like there was a person there to say ‘Look if you need anything, come in,’ you know, ‘knock on the door’.

Here I find you have a lecture, you go away and you never see the person till the next one again. They are there to flip a slide rather than have that human contact one to one (Christie et al 2008, p. 571).

Australian studies have produced similar findings. In a 2002 study, Gale found that some students ‘found it difficult to adjust to a different economy of time at university’ (Gale 2002,
Students for whom success depended on face-to-face interactions (with peers and teachers) were often disconcerted by the relatively sparse weekly timetable of lectures and tutorials and the relative lack of contact with teachers. Gale goes on to note that student dissatisfaction with lectures and other aspects of academic life is recorded in successive evaluations of university teaching since the mid-1960s. (Gale 2002, p. 75). A 2011 study of the first-year university experience by Richard James found that (a) only 50 per cent of students felt like they belonged on their university campus, despite the vast majority of respondents being full-time, campus-based students, and (b) between 2004 and 2009 there was a significant decline in the proportion of students who feel confident that they are known by name by at least one teacher (James 2010).

In the light of Australia’s higher education participation targets, it is particularly concerning that a problem so long recognised has still not been adequately addressed. Overall, universities have failed to embrace ways of learning and teaching more in step with changing work demands and learning cultures. In particular, there has been a failure to take account of the significant changes in primary and secondary school learning, including the use of learning standards and criterion referenced assessment, and the widespread implementation of explicit pedagogies to encourage meta-cognitive development. Such innovations are changing the learning experiences and expectations of all students, not just those in low SES and other disadvantaged groups included in higher education participation targets. In a conference keynote address in 2009, Trevor Gale observed that:

There has been little regard for what students bring to university, to the learning environment and experience, and little regard for what they are potentially able to contribute. Knowledge has been assumed to reside in the cloisters of the university, in the hands and heads of its dons. Indeed, universities and their scholars have positioned themselves as the legitimate, almost exclusive, producers of knowledge (Gale 2009, p. 11).
In this keynote, Gale goes on to argue for changes in university operations, saying that:

Like Kift, I too argue that the most effective site to engage in changing higher education is from the centre. Student support services are important and essential but [...] they are largely peripheral to the mainstream of higher education. A student equity agenda for higher education must centre on the student learning environment and experience if it is to challenge the exclusion of certain bodies and what they embody (Gale 2009, p. 10)

The need for new forms of university curriculum and pedagogy has been promoted by Sally Kift and others in the First Year in Higher Education Program at Queensland University of Technology. Basing their work on research which has demonstrated the powerful formative influence of the first year of university study, the First Year Experience (FYE) researchers identified three ‘change challenges’:

1. The need for both high level and distributed sponsorship and leadership within universities;
2. Building a strategic commitment to educating and retaining students by adapting and respond to changing student needs and accommodating known and knowable student diversity; and
3. Developing first year curriculum design that ‘scaffolds and mediates the first year learning experience for contemporary heterogeneous cohorts’ (Kift 2008, p. 5)

The latter challenge refers to the need for a ‘transition pedagogy’, described by Kift as:

... a guiding philosophy for intentional first year curriculum design and support that carefully scaffolds and mediates the first year learning experience for contemporary heterogeneous cohorts (Kift, 2009, p.9).

Transition pedagogy explicitly acknowledges that university curriculum is a particular cultural form which needs to be learned:

... a transition pedagogy seeks to mediate the diversity in preparedness and cultural capital of entering students, now so endemic in our mass system. The concern is that if we do not come in from the periphery (for example, of de-contextualised, ‘bolt-on’ skills courses) and harness the curriculum as the academic and social ‘organising device’ – as the ‘glue that holds knowledge and the broader student experience together’ (McInnis 2001, pp. 9, 11) – student take-up of our otherwise disparate and ‘piecemeal’ efforts to support their FYE (Krause et al., 2005, is left to chance (Kift 2009, p. 9).

The transition pedagogy discussed here is inclusive of all first year students, being focused on university practices rather than changing the behaviours of one or more sub-cohorts of students. It is an integrated orientation to university learning which is designed to provide students with tools to manage their own learning. As the extract in Figure 10 illustrates, the FYE transition pedagogy is learner rather than disciplinary focused, and introduces the notion of multiple learning interactions and transactions in place of the one-to-many style of the lecture and the classroom.

112 The articulation of a transition pedagogy was a major outcome of Professor Sally Kift’s 2009 ALTC Senior Teaching Fellowship. The final report and other resources can be accessed via: http://www.olt.gov.au/resources?text=Kift+2009

Associate degrees in Australia: a work in progress
Kift, citing Gale (2009) and Wilson (2009), refers to the transition pedagogy as a ‘second-generation pedagogy’ that moves beyond the traditional ‘first generation FYE approaches’ which mainly centred on co-curricular activities (Kift 2009, p. 9). Kift looks forward to a ‘third generation FYE approach: ‘... a further collaborative and strategic leap again that requires whole-of-institution transformation’ (ibid). She also refers to Gale’s work in this arena, acknowledging that he would ‘go further and advocate for a different sort of ‘third generation FYE’ approach (ibid).

In framing the argument for his version of the third generation FYE approach, Gale describes three phases in the move towards more inclusive higher education:

First, the way higher education policy currently defines student equity and social inclusion is in terms of student numbers and, superseding all others, numbers of students from low SES backgrounds. It is not a highly nuanced account although it is politically useful to some degree;

Second, university student support services – including co-curricular activities (first generation FYE approaches) and enhanced curricula design (second generation FYE approaches) – are increasingly being positioned as what student equity and social inclusion mean within higher education. These activities are incredibly important but they do not constitute all there is to equity, social inclusion or social justice;

Third, a more sophisticated approach to student equity and social inclusion entails the creation of space in higher education not just for new kinds of student bodies but also for their embodied knowledges and ways of knowing. This is what I have called a Southern Theory of higher education and which perhaps could be dubbed third generation FYE. It applies not just to Indigenous peoples, their knowledges and ways of knowing, but has relevance for the epistemologies of all socio-cultural groups, including people of low socioeconomic status. Their current absence from our universities means a diminished higher education for our current university students, particularly for those enrolled in our elite institutions, which tend to have more homogeneous student populations (Gale 2009, pp. 13-14, emphasis added).

Gale’s third generation FYE proposes new forms of university curriculum and pedagogy which set out to intersect with multiple orientations to learning. Citing the work of Moll et al (1992), Gonzales (2005) and Zipin (2005), he draws together two approaches to translating marginalised knowledges into ‘real world curriculum’. The first is what is known as a ‘funds of knowledge approach’ (Moll et al 1992; Gonzáles 2005), which identifies and invites student knowledge into the learning environment, and uses them to develop curricular. The second has been termed ‘funds of pedagogy’ (Zipin 2005) which refers to the ways in which
students learn within their own cultures. Gale goes on to describe Gonzales’ concept of a hybrid of these two approaches, saying that such an approach would involve ‘lightly framed, open curricula and pedagogy that allow for student contributions, without these being predetermined’ (Gale 2009, p. 13). He argues that:

Such an approach has implications for:
- the repositioning of lecturers, peers, academic literature, fieldwork, etc as resources for students’ learning;
- the repositioning of disciplines and traditions as resources to aid the understanding of issues, problems, themes, and so on (ibid).

In my reflections on the nature of university curriculum and pedagogy, I have been drawn to similar conclusions and I am greatly attracted to the benefits of the hybrid approach as a means of bring new vigour into university learning and teaching. Whereas Gale has focused on the knowledges brought into the university by the students, my own focus has been on the knowledges that may be brought into the university by embracing other codified knowledge traditions – specifically that which is characteristic of vocational education and training. A combination of these two points of focus brings another hybrid approach into being.

6.3 Foreshadowing an integrated tertiary curriculum and pedagogy

The curriculum and pedagogical models proposed in chapters 7 and 8 of this report could be regarded as an integrative or, perhaps, fourth generation strategy for making necessary changes in university curriculum and pedagogy. This approach is complementary to the strategies discussed in the previous section: the FYE (Kift et al) second generation strategy which sees incorporation of new curricula approaches into the mainstream of current undergraduate programs, and Gale’s third generation strategy of inviting in learner knowledges.

My own hybrid envisages a curricula-pedagogical form which has disciplinary and work knowledges operating side by side, underpinned by an explicit pedagogy which names the knowledge processes involved in this way of learning. A major inspiration for this hybrid form is the ways in which educational leaders and teachers at RMIT are interpreting the associate degree as an AQF 6 qualification with vocational and further study outcomes. In the section below, I provide examples of associate degree practice at RMIT as a prelude to elaborating the integrated curriculum model which is laid out in chapter 7.

1. Balancing practical skills and engineering knowledge

At RMIT, the first associate degree accredited in 2003, was the Associate Degree in Engineering Technology (Mechanical) – as a program manager explains, ‘very generic engineering skills that everybody needs: drawing, hand skills, industrial practice’ (Engineering program manager, interview February 2011). This and subsequent streams

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113 Gale does conclude with a disclaimer that these are tentative ideas which require further work. In a revision of the keynote paper (Gale 2012), he omits the reference to Gonzales’ hybrid model of a ‘lightly framed, open curricula and pedagogy’. It is to be hoped that this line of argument is pursued in the future as it offers a way of theorising new approaches to university curriculum and pedagogy which will enable ways of knowing and doing which are applicable to multiple student backgrounds and destinations.

114 In 2010 and 2011, I interviewed senior managers responsible for the design and delivery of RMIT associate degrees in engineering technology, applied science, fashion and textiles, business and design. Data in this section is largely based on these interviews.
of the engineering associate degree were designed by a team of higher education academics and TAFE teachers as a bridge between the hands-on practical orientation of nationally accredited engineering diplomas and advanced diplomas, and the theoretical orientation of the engineering degrees. The delivery model addressed two characteristics of the target student population.

First, the model recognised that students may enter an associate degree with a lower ATAR score (particularly in VCE levels 3 and 4 mathematical methods) and need greater teaching support:

We designed associate degrees so that we can spend extra time with the students. Instead of running classes for four hours [per week], we run for six. The semester is 15 weeks, not 12. By spending extra time with our students in smaller classes, we can offer more help (Engineering program manager, interview February 2011).

Second, the delivery model took account of the fact that a number of students are very much interested in practical experience. ‘They want hands-on experience — and they get more vocational outcomes. Our [TAFE] labs are set up to be practical based, so they get more practical training than what they do in bachelor degree programs’ (ibid).

During this interview, the discussion returned several times to the question of the place of practical skill development in engineering training. The program manager believed that the practical component of the associate degrees is both more interesting for the students and better preparation for the later years of professional engineering:

The students find it more interesting when you do a practical project. And when they do an engineering project in second year, by the time they go to third year or fourth year, they are miles better than others because they do the design, then they manage the project and they make something at the end. It’s not only design. We also invite industry speakers to talk to our students in the project, so they can see what is happening in industry. We found students take this very seriously and ask many questions (ibid).

The fact that associate degree students graduate with project management, design and hand skills is also regarded as an advantage for entry into paraprofessional engineering roles – particularly in the rapidly changing fields of electronics and network engineering. Program staff point to a shortage of design engineers in electronics and civil engineering and to the national broadband network (NBN) as sources of employment for two-year trained network engineers, technical officers or network support officers.

2. Associate degree vocational pathways

In 2008, the RMIT College of Science Engineering and Health (SEH) published a manual ‘as part of the overall commitment by RMIT University to accelerated industry pathways through Associate Degrees programs’ (SEH 2008, p. 5). From a reading of this manual, I understood this college to be working with the notion of ‘vocational pathways’ as a way to describe both work and further study destinations for associate degree graduates. In other words, whether a graduate opts for employment immediately following their associate degree studies or for articulation into, say, professional engineering, or scientific or business training, their pathway is vocational – where ‘vocational’ describes an orientation to learning at all AQF levels which has work skill at its focus. The fact that SEH regard associate degrees as a joint VET and higher education experience is made clear in the introduction to the manual:
Associate Degrees offered by the SET Portfolio are intended to exemplify the nexus between TAFE and Higher Education, bringing together and capitalising upon the best features of each sector in the right blend. SET Portfolio Associate Degrees are jointly designed and developed by TAFE and Higher Education staff. This provides an opportunity for staff from both sectors to observe, learn and acquire strengths from one another, and ensures robust articulation arrangements (SEH 2008, p. 21).

The vocational nature of the RMIT associate degree is underscored by the statements on employability skills and vocational outcomes:

Even though Associate Degrees are not directly linked to Training Packages and hence are not bound by Training Package requirements, the generic employability skills, as articulated in the Training Package Support Materials should be addressed in the capabilities for SET Portfolio Associate Degrees. This is one of the features of the nexus between VET and Higher Education that is unique to these programs.

A pathway into further study on its own is not sufficient for SET Portfolio Associate Degrees. All programs must also seek to identify potential vocational outcomes (i.e. entry into employment) for students at para-professional, associate or technologist level. Since Associate Degrees are a comparatively new qualification and are still relatively unknown in the wider community, this may involve lobbying the industry for new and emerging employment opportunities and/or recognition of the qualification in existing career structures (SEH 2008, p. 22).

Engineers Australia has played an important role in the development of vocational pathways in associate degrees through their accreditation guidelines which place considerable emphasis on practical engineering skills and knowledge, as the following extracts from the EA accreditation guidelines illustrate.

... it is expected that programs will embody at least one major engineering project experience, which draws on technical knowledge and skills, problem solving capabilities and design skills from several parts of the program and incorporate broad contextual considerations as part of a full project life cycle. (Engineers Australia 2007, p15)

There must be substantial hands-on practical experience manifested through specifically designed laboratory activities, investigatory assignments and project work. The specific learning contributions from practical work should be thoroughly understood, mapped and documented as an integral part of the learning design process within any particular academic unit. Practical learning experiences should engage students with the use of facilities, equipment and instrumentation reflective of current industry practice’ (Engineers Australia 2007, p17).

The SEH College Manual recommended that all associate degrees, not only those seeking EA accreditation, should follow the principles underpinning the EA guidelines as a means of ensuring graduates’ work-readiness. The Manual recommends methodologies which incorporate ‘practical and classroom based activities involving individual and team work; problem-based learning; and Work Integrated Learning (WIL)’ (SEH 2008, p. 47). It includes the following learning and assessment guidelines:

Approximately one third of an Associate Degree should use project based assessment which requires students to design, negotiate, plan, and complete suitable, realistic and meaningful projects...
Assessment information gathered through formative assessment may contribute towards summative assessment...

There should be a balance of both team and individual assessment throughout each program. Team assessments are most effective when they are made up of a mix of individual grade, group grade and peer evaluation...

It is not sufficient to rely solely on written assessment, such as exams, to assess Associate Degrees. There must be a component of practical assessment where students must demonstrate their ability to apply their skills...
Each course must contain more than one assessment task and use a range of assessment methods (SEH 2008, pp. 74-75; emphasis in the original).

3. Skill development as a framework for disciplinary theory

The design of the RMIT associate degrees in applied science by the School of Life and Physical Sciences followed a process which referenced the proposed associate degree to its AQF level 6 advanced diploma counterpart, and to cognate undergraduate degrees. The design process started by aligning the skill objectives of the associate degree with units of competency in a related Training Package advanced diploma. The theory components of the associate degree courses were then built as a scaffold to support skill development. The proposed associate degree courses were then reviewed against undergraduate degree courses to make sure articulating associate degree graduates could meet the disciplinary standards required in the third year of the degree. The Head of School describes the anxieties and dangers associated with this novel design process:

It was quite a challenge because we were creating a new design approach for a new style of qualification without having anything to refer to. There was always a danger we would end up with as much theory as possible to demonstrate to higher education [colleagues] that we’re at least as good. There was also a danger of losing sight of the fact that it was the VET teaching strategies and practical focus which was needed for the occupations linked to the associate degree. So we had to identify the key skills that graduates would need and make sure they were embedded in the associate degree just as they were in the advanced diploma. Not only the skills focus but also the teaching strategies are similar because students quickly gain confidence when they have developed occupationally relevant skills, and it helps them to learn the disciplinary theory needed for articulation to degree level studies. (Head of School, November 2010).

The program manager goes on to cite the case of a graduate who came back to the school to tell the program team that ‘she learnt how to be a scientist … what it actually meant to work as a scientist through the associate degree’ (Program manager November 2010).

When she moved on into the degree, well she thought they probably had more theoretical knowledge than she did, but subsequently found out they didn’t. Soon she got over that intimidation thing of, ‘oh I’m just a TAFE student moving into higher ed’ and she told us she felt so confident that she knew exactly what she was doing and what needed to be done, and she could help other students — that gave her such an edge. She’s one of our best advocates for the way we teach but all of them said that the learning they did here gave them so much confidence that they could do the job. In fact this graduate actually said ‘oh the theory, that was the easy bit’ (ibid).

4. Vocational skill development and creativity

Without compromising vocational skill development, associate degree learning must be designed to encourage analytical and creative thought processes (Associate Degree Forum August 2011).
The Associate Degree in Design (Furniture) students will be participating in daily discussions and workshops throughout the festival...

Julian Pratt, Program Coordinator, Furniture and Product Design at RMIT, said the works selected demonstrated the current high level of Australian design talent. "We are seeing our students using and manipulating ideas to produce visually stimulating and innovative products," he said. "They are playing with the idea of what furniture is and exploring..."

The development of analytic capabilities and creativity in the Associate Degree in Design (Furniture) is based on a combination of conceptual learning and hands on production, where simulated projects based on industry scenarios will aim to solve real-world design problems (http://www.rmit.edu.au/programs/ad007), and a close association with practitioners from the design industry, as the following extract from the program guide illustrates:

There are three ‘capstone’ courses in the Associate Degree which require you to engage with ‘real world’ industry practice - Design Studio 3 (Furniture Design) in which you will develop a new furniture design proposal in consultation with industry to meet a researched market need; Design Studio 4 (Furniture Design) where you will collaborate with an industry partner to create a piece of furniture ready for retail; and Independent Professional Practice for Furniture Designers involving the development of a personal portfolio and action plan designed to enhance your generic employment capabilities as a furniture designer (See: http://www.rmit.edu.au/courses/041122).
5. Emergence of a shared notion of the associate degree as hybrid

In August 2011, RMIT held its first forum on associate degrees. The forum aim was to provide ‘managers and teachers involved in the design and delivery of associate degrees with an opportunity to share their experiences and to explore the nature of associate degrees in the context of the national and institutional strategic directions’ (RMIT Associate Degree Network 2011). The program included speakers from RMIT, Deakin University, Box Hill Institute of TAFE and Swinburne University. It attracted 120 participants, mainly RMIT VET staff teaching and managing associate degrees, and others keen to explore this option in their own industry area. A small number of bachelor degree-level academic staff participated – two teachers from articulating programs and five members of college academic development groups. The forum program included small group discussions which addressed three questions:

- What are the key characteristics of an associate degree at RMIT? How would you explain these to potential students and to employers?
- What pedagogical approaches are appropriate for associate degrees?
- How do we ensure that graduates are both work ready and capable of articulating to degree studies?

There was a similarity of responses across the groups to these three questions. The reports from each group revealed that the associate degree is widely understood as a hybrid of vocational and disciplinary knowledge and skills, with 14 of the 18 groups including reference to convergence/merging/integration between different forms of knowledge.

Involving industry in the design and delivery of associate degrees was regarded as critical to the success of the program in producing work-ready graduates. Equally, the VET and associate degree program managers and teachers at the 2011 forum regarded disciplinary knowledge, critical thinking and analytical skills to be essential to a program which also offered further study destinations for graduates.

This chapter concludes with an expression of the views expressed by the forum participants, based on the group reports, which I have merged and summarised under three headings:

1. RMIT associate degree curricula and pedagogical principles;
2. Pedagogical practices; and
3. Preparing graduates for the workforce and further study.
Associate degrees at RMIT: August 2011

Group Report 1 RMIT associate degree curricula and pedagogical principles

The RMIT associate degree occupies a distinctive third space where the strengths of vocational education and training and higher education converge. The qualification represents a blending of skills and knowledge and offers a strategy for bridging the gap between vocational qualifications and undergraduate degrees.

The associate degree also offers an opportunity to widen participation. We need a close look at the selection criteria for associate degree entry and not just replicate the higher education model. For instance, we should consider associate degrees as a post-school destinations for the over 5,000 Victorian Certificate of Applied Learning graduates who do not have an ATAR score and hence have limited access to undergraduate studies.

Curriculum principles

• An industry linked paraprofessional qualification with an employment focus offering pathways to further study.
• Skills – it’s all about skills; strong vocational outcomes; industry led, industry oriented and endorsed with professional accreditation where available
• Associate degrees must be Industry-relevant — allowing for application of knowledge and theory through industry experience.
• Engagement of industry in design and delivery
• Underpinning theoretical knowledge, high level (generic) skills combined with specific work ready skills.
• Multiple pathways, exit points and work destinations
• Training for the present preparing for the future

Pedagogical principles

• More independence in learning, stronger body of theoretical knowledge and skills;
• Practical focus underpinned by learning how to learn;
• Enable more contact with teachers;
• Student centred and flexible — not one size fits all
• Cater for cultural diversity and students from low SES backgrounds

Group Report 2 Pedagogical practices

No single pedagogical approach will work – a range of practices are needed to blend applied learning and theory, leading to outcomes which combine broad capabilities and specific vocational skills.

Learning should be based on application to enable concept building from practice-based approaches. It is important to maintain a skills focus – competence builds confidence. Work integrated learning approaches should be designed in consultation with the relevant profession to ensure recognition of the qualification. Include provision for the development of analytical and critical thinking skills and research capabilities.
Assessment options

- Formative as well as summative assessment. Maintain a dual focus on competency and disciplinary knowledge
- Provide feedback and continuous assessment as a strategy to assist students to adjust to higher levels of learning.

Learning strategies

- Hands on and practical
- Project-based learning
- Workshops and studio
- Discursive and interactive lectures
- Problem based learning
- Flexibility delivery
- Small classes (as opposed to the higher education large class model)

Group Report 3 Preparing graduates for the workforce and further study.

Achieving these two outcomes was regarded by forum participants as the most difficult part of the design of an associate degree: striking a balance between specific vocational outcomes and generic skill and knowledge development. Diplomas and advanced diplomas were regarded as appropriate qualifications for providing for technical skill development, and ensuring employment outcomes are met. However, they were regarded as less able to meet academic requirements for articulation into degree programs.

Without compromising vocational skill development, associate degree learning must be designed to encourage analytical and creative thought processes.

Industry related/based projects offer the opportunity to combine competency based and disciplinary learning, for example, by adopting approaches which incorporate work-integrated learning to address work-readiness and add higher level competency and analytical knowledge to satisfy the degree requirements. However, RMIT must not lose the focus on what industry needs and wants.

Articulation arrangements

- Key is in retaining the flexible nature of articulation agreements – allowing for pathways that don’t insist on block exemptions. Block 2nd year exemptions encourage associate degrees to lose vocational emphasis by focusing on preparing students for the 3rd year of the bachelor degree

Learning strategies

- Clearly define learning outcomes and career destinations and maintain the focus on combining vocational and critical thinking skills
- Include courses such as Deakin’s Learning for Knowledge Society; E-learning for contemporary learning; and Work and the sustainable society or incorporate these perspectives into existing courses
- Build transition strategies into the program – for example a second or third year degree
elective

- Cross program collaboration and team teaching

Include project options which involve students from advanced diploma, associate degree and bachelor programs working together

Ensure that employability skills are integrated into the associate degree
Chapter 7 Drawing the threads together

7.1 The current moment in tertiary reform

The desire to improve educational pathways has been a constant in the policy-driven evolution of Australia’s university and VET sectors towards a mass tertiary system. In my review of Commonwealth government policy making for tertiary education (chapter 4), I reached the conclusion that the Bradley Review got the national policy settings for the transition to effective tertiary provision and intersectoral relations just about right. The macro-policy combination of participation targets, demand driven recurrent funding, and performance standards, hold tertiary institutions accountable and enable innovation. Under the Commonwealth government funding arrangements flowing from the Bradley Review recommendations, universities are held to account for performance against targets through their compact with the government, and are rewarded when targets are achieved. The decisions about how to reach agreed targets – what programs to deliver, how many enrolments to accept and how to meet participation targets – can be made at the institutional coalface according to local circumstances.

This national policy framework puts the Australian tertiary sector on notice to develop educational and business practices capable of delivering a broader range of services to cohorts and clients not well represented at present: low SES and first in family secondary school graduates; adults returning to study; online, part-time and work-based learners; and enterprises looking for effective ways of maintaining the knowledge and skills currency of their workforces. When the Bradley Review concluded, ‘[i]t is no longer helpful to see stark contrasts between higher education and VET in the level and types of qualifications they deliver’ (Australian Government 2008b, p. 180), it was a reference to the shift in VET provision towards high-end skills (Richardson and Teese 2008) and the increasingly vocational and professional focus of higher education, in response to changing labour market demands. These changes are not simply about a more strongly work-oriented curriculum and certainly not about a uniform approach to teaching and learning. They are about embracing many different ways of operating. The new tertiary sector will be wide ranging and complex. Approaches to tertiary learning will have to be flexible and heterogeneous if the sector is to deliver meaningful outcomes. Elaborating on the comment regarding the changes in sectoral relations, the Bradley Report goes on to say that:

... diversity in tertiary education provision remains necessary to ensure that the full range of learner, industry and social needs can be met. The broader tertiary education and training system must support development of generic and specific skills, knowledge and understandings for new workforce entrants and for those seeking skills deepening or broadening. It must also cater to young people experiencing difficulty in making successful transitions and to existing unqualified or low-skilled workers (Australian Government 2008b, p. 180).

And this leads us to a fundamental challenge for tertiary educators. A more diverse range of student cohorts, and converging workplace demands, are still being channeled through a tertiary sector characterised by two differentiated options. There is an undergraduate

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115 See: http://www.innovation.gov.au/HigherEducation/Policy/Pages/MissionBasedCompactsAndPerformanceFundingForUniversities.aspx

116 This policy applies to undergraduate programs. The Commonwealth government has maintained caps for ‘sub-degrees’ – that is, diplomas, advanced diplomas and associate degrees.
curriculum based on the transmission of disciplinary fundamentals and the pedagogies of reading, lectures and scholarly discourse. And there is a vocational curriculum offering workplace competencies through the pedagogies of practice. The challenge is one of devising curricula and pedagogies relevant to emerging work and cultural conditions, and of stepping back from the increasingly anachronistic view that ‘vocational’ and ‘higher’ education are fundamentally different and incommensurable.

This is of course much easier said than done, and more readily achieved at the point of macro-policy making than that of multi-faceted practice. After so many years of what has been described as ‘ad hoc, piecemeal approaches to plugging learning gaps, widespread confusion on the part of applicants for tertiary places, and cultural gaps between staff in the two sectors’ (Milne et al 2006, p. 30), getting the macro-policy settings right has been the relatively simple stage in the tertiary reform agenda. Shifting long-held views and deeply embedded teaching practices is another matter altogether: like the proverbial elephant, a meal to be eaten slowly, carefully and in small pieces – starting where the accretions of age and habit are the least encrusted.

As a new qualification in the AQF, which is coming to be regarded as a hybrid of the vocational and academic, and which offers a near greenfield site for innovation, the associate degree is an obvious place from which to launch a new tertiary learning model. However, this is not simply a matter of conflating different learning and teaching approaches into a uniform median. Maintaining the distinctive values of vocational and general education, and enabling a diversity of learning options, is essential if the tertiary sector is to meet student and workforce needs and contribute to a dynamic culture.

As a prelude to unpacking a tertiary curriculum and pedagogical proposition aimed at meeting these needs, I take a brief detour into the underlying nature of different forms of learning to show how they are counterpoised in an unequal relationship. I suggest a unifying knowledge framework which addresses emerging tertiary learning needs without losing distinctive and important differences along the way.

### 7.2 Ways of knowing, doing and learning

In his exploration of the notion of craftsmanship, Richard Sennett identifies three basic abilities which he argues are (a) the foundations of craft skill, and (b) distributed roughly equally throughout the population. These he names as the abilities to localise, question and open up. He says that ‘the first involves making a matter concrete, the second reflecting on its qualities, the third expanding its sense (Sennett 2008, p. 277). He goes on to explain his concept of craftsmanship with the following example:

> The carpenter establishes the particular grain of a single piece of wood, looking for detail; turns the wood over, pondering how the pattern on the surface might reflect structure hidden underneath; decides how the grain can be brought out if he or she uses a metal solvent rather than standard wood varnish. To deploy these capabilities the brain needs to process in parallel visual, aural, tactile, and language-symbol information (ibid).
Localising is about focus – intense concentration on the task at hand and deploying tools to achieve planned outcomes. Sennett gives the example of a surgeon fully focused on the action of the scalpel, conscious of what it should feel like as it dissects flesh, alert to any small variation that may suggest a lesion. The focus is on established patterns of practice and equally on unexpected and inexplicable events: moments of cognitive dissonance which call actions into question – ‘this is not how it should be’, ‘what’s happening here?’; ‘how should I go on?’ – and which solve problems by being open to new possibilities and prepared to take intuitive leaps:

Simply shifting between domains of activity stimulates fresh thinking about problems. ‘Open up’ is intimately linked to ‘open to’ in the sense of being open to doing things differently, to shifting from one sphere of habit to another. So elemental is this ability that its importance is often slighted (Sennett: 2008, p. 279).

This way of knowing and doing is situated practice (Lave & Wenger 2003) – working out how to do things by drawing on experience and, through repeated and reflective experience, improving performance. The rules and conventions of situated practice are open to variations which are progressively added to the mental repertoire of skilled practitioners and typically communicated by word of mouth. Codified learning associated with this way of knowing and doing is in large part competency-based. Evidence that learning has taken place is primarily found in what is produced and/or transacted – and in explanations of how knowledge was applied in these processes.

Craft knowledges are readily perceived as performative (dealing with what is done in particular situations by acting on, and with, specific materials). On the other hand, the forms of knowledge associated with academic learning, while equally performative as knowledge processes, involve dealing with abstract representations of reality to generate concepts with which to analyse and classify qualities that define what is what. This form of knowledge is propositional. It is codified as rules, theories, theorems, matters of proven fact, and structured conjecture. It is a way of knowing and doing which is enabled by different abilities than those identified by Sennett in relation to craft skill. The abilities I would most closely associate with academic skill are generalisation and abstraction, interrogation and analysis, and what could be termed ‘drawing in’ (in contrast to ‘opening-up’ in Sennett’s construct). By using the same explanatory form as Sennett. I propose the following characterisation of academic abilities:

The first ability involves establishing the conditions for generalisability within one or more theoretical frames of reference. The second ability involves testing the potential relevance of selected theoretical explanations to the matter at hand. The third brings things together in a logical order and draws generalisable conclusions — that is, conclusions that can be defended with reference to existing theoretical knowledge — and that may lead to the elaboration, modification or replacement of the existing theories.

The primary practical skills on which these abstract academic abilities depend are those of critical reading, reasoning framed by formal mathematical and scientific logics, and scholarly writing. These are all skills associated with formal, discipline-based learning. By contrast, the capabilities associated with craft ability – working with particulars, observing material form, consulting people with relevant expertise, testing practical interventions to achieve an

117For useful explanations of mathematical reasoning see De Corte 2007; and of critical reading Manguel 1996
outcome – are associated with informal and work-based learning. These are two ways of knowing and doing – certainly not mutually exclusive – and perhaps entirely complementary.

**Problematising ways of knowing and doing**

My use of Sennett’s framework to produce the thumbnail description of academic abilities applies the principle of symmetry, developed by actor-network theorists, to ‘level the differences between humans and non-humans’ (Law & Hassard 1999, p. 38). In my case the principle is applied to level the difference between two philosophies of knowledge and action – treating each simply as an orientation that is open to critical scrutiny, and equally deserving of being taken seriously as a way of knowing which has salience in the real world. I try to avoid giving the two philosophies of knowledge and their practices any a priori value relative to each other. I simply regard them as different knowledges used to achieve different ends.

This is not the usual way in which philosophies of knowledge and action and ways of knowing and doing, are expressed in relation to each other. Two matters have led to a particularly asymmetrical way of expressing the relationship. First is the fact that these two philosophies and their practices are most commonly unpacked and critiqued by analysts – for example, educational sociologists – who work within an academic way of knowing. Second is the fact that the academic way of knowing has become a dominant code (Bernstein 1981, 1996) in what could be called the global north, which has taken on the power to arbitrate on the validity of other codes. Indeed, as Verran argues, because of its claims that knowledge is a form of symbolic representation referring to underlying given foundations (Verran 2001, p. 32), the dominant code can have the effect of marginalising other codes in various ways. This is the case whether a universalist or relativist stance is adopted. A universalist reading of knowledge would question the validity of the non-dominant code, and insist that it be replaced by the dominant code – the classic colonial move. A relativist reading of comparative knowledge(s) would regard the non-dominant code as a valid in its own domain – to be valued as other, perhaps primitive and quaint, and almost certainly separate and of limited use-value within the frameworks of modern reasoning. The essential point is that the dominant western knowledge code regards the three categories of world, knower and knowledge as given, a priori categories. A contrasting view would regard the world, knowers and knowledge as categories which are formed – and reformed through action.

The British sociologist Basil Bernstein, cited above, is one who put a relativist case for the dominant code when he defines a code as ‘a regulative principle, tacitly acquired, which selects and integrates: a) relevant meanings ... ; b) forms of their realization [and] c) evoking contexts’ (Bernstein 1981: 328). Bernstein goes on to argue that:

> It follows from the definition that, if code selects and integrates relevant meanings, then code presupposes a concept of irrelevant or illegitimate meanings; that if code selects forms of realization, then code presupposes a concept of inappropriate or illegitimate forms of realization; that if code regulates evoking contexts, then again this implies a concept of inappropriate, illegitimate contexts. The concept of code is inseparable from the concepts of legitimate and illegitimate communications,

118 There is a third factor to consider, but as this is not something for which I have amassed a defensible proof I merely mention it in passing: it is possible that the sociologists who critique craft ways of knowing do so from a perspective of relative ignorance.
and thus it presupposes a hierarchy in forms of communications and in their demarcation and criteria (Bernstein 1981, p. 329, emphasis added).

Bernstein empirically tests this proposition through constructing an experiment involving British children from different social classes. These children are asked to classify items of food with which they would all be familiar (such as bread, bacon, cheese, fish fingers, hamburgers, sardines, butter) by grouping them on whatever basis they wished. Bernstein identified two broad principles for grouping: on the basis of local practice (for example, ‘that’s what we have for breakfast’), or on the basis of more general criteria (for example, ‘these all come from the sea'). He found that middle class children were more likely to group the foods according to general principles and working class children grouped the foods according to local criteria. When the same children were asked ‘can you group them a different way this time?’, a statistically significant number of middle class children explained their grouping according to local practice, whereas the working class children continued to use their original (local) criteria. The conclusions drawn on the basis of this experiment are that the middle class children had access to two sets of principles, and that they accorded the general principles priority over the local (that is, in choosing this option first) (Bernstein 1981, pp. 330-332).

Bernstein names the codes as ‘elaborated’ and ‘restricted’. The latter, as the name suggests, is a code which is enacted in particular social settings – the home, workplace, neighbourhood, sporting clubs and other such associations – carrying local stories and codifying local truths which do not have salience in the greater scheme of things – stories about breakfast and other small matters rather than grand stories of universal classification. The elaborated code on the other hand is associated with the institution of ‘society’ and mediated through formal education:

The institutional availability, distribution, and realization of elaborated codes is established through the modality of education. We see education as a fundamental reproducing and producing agency crucial to (but not in a close correspondence relation with) the class regulation of the mode of production and crucial to the class regulation of modes of social control (Bernstein 1981, p. 333).

So, it is through schooling that students either gain, or are denied access, to the elaborated code – which Bernstein argues is a vertically integrated (social context free) discourse, in contrast to the context-bound horizontal discourse of the restricted code. Wheelahan summarises Bernstein’s concept of vertical discourse as taking two forms:

The first [...] ‘takes the form of a coherent, explicit, and systematically principled structure, [and is] hierarchically organised, as in the sciences ...’ (Bernstein, 2000, p. 157). Physics or other natural sciences are examples of vertical discourses with hierarchical knowledge structures.

The other ‘takes the form of specialised languages with specialised modes of interrogation and specialised criteria for the production and circulation of texts, as in the social sciences and humanities' (Bernstein, 2000, p. 157) (Wheelahan 2007, p. 640).

Wheelahan compares these two forms of vertical discourse with the ‘horizontal discourse’ as follows:

Unlike the acquisition of horizontal discourse (which is tied to specific contexts and largely only meaningful within that context), the process of acquiring vertical discourse is through induction into that strongly classified and insulated body of knowledge. The acquisition of vertical discourse requires

Bernstein does make it clear that he does not regard this as an issue of innate capability, rather one of context and access.
the development of the capacity to integrate meanings so that these meanings ‘are not consumed at the point of its contextual delivery (ibid).

There are two key points at issue here. The first is that Bernstein’s proposition is based on a deficit model of knowledge, language and learning. Some knowledge (and some knowledge practitioners) inevitably comes to be less valued in mode and application. Typically the knowledge associated with manual trades and work-based learning is cast as a diminutive of the elaborated code: knowledge with the theory missing. This sense of something missing is conveyed in the following extract from Wheelahan’s reading of Bernstein:

Bernstein’s insights allow us to see that CBT [competency-based training] fundamentally transforms the nature of knowledge by delocating it from the vertical discourse in which it is classified and relocating it closer (if not completely) towards horizontal discourse. This changes the nature of knowledge, and the processes through which it is acquired. Rather than integration of meanings we have integration within a context. Consequently, students are provided with access to specific content, and not the systems of meaning in disciplinary knowledge... Content is disaggregated so that it consists of isolated ‘bits’ of knowledge. A focus on specific content for a specific context means that the meaning of that content is exhausted by the context. Unless students have access to the generative principles of disciplinary knowledge, they are not able to transcend the particular context. Students need to know how these complex bodies of knowledge fit together if they are to decide what knowledge is relevant for a particular purpose, and if they are to have the capacity to transcend the present to imagine the future. Knowledge is not under their control. This simultaneously denies them epistemic access to the structures of knowledge relevant in their field and social access to the ‘unthinkable’ (Wheelahan 2007, p. 648; emphasis added).

The second and related issue is that Bernstein’s theory ties the relative value of knowledge to a single, and singular, set of cultural and epistemological practices – those of the dominant class. It follows that access to, and the capacity to utilize, this valued knowledge is distributed unevenly throughout the population – roughly in proportion to access to, and the capacity to benefit from, formal (academic) education. It further follows – and this is where the theory becomes really problematic – that equity is only served by giving the population at large access to curricula devised to communicate the vertical discourse of the dominant code.

In saying that the theory is problematic in this regard, I already hear the murmur of dissent from those who would champion such equity. What can be wrong with universal access to the dominant code? And indeed the thrust of current Commonwealth policy for greater university participation is in this very direction. My concern is not about access per se. That is an undeniable good. It is about the terms and conditions of that access. In other words, the quality and relevance of the dominant curricula and pedagogical practices to the increasingly diverse range of students to whom they will apply – the issues canvassed by Gale and others, discussed in chapter 6. Unless academic communities find the will to adopt new approaches to learning and teaching, we will merely have more and more people subjected to a curriculum regime which privileges a dominant code of disciplinary learning – rather than more and more people having access to a broadened range of conceptually and practically valuable knowledges.
Finding a resolution in multiplicities

While Bernstein’s theory of the structure of knowledge has the potential to privilege a dominant code, the fact that he is concerned to name and understand different knowledge forms also contains the seeds of a resolution to this potential. Here I am indebted to Leesa Wheelahan who has framed her reading of Bernstein with a commitment to the value of vocational knowledge. As she says in the conclusion to the paper I cited in the previous section: ‘We need to value the depth and complexity of knowledge needed for vocational practice the same as we do for professional practice’ (Wheelahan 2007, p. 649). It was Wheelahan’s visual representation of vocational and professional knowledge side by side as equal and different forms, which she suggested could be named as contextual and conceptual knowledge, that led me to put aside the deficit nature of Bernstein’s theory and replace his dichotomy (either/or) with the possibility of multiplicity (this and that). If, as Bernstein argues, ‘curriculum defines what counts as valid knowledge and pedagogy defines what counts as the valid transmission of knowledge’ (Bernstein 1971, p. 48), then we can benefit from curriculum and pedagogical approaches which embrace multiple forms of knowledge. Applying the principle of symmetry, and adopting Wheelahan’s Bernsteinian schema, I have developed a schema, presented in Figure 12, which has these two orientations to knowledge named as conceptual and contextual and has them represented as different and complementary approaches to the organisation of learning.

Figure 12 Orientations to knowledge and organisation of learning

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120 Wheelahan 2011: The point was made in response to a question from a conference participant during a presentation at the AVETRA conference, Melbourne 28-29 April 2011.

121 I realise that naming one form of knowledge ‘contextual’ can be problematic if it implies that the other form is context-free, which clearly is not the case given the association of conceptual knowledge with the academy. However, enactments of conceptual knowledge in the academy are decontextualised through abstraction, such that context is not a defining feature. It is this generalised (conceptual) contextuality that stands in contrast to the particular (material) contextuality of what I am calling contextual knowledge.
Modern conceptual knowledge which is commonly applied as scholarly practice is characterised by a high degree of mobility, by which I mean it can be transferred across time and space, without distortion, in the form of printed and digital representations (such as maps, text, graphs, tables, spreadsheets). Indeed the authoritative position and efficacy of conceptual knowledge is significantly enabled by its mobility and immutability. Explanatory and problem solving propositions and methodologies, circulated as authoritative texts, enable conceptual knowledge to be articulated, generalised and applied in the widest possible range of sites. When organised for the purposes of learning, conceptual knowledge traditionally gives rise to curricula organised according to disciplinary (and inter-disciplinary) categories.

Whereas conceptual knowledge is mobile, contextual knowledge is linked to the specific economic, cultural and physical spaces in which various practices are organised – for example, work sites in which practices are organised for the purposes of production and service provision. Whereas conceptual learning is transacted with reference to books and other forms of codified knowledge which provide the rules and protocols for application, contextual learning involves a good deal of learning from experience (one’s own and that of instructors and mentors), and improved performance through reflection on and experimentation in new ways of doing.

What is important to appreciate in this model is that both of these orientations to knowledge deal with the relation theory-practice – albeit in different ways. To repeat a point already made: knowledge associated with manual trades and work-based learning is not devoid of theory. The relationship between knowledge as a set of propositions about the material world, and knowledge as a range of skilled and knowing interventions in the world, is operationalised differently in conceptual and contextual orientations. Each has its place and purpose – and its own relative power base. The power of conceptual knowledge lies in its generalisability, whereas the power of contextual knowledge emerges when practitioners apply an appropriate process to the problem in hand. The question is not whether one or other knowledge orientation is more necessary/better/stronger than the other. It is a question of where to start to get the best learning and productive outcomes.

Most of the teachers who contributed to the development of the statement of characteristics of RMIT associate degrees (cited in chapter 6) preferred approaches where learning starts with practical experience. They argued that the practical components of the associate degrees are proving to be both more interesting for the students and better preparation for the later years of disciplinary study at degree level. Some teachers argued that they had students who fare better when they develop a broad theoretical understanding and learn how to apply this theory in practice. These teachers are looking for a flexible curriculum/pedagogical approach that will enable them to lead some learners to theory through practice, and others through a theoretical framework to practical skill development.

The examples of RMIT associate degree practice discussed in chapter six show an emerging idea on the part of these associate degree practitioners of a qualification which is distinguished from undergraduate degrees and diplomas and advanced diplomas by combining the characteristics of both. My brief excursions into the associate degrees

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offered by other Australian tertiary institutions suggests that these different interpretations of the AQF specification is leading broadly towards hybridity and new approaches to skill and knowledge development. Whatever their different structures and functions, Australian associate degrees sit at the intersection of the current sectoral divide with the potential to integrate what has previously been regarded as separate and incommensurable.

The challenge as I see it, is to come up with design principles which do not privilege one way of learning and doing over the other. To achieve this outcome requires a curriculum-pedagogical domain in which teachers and learners embrace multiple ways of doing knowledge, and learn how to name what they are doing at any point in the learning-teaching process.

The structural dimension of this domain is a hybrid curriculum model combining conceptual and contextual knowledges.

The procedural dimension is a pedagogy which names and makes explicit a set of knowledge processes to assist students to recognise and name their ways of learning, and to become adept at selecting appropriate orientations.

The integrated curriculum/pedagogy I have in mind is one that may facilitate educational and cultural change: on one hand by opening the door to ‘academic’ success for previously excluded individuals and groups, and on the other by being more inclusive about the ways in which success is defined and pursued. The approach rests on three principles:

- Understanding integration as a means of maintaining difference within a frame of macro-level sameness (such as multiculturalism), and not as eradicating difference (that is, assimilation). This means conceptualising and operationalising different ways of knowing, doing and learning and letting these different ways coexist and go their separate ways as befits specific purposes;
- Creating learning spaces in which different forms of learning and being skilled and knowledgeable are enabled and valued as pathways into increasingly diverse forms of work and into higher study; and
- Making the features of the model clear and explicit to students, employers and teachers.

The idea of ‘integrated’ curriculum has been around for some time and in the tertiary sector usually refers to programs of study which contain higher education and VET courses/units and are taught by higher education and VET teachers respectively (see for example Gabb & Glaisher 2006; Carnegie 2009). The hybrid model goes somewhat beyond current conceptions of integration. What I have in mind may include these features, but would be designed in the first instance with reference to different orientations to knowledge and its application in practice. Who teaches what, and how programs are administered, are questions to be decided once the program is designed, and student needs and interests assessed, rather than being determined a priori according to given sectoral patterns of ‘ownership’. As a framework for considering a hybrid curriculum and pedagogy, in the following section of the report I discuss some recent US and Australian studies, and the debates that are unfolding as educators explore new ways in which a mass tertiary system might respond to new occupational needs – and those of new student cohorts.

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7.3 Towards hybridity: contemporary debates and options

7.3.1 Challenging conventional undergraduate structures in the US

As discussed in the introduction to chapter 2, and in Appendix Two, for almost a century (and particularly since the end of WWII) the associate degree in the US has played an important role as an alternative pathway into a four year degree. Its vocational role has been relatively minor. Associate degrees which lead directly to employment (widely known as ‘terminal’) have been regarded as quite different in structure and content from those that lead to a baccalaureate degree – the ‘transfer’ associate degree. However, in recent years as new middle level/paraprofessional occupations have been created, attention has turned to the nature of higher education credentialing frameworks, and the question of how to enable greater work/study flexibility.

A leader in this debate is the Lumina Foundation, a private, independent foundation established in 2000 with the aim of ‘increasing the proportion of Americans with high-quality degrees, certificates and other credentials to 60 percent by the year 2025’ \textsuperscript{124}. The Lumina strategic plan includes the aim of:

\begin{quote}
... mobilizing higher education institutions and systems to increase the adoption of data- and evidence-based policies, partnerships and practices that closes attainment gaps for underserved students and improve overall completion rates (Lumina Foundation 2013a, p. 2).
\end{quote}

The Lumina Foundation points to substantial skill shortages as the ‘clearest evidence about the need to increase higher education attainment’ (Lumina Foundation 2013, p. 3). A third of employers surveyed by Lumina cited a lack of technical competencies/hard skills as their main difficulty in filling jobs. The problem was ‘particularly acute in the manufacturing sector, where advanced manufacturing techniques are dramatically increasing the demand for postsecondary skills’ (ibid).

Debates convened by the Foundation have led educators and policy makers into some interesting new territory where long held assumptions about the nature of a baccalaureate degree, and the relationship between different forms of associate degree and the baccalaureate, are being challenged (Ruud & Bragg 2011). Baccalaureate and applied baccalaureate\textsuperscript{125} (AB) curriculum structures have been unpacked and compared by participants in Lumina Foundation forums\textsuperscript{126}. A key issues identified in this process was the circularity of traditional definitions of the baccalaureate, or four year degree, which rest on ‘identifying the credits and courses required’ without any consensus about what these credits and courses in fact constitute (Ruud and Bragg 2011, p. 15). The lack of a clear standard for courses which can receive credit towards a baccalaureate has become a concern as the applied baccalaureate has become a more popular means of meeting skill shortages. With increasing enrolments, the applied baccalaureate has become a more

\textsuperscript{124} See: \url{http://www.luminafoundation.org/about_us/}

\textsuperscript{125} The applied baccalaureate has been defined as ‘a bachelor’s degree designed to incorporate applied associate courses and degrees once considered as terminal or non-baccalaureate level while providing students with the higher-order thinking skills and advanced technical knowledge and skills so desired in today’s job market’ (Townsend, Bragg & Ruud, 2009). This definition is acknowledged as problematic in the absence of clear definitions of terms such as ‘non-baccalaureate’ levels and courses, and ‘higher-order thinking skills’ (Ruud and Bragg 2011).

\textsuperscript{126} The forum reported by Ruud and Bragg in their 2011 report is ‘The Convening’ on the applied baccalaureate degree, held in September 2010.
substantial recruiting ground for applicants for the baccalaureate. As Ruud and Bragg point out in reporting on a Lumina forum called ‘The Convening’:

When applied associate course work was considered terminal and nontransferable, there was less concern about the value of these courses in the context of a baccalaureate education; however, now that these courses are allowed to transfer, they are meriting closer attention (ibid).

The Convening also led to discussions about what makes a program ‘academic’, using the skill of welding as a reference point for the exploring criteria and indicators. The response, as reported by Ruud & Bragg:

... focused on the need to move away from looking only at what the classes are teaching students to looking at what outcomes are being developed in students, similar to other discussions regarding outcomes assessment and the redefinition of a baccalaureate education (Ruud & Bragg 2011, p. 18, emphasis added).

The conventional view that technical degree programs are ‘nonacademic and of lesser value as a bona fide college major’ (ibid), led a participant from the US Higher Learning Commission, to observe that:

A baccalaureate program is 120 credits of college-level work. At a developmental level we don’t have much disagreement, but when you get into the major, it gets messy. If the major is welding, most people would see that as inappropriate, but if I push hard I can find similar difficulties with, for example, ‘violin’ (ibid).

As this example is further unpacked it becomes clear that welding has been given an ascribed (non) value related to its cultural and economic status without the actual knowledge outcomes in welding training being examined. As Ruud and Bragg conclude:

If outcomes are identified as truly academic, then technical programs can be adapted to meet the academic rigor criteria. In other words, welding should not be considered ‘nonacademic’ until we determine what is truly academic; when academic quality criteria are established, programs like welding may or may not make the cut (ibid).

Similar aspects of academic status and curriculum structure are being canvassed through a four-year study of applied baccalaureate degree pathways in science, technology, engineering, and mathematics (STEM) fields, and technician education, through the Office of Community College Research and Leadership (OCCRL) at the University of Illinois127. Through a review of data from previous studies and an analysis of the curricula of 95 baccalaureate pathways, Makela, Ruud, Bennett and Bragg identified a set of themes that open up new ways of thinking about how undergraduate pathways might be structured. Of particular relevance is their finding that applied and traditional associate degree programs can exhibit strikingly similar characteristics. When comparing curriculum from transferrable and nontransferable degree tracks, the research team discovered that, contrary to widely held assumptions:

... in five of eight associate degree comparisons, there were very few differences. In four of these five comparisons, program representatives confirmed that the nontransferable curricula existed first and that the curricula were modified to create a transferable degree program (op cit, p. 12)

127 This research is supported by a grant from the National Science Foundation Advanced Technological Education program (NSF DUE 10-03297). Further information is available at: http://occrl.illinois.edu/files/Projects/nsf_ab/NSF-AB-TechReport-2012.pdf
The modifications necessary in this case were minor, and at three institutions only a single class in the entire associate degree curricula was affected. Even where apparent differences were greater, ‘the program descriptions available online for the two degrees were almost identical’ (ibid). Reflecting on their findings Makela, Ruud, Bennett and Bragg observe that:

… the ‘similarities found between transferable and non-transferable associate degree programs … raise a host of questions about the difference between preparing students for the workforce versus, or perhaps concurrently for, academic transfer’ (ibid).

Interestingly, the research team also found that some of the respondents to their study ‘avoid[ed] applied language due to perceived stigma’ (op cit, p. 15). They conclude that ‘this hesitancy stems from both a lack of recognition of AB degrees with state policy contexts and concerns about lowering perceptions institutional prestige for those who identify with AB degrees’ (ibid).

Such discussions are evidence that conventional wisdom about different orientations are being questioned in the US, as they are in Australia. This may assist to set the stage for an international dialogue about, and increased recognition for, different approaches to tertiary learning.

Using the 50-state policy study conducted by Bragg and Ruud in 2010, Makela et al identify five curriculum models which offer different pathways into baccalaureate studies:

- Career ladder programs which ‘provide stepwise academic and technical coursework extending from the associate to the baccalaureate degree program’;
- Management capstone programs ‘in which the associate degree program is supplemented with business and management-focused coursework at the upper division’;
- Upside-down programs are highly structured: commencing with prescribed technical coursework which is complimented by general education coursework at the upper division level;
- Completion programs which are similar to the upside down model, but are more wide-ranging in their requirements and structure, thereby enabling students to select courses which will maximise their chances of receiving credits and completing a baccalaureate degree; and
- Hybrid programs which feature elements of two or three program types (Makela, Ruud, Bennett & Bragg 2012, p. 7).

The upside down curriculum (see Figure 13) has been identified as enabling a combination of work and study outcomes. First, it means that a student entering a program from year 12 can exit into paraprofessional work on the basis of specific work-related studies in the first two years of an articulated pathway. Second, these graduates can receive credits towards a baccalaureate degree. Third, graduates who enter the workforce can return to baccalaureate studies at a later stage. Finally, the model is regarded as having potential benefits for adults seeking to re-enter the workforce because it ‘frontloads the technical course work’ (ibid), thus facilitating credit for prior work-based learning into these technical units.

However, it must be said that this model does not necessarily provide students with a level of credit equivalent to the number of courses completed in their associate degree. As the following extract from the Evergreen State College online information for baccalaureate applicants shows:

You will be advised to register in a coordinated studies program that is not related to your technical degree. The first 32 credits you earn at Evergreen must be through a coordinated studies program.
Consult with your academic advisor after you have completed these 32 credits in a coordinated studies program. Submit a written request to the Credentials Evaluator in the Office of Admissions to have your transfer credits reviewed again. Successful completion of the Evergreen credit will ensure that your technical degree will transfer as a block of 90 credits (See: http://admissions.evergreen.edu/docs/upsidedown.pdf).

In other words, students need to complete a 32 credit coordinated studies program in addition to their two year associate degree to enter the final two years of the baccalaureate.

**Figure 13 Evergreen State College upside down degree**

Amongst the key themes identified by Makela et al in their 50 state review, was a hesitancy amongst respondents to use the ‘applied baccalaureate’ terminology commenting that ‘this hesitancy stems from both a lack of recognition of AB degrees with state policy contexts and concerns about lowering perceptions [of] institutional prestige’ (Makela, Ruud, Bennett & Bragg 2012, p. 14). And despite a growing awareness amongst researchers about the anomalous value hierarchy operating in the US credentialing system, and the fact that the apparently different approaches ‘can exhibit strikingly similar characteristics’ (op cit, p. 12), prejudices persist. Makela et al conclude that:

> ... analyses of AB degree pathway designs, implementation, and outcomes is needed so that program designers and policy makers can move beyond opinions and assumptions ... toward decisions made based on fuller and more complete descriptions of existing and emerging AB degree pathways and evidence of their effectiveness and replicability (op cit, p. 15).

The OCCRL research team is continuing their work on the relationship between the applied and four year baccalaureate and maintaining an online dialogue about their findings. A recent posting by Erica Harwell and Julia Panke Makela concerns the balance between theory and application in science, engineering and maths programs. Harwell and Makela’s article is worth reproducing here in full as it tells a most interesting story about a significant 21st century dilemma facing US universities – and our own.
Addressing the Theory and Application Debate in STEM Education

One of the analogies that stand out most clearly from our conversations in the field is that of a swinging pendulum, with theory on one side, application on the other, and a pendulum representing the focus of the curriculum. For each degree program, the pendulum hangs at a different angle, seeking a balance between theory and application that is optimal for the program’s goals and objectives, as well as the stakeholders that it serves (e.g., students, employers, faculty, administrators, communities).

Understanding this balance in the context of a single degree program and higher education institution can be a challenge. Placing that institution within the larger context of relationships with employers, other colleges and universities, government and policy makers, and other stakeholders adds layers to the complexity. It leads to a fascinating discussion regarding: (a) what should be the goals of a high quality, STEM education for college students, and (b) what educational formats are effective for attaining those desired outcomes?

One program administrator of an Associate of Applied Science (AAS) degree program stressed that community colleges differentiated themselves from four-year baccalaureate degree programs through their focus on direct application of technical skills. He stated:  

"we focus on industry standards, the technical capabilities that [students] need in the job that they are going for." The students gain concrete, technical expertise through their coursework and – although they may need some time to get acclimated to a new environment or new piece of equipment – they are essentially ready to go on the first day of their job. This teaching approach is viewed as providing successful learning opportunities for students who connect to material by actively applying tasks.

While the theme of valuing applied education at the technician level appears repeatedly in our data, as we move to the baccalaureate degree level the discussion becomes more complicated. On the one hand, students who choose to pursue a bachelor’s degree after receiving an applied associate degree are often at a disadvantage. Four-year institutions can struggle to fit applied technical courses within their program requirements, and the low number of general education courses required in AAS degree programs leave students with a number of requirements to fill. As one four-year institution representative reflected: “it’s not fair to [the students], because then when they come to us, they have to take another three and a half years to earn their degree."

On the other hand, employers have expressed concerns when upper level bachelor’s degree coursework does not add sufficient depth via the instruction of theory and context. For example, one manufacturing employer suggested that when students are too specialized in a single applied field:

They don’t have that broader perspective that you get in an electronics program or through a mechanical program that gives you views beyond what you’re going to work on day in and day out. And that broader perspective helps them think more logically and reason through problems as opposed to, ‘Oh, I learned this is school. I just go apply this.’ … There are subtle things that can happen. If you can’t reason through a problem based on your fundamental science knowledge, then you’re going to be in trouble. Right? You can try the same things over and over, but if it didn’t work the first time, it’s not going to work the second time either.
During our travels, we also heard employers discuss the need for students to be able to apply the knowledge they have gained to their workplace. One employer expressed a need for curriculum to be contextualized, and that such practical application has been missing in the past:

But what I would like to see, and this again goes back to the market sector-driven approach for the AAS, is the contextualization of the subject matter so that it’s not left to the individual to show up on the doorstep of an employer and say, “Okay, I learned this in school, but I don’t know how to apply it here.”

However, we have also heard expressions of concerns about a trend toward theoretical education (to the detriment of application) in STEM bachelor’s degree programs. A department chair of a traditional, highly-ranked Bachelor of Science in Mechanical Engineering program expressed that:

*We’re in a crisis mode.*

We have engineering programs around the country with faculty now that have been trained in sort of this classical research university mentality, where people in graduate school are taught to be faculty; they’re not taught to be engineers. And I have friends who have won the most prestigious awards in machine design, who honestly cannot change a tire... They’re an expert in some tiny narrow area. They’re deep as can be, but they’re just narrow. And those can’t be the people that educate our engineering students. That’s just never going to work... 

There just aren’t the capable engineers coming out of schools these days. There are a lot of engineers graduating, but most of them, they’re years away from really being able to do engineering work.

This department chair stressed the importance of restructuring primarily theory-based degree programs by reducing class sizes and providing students with opportunities to get “engaged from day one in actually designing and building and working with mechanical systems, taking things apart” – essentially, participating in applied learning experiences. He suggests that doing so offers the opportunity to “teach more theory than other schools because we allow students to understand the theory that they learn through application, becoming really passionate about it.”

However, changes such as these would also require shifts in institutional culture which reward the current focus on theory:

The industry wants [applied learning]. But the academic side of the house drives us to the publish or perish. ‘How many journals do you have? How many conference publications do you have?’ Nobody in engineering, nobody really cares how many machines you’ve built.

(Posted Dec 2012; downloaded February 11 2013. Reproduced with the permission of the authors. See: [http://occrl.illinois.edu/](http://occrl.illinois.edu/))

Similar themes emerge in discussions with teachers, researchers and employers in Australia, who express concern that long-held assumptions about the nature of knowledge and skill which created a status gap between assessment to occupational standards, and academic grading based on publishing standards. I talk regularly with excellent vocational teachers working at diploma and associate degree levels who feel constrained to replace practice-based teaching with approaches whose product is an academic paper. I also hear excellent undergraduate teachers expressing frustration that their institution does not allow them (sometimes due to administrative or financial constraints) to reduce class sizes and enable hands-on learning (as advocated by the department chair cited by Harwell and Makela).

This is not to say that practical skill should be privileged over theoretical knowledge. It is to suggest that we force invidious choices on teachers and learners by not knowing how to
relate different knowledge and learning orientations – and by continuing to pursue program delivery options that do not allow for applied learning.

7.3.2 A typology of Australian cross-sectoral curricula

A 2006 Victoria University study (Gabb and Glaisher 2006) explored cross-sectoral curriculum models in the USA, UK and Australia. Three case studies from each jurisdiction were explored. They included:

Associate degree/degree pathways in the US and foundation degree/degree pathways in the UK – the former underpinned by longstanding practice and the latter by national policies; and

Two local sets of arrangements in Australia, along with a Victorian Credit Bank initiative (VQA 2005).

On the basis of these case studies, Gabb and Glaisher design a typology which identified four sets of curricula features which are summarised in Table 29.

Table 29 Cross-sectoral curriculum typology

<table>
<thead>
<tr>
<th>Curricula feature</th>
<th>Identified models</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure</td>
<td>Sequential, Concurrent, or Integrated curriculum</td>
</tr>
<tr>
<td>Fields of study</td>
<td>Same or similar fields of study (cognate fields), or</td>
</tr>
<tr>
<td></td>
<td>Different (non-cognate) fields of study, which may be</td>
</tr>
<tr>
<td></td>
<td>• Complementary, or</td>
</tr>
<tr>
<td></td>
<td>• Unrelated.</td>
</tr>
<tr>
<td>Entry and exit points</td>
<td>Multiple entry/multiple exit,</td>
</tr>
<tr>
<td></td>
<td>Single entry/multiple exit, or</td>
</tr>
<tr>
<td></td>
<td>Single entry/single exit).</td>
</tr>
<tr>
<td>Sectoral contributions</td>
<td>Based on</td>
</tr>
<tr>
<td></td>
<td>• the notion of the equivalence of the contributions of the different sectors,</td>
</tr>
<tr>
<td></td>
<td>or</td>
</tr>
<tr>
<td></td>
<td>• the notion that the contributions of the sectors are complementary.</td>
</tr>
</tbody>
</table>

(Based on Gabb & Glaisher 2006, p. 1)

The typology focuses on curriculum concepts, as distinct from organisational arrangements which previous models tended to include (Gabb & Glaisher 2006, p. 13). The typology led Gabb and Glaisher to develop a set of nested models which are summarised in Table 30.
### Table 30: Typology of cross-curriculum models

<table>
<thead>
<tr>
<th>S. Sequential</th>
<th>C. Concurrent</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1. No entry, no credit transfer</td>
<td>C1. No credit transfer</td>
</tr>
<tr>
<td>S2. Entry without credit transfer</td>
<td>C2. Unit credit transfer</td>
</tr>
<tr>
<td>S3. Entry with block credit transfer</td>
<td>I1. Integrated cross-sectoral curriculum</td>
</tr>
<tr>
<td>S4. Entry with unit credit transfer</td>
<td>I2. TAFE award embedded in HE course</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>I. Integrated</th>
</tr>
</thead>
<tbody>
<tr>
<td>I1. Integrated cross-sectoral curriculum</td>
</tr>
<tr>
<td>I2. TAFE award embedded in HE course</td>
</tr>
<tr>
<td>I3. TAFE award as start of HE course</td>
</tr>
<tr>
<td>I4. TAFE units in HE course</td>
</tr>
<tr>
<td>I5. HE units in TAFE course</td>
</tr>
</tbody>
</table>

Source: Gabb & Glaisher 2006, p. 14

For the present purpose – identifying the possible structures possible within a hybrid curriculum – the integrated models in Gabb and Glaisher’s typology are of particular interest. All five models (I1 to I5 in Table 30) retain the distinction between sectoral awards and units, so that in a cognate field the vocational (TAFE) components are competency-based and the higher education components are based on disciplinary content. Gabb and Glaisher provide an example of a four-year program in which there are equal numbers of TAFE and higher education units. In the first year, seven of the eight units are drawn from TAFE. By the fourth year this balance shifts so that seven of the eight units are from higher education. As Gabb and Glaisher conclude, ‘in some cases, the model may allow students to exit from the program with the TAFE qualification only if they do not complete the full integrated course’ (op cit, p. 23). Variations on this model have been implemented at Victoria University including the Fast Track Accounting course and the articulated Diploma of Liberal Arts/Bachelor of Arts (ibid).

By integrating vocational and higher education studies within one program structure, this program has a similar structure to that of the ‘upside down’ Evergreen Community College degree. The program effectively reverses the conventional movement in undergraduate studies from generalist to specialist by focussing on particular work-related studies in the first two years, then moving into broader disciplinary studies in years three and four.

Gabb and Glaisher conclude that:

The pedagogical challenges of this model are considerable. The main pedagogical challenge of this model is the need to design the integrated course so that the TAFE and HE components effectively complement each other throughout the course. An even greater design challenge is to design an integrated course with multiple entry and exit points (Gabb & Glaisher 2006, p. 23).

There is a deeper pedagogical challenge here – one which has its origins in a scholastic taxonomy designed in the 16th century. This taxonomy emerged from the work of a 16th century teacher and philosopher named Ramus in a 1543 publication, *Training in Dialectic*. 

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Associate degrees in Australia: a work in progress
This ‘transposition of Aristotelian categories into a curriculum classification’ (Ong 1983, p. 198) shows sets of increasingly specific propositions, each of which is nested within a higher order general proposition. Walter Ong (1983) attributes the taxonomy as the origin of the notion that learning naturally moves from the general to the particular, and as the origin of learning models which classify knowledge into disciplines which are sub-divided into sub-disciplinary subjects, topics and sub-topics. So commonplace is this taxonomy as a basis for classifying knowledge (both in curriculum design and in everyday data management systems such as Microsoft Windows Explorer) that the other taxonomic forms are regarded as anomalous – meaning that the Evergreen College model is regarded as ‘upside down’, suggesting that it is anomalous or abnormal. This issue is further unpacked in Chapter 8 in looking at issues to be addressed in implementing new curriculum approaches.

7.3.3 AQF 5 and 6: designing a qualification architecture for work preparation and pathways

Since the new AQF was published in 2011, there has been much discussion and debate in tertiary education circles about the nature of, and relationships between, the diploma, advanced diploma and associate degree as work preparation and pathways qualifications. That discussion and debate is driven by three areas of concern. First, despite evidence of a growing demand for professional and paraprofessional level skills, enrolments in diplomas and advanced diplomas remain small with 11.6 per cent of VET qualification enrolments at the diploma level, and just 2.1 per cent at advanced diploma level (NCVER 2012, p. 10). Secondly, there are relatively few opportunities for school leavers to attain paraprofessional qualifications. Diplomas and advanced diplomas within Training Packages were never intended to be entry level qualifications. They offer specialist and advanced skills training for students who meet prerequisite work skill requirements, which means that school leavers without prior experience need to front-end specialist diploma studies with certificate IV units. Thirdly, the national level of articulation with credit between national Training Package qualifications and degrees remains low overall, and particularly so for low SES students (Wheelahan 2009), with pockets of success where institutions have put the effort into facilitating transition.

It is in this context that Innovation and Business Skills Australia (IBSA), one of the largest of Australia’s eleven Industry Skills Councils, initiated research into higher level VET qualifications. The report of this research reflected on the purpose of higher level VET qualifications and options for future qualification architecture to improve articulation between VET and Higher Education and across industries (IBSA 2010, p. 4).

128 The prevalence of this taxonomy in everyday life and in education makes it difficult for alternative models of learning to be appreciated. It also leads to variations which confuse generality with clustering in curriculum formation. The latter, rather than proceeding from the highest order of generality to its particulars, features a clustering of similar subjects or topics from a cognate field, each of which features a smattering of the general. In a common core degree in which students all take first year subjects from across a discipline area (for example, a Business degree comprised of Introduction to Accounting/Economics/Computing/Marketing), and progressively specialise into a major sequence, the majority of the subjects clustered in the first year lead nowhere in particular as their applications remain elusive.

129 For example, Burke and Shah’s (2006) findings that by 2016 more people would be employed in ‘associate professional’ positions, and that 18.6 per cent of new entrants into the Australian labour market will require ‘diploma and above’ qualifications.

130 Despite these shortcomings as entry level qualifications, year 12 graduates continue to enrol in diplomas, and to a much lesser extent advanced diplomas (Stanwyck 2006). Some advanced diplomas (in accounting, for example) do in fact lead to entry level occupations.
Those interviewed as part of this research were of the view that higher level VET qualifications should prepare graduates for the workforce and for further study, stressing the need for training ‘relevant to an unpredictable future labour market as well as for jobs that have already been defined’ (IBSA 2010, p. 19). While all respondents ‘advocated for the value of a distinctive VET system and for distinctive VET qualifications, most ‘felt that the architecture of Training Packages and CBT had increased the gulf between VET and higher education courses’ (ibid). Further, they pointed to the fact that while higher level VET qualifications worked well as standards against which to assess the skills of existing workers, they did not work for new entrants. They cannot provide – and given their primary work-based purpose cannot be expected to provide – the skills and knowledge needed for articulation with credit to higher studies (op cit, p. 20). Respondents to the research regarded higher level VET qualifications as lacking ‘the foundational disciplinary knowledge and the generic academic skills and knowledge required for successful progression into degrees’ (op cit, p. 21).

Based on the respondents input, the IBSA report identifies three options for changing higher level VET qualifications:

1. Minimalist revision of all IBSA qualifications at diploma level and above to cluster current units of competency into uniform units of study comparable with the units of designed learning time in degrees plus optimal use of any flexibility available under current package rules to support local customisation;

2. A new qualification architecture comprising a ‘hybrid of competence and knowledge based units’ designed with a core and elective structure that addresses current vocational needs, skills for future work and the capabilities needed for further study in higher education; and

3. The replacement of advanced diplomas with associate degree qualifications based on a course design similar to the foundation degrees as they operate in the United Kingdom (op cit, p. 25, emphasis added).

Option 3 envisages a curriculum-based associate degree, aligned to a bachelor degree which would achieve similar outcomes to the advanced diploma described in point two above. This option was regarded by the report’s authors as the ‘more radical option [which] would involve Industry Skills Councils moving into a new qualification territory by developing associate degrees to replace advanced diplomas’ (op cit, p. 27).

Interestingly, the architecture envisaged here for the associate degree retains the distinction between competency-based and disciplinary learning (the latter named in the report as ‘curriculum-based’), while the advanced diploma is seen as a hybrid. This position on the associate degree may have been adopted to maximise articulation to an undergraduate degree. The report is silent about how this associate degree might demonstrate that it addresses paraprofessional skill standards. While a disciplinary-based qualification could achieve paraprofessional skill outcome, given the availability of industry endorsed AQF level 6 skill standards, it is tempting to propose an associate degree qualification structure which incorporates both competency-based and disciplinary approaches to learning and assessment.

\[131\] Whether an ISC can include an associate degree in a Training Package remains to be seen. Under the current AQF specification an associate degree is subject to higher education accreditation standards, whereas diplomas and advanced diplomas can be regulated as either VET or higher education awards. Accordingly, an associate degree would need to be accredited through TEQSA which would be anomalous in a Training Package endorsed by the National Skills Standards Council (NSSC). This matter is currently under investigation.

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A somewhat bolder alternative with these features is canvassed in a 2009 Pathways Project report. The author suggests a VET/higher education associate degree which would address:

… both industry outcomes and the underpinning skills and knowledge in a discipline area in a coherent and sequenced design that would enable students to move into the final stages of the degree or exit with learning outcomes that are relevant to identified individual, professional, industry or community needs (Carnegie 2009, p. 52).

This ‘hybrid’ tertiary qualification is seen as one that combines vocational and academic outcomes:

… it could be co-designed and developed to integrate CBT and higher education approaches to learning outcomes. This could take the form of devising a mixed curriculum that embraced relevant competency standards and competency assessment, in conjunction with discipline based knowledge and skills and assessment. Such a qualification could also address foundation skills for higher education, such as research and study methods, essay construction etc as a standalone subject/s (ibid, emphasis added).

7.3.4 Are we ready for new forms of curriculum?

Research underway in the US and Australia, and the general tenor of the debate about the structure and purposes of tertiary education suggest that we are entering into a new phase of educational reform. Propositions articulated in the government, university and industry reports I have discussed here would almost certainly not have seen the light of day in previous stages in the evolution of the Australian vocational and higher education systems, which were more concerned with their identity as sectoral systems than they were about their relations as components of a tertiary system. As we saw in Chapter 3, past curriculum innovations withered and died for want of ongoing policy and funding support. The contemporary examples of successful practice tending towards hybrid solutions (such as that of the associate degree programs discussed in this report, and others featured at the recent LH Martin/RMIT AQF 5&6 Conference) risk the same fate unless they are clearly understood to have a specific and valid role and are widely promoted as viable options within the current regulatory environment.

The final sections of this chapter set out to name the elements of a hybrid tertiary curriculum and associated pedagogical principles and practices, as a framework for action within educational institutions and in state and national policy arenas.
7.4 Modeling a hybrid tertiary curriculum

Qualifications should not focus exclusively on general academic skills on the one hand, or narrowly defined occupational competencies on the other, as expertise involves the capacity to integrate and connect different kinds of knowing and apply this in innovative ways (Wheelahan 2004).

The term ‘hybrid curriculum’¹¹ is not uncommon in contemporary educational discourse. It is used to describe a range of learning and teaching arrangements, including ‘hybrid’ delivery (for example, online and classroom based), teaching approaches (for example, didactic and problem-based learning), disciplines (for example, integrated/general studies). Gabb and Glaisher (2006) provide examples of several forms of hybrid qualification implemented in TAFE and higher education institutions. The growth in RMIT degrees that feature national VET accredited units as skill electives (see page 15) illustrate how competency-based learning is playing a small role at the undergraduate level. As shown in the Deakin At Your Doorstep case study (Chapter 4, pp. 68-72), nationally accredited VET qualifications have been incorporated into Deakin undergraduate degrees. A major Victorian tertiary institution is currently planning to introduce ‘applied degrees’ in which there will be exit points at the end of first year with a nationally accredited diploma, and at the end of second year with a national advanced diploma. The ‘mixed curriculum that embraced relevant competency standards and competency assessment, in conjunction with discipline based knowledge and skills and assessment’, envisaged by Carnegie (2009), is about to come into being.

Despite the emergence of hybrid models, there is little in the curriculum literature to guide thinking about how to design a curriculum which combines different orientations to knowledge.¹³ As far back as the early 1990s, educational researchers were arguing that the distinction between ‘general’ and ‘vocational’ studies is dysfunctional (see for example Beck 1990, 1991). But this debate has not yet led to widespread investigations into how an integrated or hybrid curriculum might be put together. Ronald Barnett, writing about curriculum change in an age of ‘supercomplexity’, identified several factors leading to hybridity in curricula forms, including mass higher education, lower funding rates, the

¹¹ Like so many cultural artefacts with a long and largely unexamined history, ‘curriculum’ defies singular definition. It is quite often conflated with pedagogy – indeed many of the examples of ‘hybrid’ curricula in current educational discourse turn out to be collections of teaching practices (for example, a mixture of lectures and online learning). As mentioned in passing in Section 7.3.2 above, the use of the term ‘curriculum’ to describe the organisation of knowledge for the purposes of learning has a long history. However, the use of the term since 1540 has departed from the original meaning to become an artefact with multiple definitions that are materialised in many different modalities. The Hadow Report on the Primary School (1931) adopted John Dewey’s definition by saying that The curriculum, is to be thought of in terms of activity and experience rather than of knowledge to be acquired and facts to be stored (Musgrove 2006, p. 4). Since Hadow, primary curriculum has been widely regarded as what teachers and students do rather than the content of their teaching and learning. For my purposes ‘curriculum’ refers to the substantive structure of learning: the arrangement of content according to an explicit or implicit orientation to knowledge into subjects, topics, lessons, in order to produce specified outcomes. Those outcomes include subjectivities, ways of knowing and ways of skilled performance of knowledge. I acknowledge the use of the term ‘hidden curriculum’ to refer to the ideologies underpinning particular interpretations of curriculum, and the concept of curriculum encompassing the totality of a student experience. Neither of these definitions is at odds with mine, simply not central to the present purpose.

¹³ I completed a keyword search of major international journals addressing curriculum models/design/studies. Keyword terms were: hybrid curriculum; integrated curriculum; vocational curriculum; integrated vocational and disciplinary curriculum; professional curriculum; and tertiary curriculum.
‘increased pull of the labour market’, and increasing interest on the part of professions in educational functions (Barnett 2000, p. 260). He goes on to say that:

... all these developments are society-wide in their manifestations. Some institutions and some knowledge fields will be able to resist changing to some extent but it is unlikely that any pool of purity will remain. Every curriculum will exhibit some form or even forms of hybridity (ibid; italics in original).

In a more recent study of curriculum design (Barnett and Coates 2007), the theme of hybridity is revisited with the exploration of a curriculum schema developed by Bennett, Dunne and Carre (2000). This schema is ‘a composite of three domains: disciplines, work and generic skills’ (Barnett & Coates: 2007, p. 56). The three domains are represented as a set of five interconnected components as shown in Figure 14. In turn the five components are represented as interconnected, with the four disciplinary and workplace components overlapping with generic skills: in other words, generic skills can be realised through each of the other two domains (ibid).

**Figure 14 Hybrid curriculum model based on Bennett, Dunne & Carre (2000)**

Barnett and Coates express support for three aspects of the schema:

- The fluidity across the curriculum as a whole;
- The interconnectedness of the domains and components of the curriculum;
- Sensitivity to the ‘inner complexity’ of each of the domains and components – i.e. acknowledgement that having a deep understanding of a field of knowing means not only mastering a body of knowledge but also acquiring a set of relevant skills (Barnett & Coates 2007, p. 56)

And on a first reading of the schema, it also appeared to offer a more comprehensive basis for designing an associate degree curriculum than my own schema based on a combination of two knowledge orientations (conceptual and contextual) as illustrated in Figure 12 on page 161. However, on a second reading, in the context of Barnett and Coates analysis of the implications of some of the properties of the schema (and without wholly agreeing with Barnett and Coates), I realised that it did have shortcomings. Barnett and Coates identify three issues.
The first issue is that the schema separates disciplinary content and disciplinary skills which Barnett and Coates argue are two distinguishable but intertwined parts which:

... have to be understood as shorthand expressions for the concepts, expressions, theories, dominant figures, major texts and signal achievements that constitute a field of knowing on the one hand, and for forms of argument, mastery of technologies, research methods and forms of scholarship that constitute the field’s ‘skills’ on the other (ibid).

Second is the fact that Bennet, Dunne and Carre cast the world of work ‘a priori as playing a major role in a general schema for higher education curriculum’ (op cit, p. 57). While acknowledging that employment is a primary graduate destination, Barnett and Coates argue that ‘it cannot be assumed that there is a clear link between the course of study and the world of work’ (ibid). They elaborate this argument as follows:

... links with the world of work may be tenuous and may even be non-existent ... That graduates find themselves typically in work following their graduation says nothing about the character of those work environments: employability indices in themselves can only be weak indicators of programme quality ... Work cannot offer a universal category with which to structure curricula (ibid, emphasis in original).

This is a view of ‘curriculum’ as a singular organisational form rather than a form of organisation of knowledge and skill to suit different forms. For Barnett and Coates, higher education is about learning how to be and act ‘in the world’. They draw this conclusion despite the vocational core at the heart of higher education – originally theology, law, medicine and teaching; now engineering, accountancy, architecture, town planning and a myriad of other professions which have brought their training needs to the doors of higher education. There is no place in their view for particular purpose curricula such as envisaged for associate degrees. Instead they opt for a framework which stands on three general pillars: knowing, acting and being.

The third issue is the central and commanding position given to generic skills as a category which is separated from their disciplinary and workplace bases. Barnett and Coates argue that ‘it by no means follows from there being present a discourse in favour of generic skills that such skills are available (op cit, p. 58). What they have in mind here would appear to be those skills which find themselves in schemas such as the Australian Core Skills Framework (ACSF) and Employability Skills. These schemas cover: foundation areas such as learning, reading, writing, oral communication and numeracy; and work-related skills such as planning and organising, decision making, problem solving, creativity and innovation, and IT skills. Barnett and Coates would argue that these skills cannot be applied out of their context: for example, ‘what it is to communicate effectively in one profession may be entirely different in another’ (ibid).

To the three issues identified by Barnett and Coates, I would add a concern of my own. Bennett, Dunne and Carre’s schema refers to disciplinary content and skills as categories that represent defined and codified fields of knowledge. In relation to the workplace they refer to ‘awareness’ and ‘experience’, neither of which suggest any structured field of knowledge, or recognise that occupational knowledge can be, and is, organised into coherent areas of competency associated with performance standards and embedded knowledge. A curriculum including nothing more than workplace awareness and experience

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134 For further details, see:
would have little currency with employers looking for evidence of work-ready skill and knowledge.

While not in complete agreement with either Bennett, Dunne and Carre’s schema, or Barnett and Coates’ critique, the exercise of unpacking both has enabled me to identify four principles relevant to the design of a hybrid associate degree curriculum.

1. Disciplinary skills should be embedded with disciplinary knowledge as this is where they have salience. The rhetorical skills required in a court of law, the fine motor skills of a surgeon, are not separated from the content of law and medicine. Similarly, the technical vocabulary and discursive forms employed by an engineer and a mechanic are not learned through a general workplace communications course.

2. Nevertheless, it is useful to codify generic skills as a means of ensuring that they are not lost. This is particularly so for academic and work skills which apply across disciplines and sites of application: research, writing (in appropriate genres), forming hypotheses, reasoning, and broad technical skills relevant to groups of crafts and professions.

3. Curricula for particular purposes need not be governed by universal categories. If occupational outcomes (a trade, profession, or craft) are specified as outcomes of the program of study, then the curriculum should be structured accordingly.

4. Work knowledge should be codified and assessed. This implies using performance standards which serve the same purpose as the scholarly consensus about disciplinary theories and their application.

On the basis of these principles, the propositions about the purpose and structure of associate degrees in recent studies, and the evidence emerging from contemporary practice, I have developed a curriculum model to achieve vocational outcomes and pathways to further study (see Figure 15).

Figure 15 Key components of a hybrid associate degree curriculum
Barnett and Coates have posited an *a priori* purpose for a ‘higher education curriculum’ – that is, to facilitate a generalised form of learning how to know, act and be in the world. However, the purpose of an Australian associate degree is to lead to vocational outcomes (at a paraprofessional level) *and/or* pathways to further study. This means that the curriculum must comprise units of study aligned on one hand to the knowledge and skill requirements of an occupational role (or set of associated roles), and on the other to the first and second year undergraduate standards of one or more related disciplines. And whereas Bennett, Dunne and Carre’s schema created a separate category of ‘generic skills’, my model integrates these skills into the component of the curriculum that is related to their learning and application.

Learning and assessment within this curriculum model would be based on a core and elective structure comprising a hybrid of competence and knowledge based units (IBSA 2010, p. 25). These units would be designed to address ‘current vocational needs, skills for future work and the capabilities needed for further study in higher education’ (ibid). However, as illustrated in Figure 16, this approach should not imply a rigid separation of competency-based and disciplinary studies. As Barnett and Coates argue, there needs to be ‘fluidity across the curriculum as a whole’ (Barnett & Coates 2007, p. 56), which is most importantly manifested in the way students experience their learning. That fluidity should continue into assessment activities and projects.

*Figure 16 Hybrid associate degree learning and assessment*
However, because the vocational and pathways outcomes from associate degrees are governed by external standards, it is important to reflect them in assessment outcomes. Accordingly, the curriculum model calls for both competency-based and disciplinary assessment to be recorded as such so that it is clear that graduates meet the standards for occupational entry specified by industry and professional standards agencies and associations. They must also meet the standards set by the degree granting institution in the context of the AQF and the Higher Education Standards Framework for entry with credit into an undergraduate degree. It is also important that underpinning generic skills (including research, writing, problem solving, analysis and teamwork) are developed through learning activities and integrated into assessment activities.

The proposal that the associate degree – a higher education award – can contain competency-based learning units and employ competency-based assessment, is bound to be regarded as heretical by those who believe that competency ‘naturally’ belongs in a VET program and in VET institutions. However, as recent research here and in the US shows, the tide is turning. What have appeared to be immutable truths in the past are now looking like outmoded beliefs. However, as recent research here and in the US shows, the tide is turning and what have appeared to be immutable truths are now looking like outmodes beliefs. RMIT and other dual sector universities have already introduced competency-based VET electives into degree programs (Ballarat/Swinburne 2010), and evaluation has shown that students develop a deeper understanding of theoretical constructs through practical learning and say they feel more ‘work-ready’ on graduation (McLaughlin & Mills 2010). Students do not seem to be bothered by the combination of what have been regarded as incommensurable approaches to learning. They are more concerned to be learning something of value through whatever modes work for them.

However...

A curriculum model, or schema, is simply an abstract representation. The reality of implementing a set of learning processes and outcomes is inevitably more complex and multivariate than can be represented in a few lines, boxes and arrows. Neat and tidy curriculum models become at least slightly unhinged when administrative realities are encountered and students enter the scene to complicate matters with their individual aptitudes, aspirations and needs. The following brief discussion of associate degree design considerations provides an example of the issues faced in designing a particular associate degree.
Professor David Dowling, Professor of Engineering Education at the University of Southern Queensland, has been involved in the design and delivery of professional and paraprofessional engineering programs for the past 33 years, including what was originally a Diploma of Engineering which aimed to provide graduates with the underpinning knowledge and skills required to begin a career as an Engineering Technician (Dowling 2010, p. 2). When the program became an associate degree in 1996, as a sub-set of a three-year Bachelor of Engineering Technology, its aim was broadened so that it now provides:

- graduates with the academic requirements for them to practice as an Engineering Technician; and
- efficient articulation pathways to the Bachelor of Engineering Technology and Bachelor of Engineering programs (ibid).

Associate Degree graduates can now articulate to and complete the Bachelor of Engineering Technology in one year full time, and can usually move into and complete the Bachelor of Engineering in two years full time. Part-time enrolment and distance delivery are available – 80 per cent of the current enrolments of 2500 are studying by distance.

In 2006, the USQ Associate Degree of Engineering experienced a spike in enrolments and the faculty decided to survey all students regarding their reasons for choosing the program and about career aspirations. Of the students who responded to the survey\(^\text{135}\), the majority was in employment, and selected the program: on the recommendation of their employer; because it was a condition of their cadetship; or because it was the quickest way for them to complete an engineering qualification. There was a range of reasons why students opted for an associate degree rather than the three or four year degree (see Table 31).

\(^{135}\) The response rate was 20 per cent, and 93 per cent of these respondents were distance students. Results shown are for distance students only.
Table 31 Reasons for choosing an associate degree

<table>
<thead>
<tr>
<th>Why did you choose to study the Associate Degree of Engineering program rather than the Bachelor of Engineering Technology program or the Bachelor of Engineering program?</th>
<th>% of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>I did not have the necessary entry requirements for a higher level program</td>
<td>15.5%</td>
</tr>
<tr>
<td>I want to work as an Engineering Associate</td>
<td>13.4%</td>
</tr>
<tr>
<td>I want to graduate as soon as possible so I can get a promotion</td>
<td>15.8%</td>
</tr>
<tr>
<td>I want to graduate as soon as possible so I am eligible for a pay rise</td>
<td>13.8%</td>
</tr>
<tr>
<td>I want to graduate as soon as possible so I am able to change jobs</td>
<td>14.2%</td>
</tr>
<tr>
<td>It was a requirement of my employer (e.g. cadetship)*</td>
<td>32.8%</td>
</tr>
<tr>
<td>Other</td>
<td>33.6%</td>
</tr>
</tbody>
</table>

(Dowling 2010, p. 5)

The most common reasons provided under the ‘Other’ category were:

- A bachelor’s degree would take too long by part-time study;
- The associate degree is a good starting point for a career; and
- The associate degree was all that was needed for current or planned employment.

It is interesting that only 22 per cent of respondents planned to work in a paraprofessional engineering role, with 63 per cent aspiring to being a professional engineer (see Table 32).

Table 32 Career aspirations of USQ Associate Degree of Engineering students

<table>
<thead>
<tr>
<th>What is your career goal?</th>
<th>% of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>To work as an Engineering Associate</td>
<td>13.4%</td>
</tr>
<tr>
<td>To work as an Engineering Technologist</td>
<td>8.7%</td>
</tr>
<tr>
<td>To work as a professional Engineering</td>
<td>63.0%</td>
</tr>
<tr>
<td>Other</td>
<td>14.6%</td>
</tr>
</tbody>
</table>

(Dowling 2010, p. 5)

Altogether 81 per cent of the survey respondents aimed to pursue further study, and 85 per cent said it was very important that they received full credit for their associate degree studies (ibid).

What the USQ survey results demonstrate is the need for an associate degree curriculum which can provide the knowledge and skills for immediate employment and those required for higher level study. Only a minority of USQ students aspired to careers directly related to an associate degree. However, the majority was in employment in, or leading to, engineering associate level work so would need paraprofessional skills and knowledge to meet the needs of their immediate and medium term careers.

Curriculum designers need to deal with the ‘inherent tension’ (Dowling 2010, p. 3) between meeting short-medium term employment needs and helping students move into further study. They must also cater for different student cohorts. In engineering, for example, these cohorts may include school leavers who wish to enter an engineering career, existing engineering associates seeking to move into professional engineering, and trades people seeking advancement to engineering associate or technologist level employment. Curriculum designers must also respond to different learning preferences and patterns. In
an address to associate degree program managers and teachers at RMIT (August 2012), Dowling identified the following needs to be accounted for in curriculum design and delivery:

1. To recognise and cater for the diverse educational backgrounds of your students;
2. To recognise different study patterns and modes and adopt strategies to help students succeed, allow for flexibility in assessments, and create a sense of community;
3. For strategies to draw on student work experiences, including through the use of RPL, and to make use of examples and case studies relevant to your students and their future jobs; and
4. To tell them about their occupational role and its importance in the workforce.

For their part, as reported in Chapter 6, RMIT program leaders and teachers were also looking for flexible curriculum approaches to meet their students’ different orientations to learning and different levels of preparedness for theoretical and practical learning.

Finally there are the views of employers to be accounted for. When Dowling surveyed private and public sector employers of engineering professionals, technologists and tradespeople, he found that of the 25 respondents:

While thirteen of the organisations reported that they actively seek partnerships with education and training providers, only five organisations have been approached by an institution to provide input into curriculum content, qualification structure or credit transfers. They believed that greater consultation is needed between industry, VET institutions, and universities to ensure that the skills and knowledge gained during the qualification correspond to industry needs, and that articulation pathways are aligned to steps in career progression pathways within organisations. While fourteen of the employers see a role for industry in the development and sustainability of articulation pathways; only two reported they had been approached by an education provider for this purpose. Fourteen employers believed that graduates with university qualifications are prepared for their workplace role, while eleven believed they were not prepared. Only seven employers believed that graduates with VET qualifications are prepared for their workplace role, while thirteen believed they were not prepared (Dowling 2011, p. 4).

7.4.2 A hybrid associate degree curriculum design model

These multiple interests and needs present greater challenges than those addressed under current higher education program design regimes. The relationship with specific employment outcomes is often quite muted, and articulation issues are usually dealt with by the programs seeking credit. The following design model attempts to capture the range of aspirations and stakeholder demands that may be encountered, and it attempts to lay out a process for consultation and decision making (see Figure 17). Like the curriculum model itself, this approach may be challenging to implement under contingent circumstances and it is presented as a framework for negotiation rather than a blueprint to be followed.
The keys to effective implementation of this model are:

1. Making sure curriculum designers ask the right preliminary questions about occupational and study practices and what these practices mean for curriculum design\(^{136}\); and

2. Establishing effective mechanisms for consulting and working with key stakeholders – most particularly employers, cognate degree programs and the students themselves.

Forms of consultation and involvement with industry will vary according to where occupational role descriptions and standards are derived. To the extent that existing nationally recognised competency standards used to guide the development of units of study which are directly related to occupational outcomes, discussions with employers will focus on how these standards are applied, and whether customisation is needed to meet specific skill needs. When developing occupational role statements and standards from scratch, a full stakeholder consultation process, and strategies to elicit and codify required competencies will be needed\(^{137}\).

The development of a working relationship with cognate degree program leaders and teachers is critical to the negotiation of successful articulation relationships. Rather than

\(^{136}\) See the discussion of practice-based education in section 7.5.2 (pp190-191) for examples of questions related to occupational needs.

\(^{137}\) For an example of stakeholder consultation see Dowling’s *Using the DYD Stakeholder Consultation Process to connect with practitioners to define a set of graduate capabilities for a program* (2012).
convening a meeting to discuss potential credits once a program is designed, it is far more profitable to establish ongoing links. Such links include provision for open discussions about the types of evidence required for credits into the cognate degree program. It is important to make room for discussion about ways of maximising credit through aligning second year associate degree units/courses to those in the third year of the degree, or ensuring that articulating students can pick up any additional disciplinary units/courses in their third year, or as an additional (elective) degree unit taken during the associate degree. Most important of all is to establish an equitable relationship between the two program teams, and for work competency to be on the table from the outset as an issue to be addressed in design rather than swept aside as irrelevant to academic considerations.

Most importantly, there is the question of student aspirations and learning preferences, which cannot be assumed on the basis of planned program aims and content. In addition to collecting data from students on enrolment and periodically (as in the USQ student aspirations survey), it is critical that pedagogical questions are flagged in the design process. The design of a curriculum structure needs to be underpinned by strategies that help students to develop work and disciplinary knowledge and skills and the meta-cognitive skills which enable them to manage their own learning.

In Figure 17, there are two sets of dotted lines leading to the box labeled ‘Pedagogical design’: one linked back to the students’ educational background and learning preferences, and the other from the boxes depicting the two associate degree knowledge orientations (to contextual and conceptual knowledge and skills). If students are to succeed in a two-year program aimed at achieving two sets of outcomes they need to be familiar with its unique features including the ways in which conceptual and contextual knowledge and skill are organised in learning and work practice; and how to negotiate appropriate learning experiences. This means making pedagogical practice explicit as tools for facilitating learning.

7.5 Associate degree pedagogies

We desperately need new pedagogical models which will be effective with students from an extremely diverse range of backgrounds and pathways (Professor Marcia Devlin, Deakin University, in The Australian Higher Education Supplement, August 24 2011)

If curriculum defines the substantive structure or content of learning, pedagogy is the syntax: defining the teaching and facilitation strategies which scaffold learning. Pedagogy is widely regarded as modes of teacher practice (such as explicit instruction, facilitation, negotiated study), and the ways in which teachers organise classrooms and students (including timetabling, behaviour management, planning lessons, allocating classroom responsibilities, guiding activities, and behaviour management). Pedagogy is also associated with different educational sectors, with reference made to primary, secondary, vocational and higher education pedagogies (for example, Waters 2005), and with particular styles of learning, such as work-based learning (for example, Burke et al 2009). Pedagogy can indeed refer to these dimensions of practice and is best understood as a multi-dimensional concept, which encompasses the cultural, epistemological and organisational relations of learning, as illustrated in Figure 18.
The two dimensions of pedagogy I am most interested in here are those labeled ‘cognitive’ and ‘outcomes’. The first addresses the design of learning in relation to students’ cognitive and meta-cognitive development; the second addresses their preparation for occupational practice. While all aspects of pedagogy are inextricably linked in practice, it is worth analytically separating out the strands to question whether pedagogical practice is indeed facilitating its multiple goals. All too often pedagogy gets stuck on immediate, socially mediated needs – for example, to engage learners, maintain cohesiveness, and ‘cover’ the required content in the time available. The questions to the forefront of a teacher’s mind are about managing program delivery and student participation:

- Do I have the right rooms booked?
- Do we have sufficient field placement/clinical practice places?
- How long can I hold their attention? Do I need to chunk the lecture content?
- How many assessments? ... etc

In the crowded work life of a teacher charged with dispensing disciplinary knowledge, it is more difficult to address questions of cognitive and meta-cognitive development and future occupational practices as an integral part of pedagogical planning. Moreover, self-questioning about cognition and meta-cognition is likely to be inhibited for the lack of a shared language amongst teachers about the micro-dynamics of knowledge processing. Nevertheless, these possibly least widely applied dimensions of pedagogy are arguably the most important because they define the core interests and goals of the majority of
graduates. In this section, I explore their relevance through the application of two models. The first, Learning by Design developed by Mary Kalantzis and Bill Cope (2005)\(^{138}\), has previously been applied quite widely in primary and secondary schools. The second model is derived from the Practice-based Education Framework which was developed by Joy Higgs at Charles Sturt University through an ALTC Teaching Fellowship (http://www.olt.gov.au/altc-teaching-fellow-joy-higgs-am).

7.5.1 Learning by Design

Learning by Design pedagogy (2005) grew out of the work of the New London Group on a Pedagogy of Multiliteracies, so-named to reflect ‘the multiplicity of communications channels and media, and the increasing saliency of cultural and linguistic diversity’ characteristic of contemporary learning environments (New London Group 1996, p. 1). Multiliteracies Pedagogy is based on four overlapping moments or modes of learning [with key characteristics listed in brackets after each entry]:

- **Situated Practice** that is constituted by immersion in meaningful practice within a community of learners with access to relevant expertise – this could be in a workplace, a school, or other community settings [experimenting, learning from experience];
- **Overt Instruction** which includes all active interventions by teacher and other experts to scaffold learning activities [systematic, analytic, conscious and explicit learning];
- **Critical Framing** though which learners develop the capacity to interpret educational and social contexts and purposes [interpretation, critique, questioning]; and
- **Transformed Practice** in which students are involved in situated contextualised assessment and move to greater levels of expertise [the practice of transformed meaning] (New London Group 2000, pp. 32-35).

Like Barnett and Coates, Kalantzis and Cope link knowing with acting to emphasise that learning is an act of cognition. Their conception of pedagogy is of an ‘epistemologically and culturally grounded theory’ whose focus is the ‘microdynamics of knowing, or how knowing happens’, and ‘the people we have become through knowing’ (Kalantzis and Cope 2005, p. 70). They define ‘pedagogy’ as a ‘knowledge process’ where knowing:

... is founded on ‘real things, including actual-life experiences (being in the thick of things) and practical applications (having to get things done). In this practically grounded world, thinking is an integral part of the action [...] something you do in a place and that takes time and effort (op cit, p. 72)

Kalantzis and Cope name their pedagogy Learning by Design and identify four key Knowledge Processes through which pedagogical choices are made explicit:

As designers of learning environments, teachers can choose any mix and ordering of Knowledge Processes. The purpose of indicating the Knowledge Process underlying each activity is to prompt teachers to think explicitly about the most appropriate range and sequence of learning activities for their students and subject matter. Teachers use the Knowledge Processes as prompts to design, document and deploy their learning programs... In a world of profound and subtle diversity, our challenge is to engage with the identities of learners as we encounter them in the classroom. Teaching and learning choices (pedagogy) need to be made explicit, pathways planned, and performance clearly tracked. (See: http://newlearningonline.com/learning-by-design/principles/)}

\(^{138}\) Professor May Kalantzis is Dean of the College of Education at the University of Illinois at Champaign-Urbana. Professor Bill Cope is a Research Professor in Educational Policy Studies at the University of Illinois at Champaign-Urbana.
These Knowledge Processes, defined as ‘an activity type which represents a distinct way of making knowledge and of learning’ (http://newlearningonline.com/learning-by-design/pedagogy/) are regarded as ‘more or less equivalent’ to the four moments/modes of learning featured in the Multiliteracies Pedagogy, as shown below.

Table 33 Equivalence between Learning by Design knowledge processes and Multiliteracies modes of learning

<table>
<thead>
<tr>
<th>Learning by Design knowledge process</th>
<th>Multiliteracies mode of learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiencing</td>
<td>Situated practice</td>
</tr>
<tr>
<td>Conceptualising</td>
<td>Overt Instruction</td>
</tr>
<tr>
<td>Analysing</td>
<td>Critical framing</td>
</tr>
<tr>
<td>Applying</td>
<td>Transformed practice</td>
</tr>
</tbody>
</table>

Each of the four broad knowledge processes is further divided into two sub-sets as follows (see: http://newlearningonline.com/learning-by-design/pedagogy/):  

**Experiencing …**
the known – learners reflect on their own familiar experiences, interests and perspectives.
the new – learners observe or take part in something that is unfamiliar; they are immersed in new situations or contents.

**Conceptualising …**
by naming – learners group things into categories, apply classifying terms, and define these terms.
with theory – learners make generalisations using concepts, and connect terms in concept maps or theories.

**Analysing …**
functionally – learners analyse logical connections, cause and effect, structure and function.
critically – learners evaluate their own and other people’s perspectives, interests and motives.

**Applying …**
appropriately – learners apply new learning to real world situations and test their validity.
creatively – learners make an intervention in the world which is innovative and creative, or transfer their learning to a different context.

The taxonomy of knowledge processes and their Multiliteracies equivalents are shown in Figure 19. The circle and the quadrant aim to convey a non-hierarchical taxonomy which can start at whatever point is appropriate to the learners and the learning purpose. The point of naming the act of knowing in this way is to make the organisation of learning explicit:

As designers of learning environments, teachers can choose any mix and ordering of Knowledge Processes. The purpose of indicating the Knowledge Process underlying each activity is to prompt teachers to think explicitly about the most appropriate range and sequence of learning activities for their students and subject matter (ibid).
Application of the taxonomy in Australian primary and secondary schools, and with Malaysian teachers through a joint RMIT/University Sains Malaysia project between 2000 and 2006, has shown it to be a comprehensive framework for designing learning. It is relevant to all 12 years of schooling, and in different cultural contexts\textsuperscript{139}. The theory and practice of Multiliteracies was integrated into Queensland Education’s New Basics program in 2002. Learning by Design was adopted to support teacher professional learning and assist teachers to develop learning resources which mapped directly to curriculum objectives and assessment through using a ‘learning element’ template coded against the Knowledge Processes. (Neville 2005, pp. 233-240). From 2000 to 2004, the pedagogy was used in a Victorian Education Department curriculum reform initiative. A case study of the professional learning of four Victorian primary teachers (Cloonan 2008) found that the ‘deployment of a pedagogical knowledge processes schema influenced teachers’ reflective practices, resulting in more knowing and purposeful pedagogical practices’ (Cloonan 2008, p. i)\textsuperscript{140}.

The taxonomy has not been widely applied in higher education. However, a small study tested the pedagogy as a strategy to improve the experience of offshore international students enrolled in a Business degree delivered as a combination of face to face and online

\textsuperscript{139} See, for example, Chapters 12-15 of Kalantzis and Cope 2005.

\textsuperscript{140} For further details of the Learning by Design pedagogy see \url{http://newlearningonline.com/learning-by-design/pedagogy/} for a workshop presentation by Professor Kalantzis (Canberra 2003).
interaction. The study found that when introduced to the knowledge processes as a strategy to name and plan their learning, student enjoyment and outcomes improved:

Not only are student results higher (as measured across cohorts), but the teacher evaluation scores that students allocate in university-endorsed instruments also saw an increase. It seems that not only did the students perform better, but they actually enjoyed the courses more, felt more engaged and perceived that teaching quality had improved (Munro-Smith & Downs 2011, p. 146).

Moreover the authors of the study found that the Learning by Design (LbyD) pedagogical model helped to improve curriculum planning processes by creating a shared language amongst lecturers and providing a lens through which to critically review learning plans and resources:

Once the lecturer has a good grasp of the LbyD concepts, we begin to critically analyse the design approach for the specific aspect under consideration. By asking questions such as: What does your design actually do? How does it work? (Analysing Functionally). Who benefits from this design? How do they benefit? (Analysing Critically). We begin to help the teacher to be self-critical of their designs and we encourage them to aim for further improvements of their design. Often, this is a good time to introduce them to other academics that have had previous experience with the LbyD approach in order to stimulate creative approaches to problem solving in the course design (Applying Appropriately; Applying Creatively). Since all the academics engaged in teaching the course can speak the common language of Learning by Design, over time they begin to form a professional community of practice that they can rely upon in order to continually improve and develop their individual and collective practice (Munro-Smith & Downs 2011, p. 149).

Strategies for using Learning by Design in associate degree planning and implementation are provided in section 7.5.3, following the discussion of Practice-based Education.

7.5.2 Practice-based Education: a framework for professional education

The Practice-based Education (PBE) framework is an initiative of the Education for Practice Institute at Charles Sturt University and the subject of a 2010 Australian Learning and Teaching Council Teaching Fellowship awarded to Professor Joy Higgs (http://www.olt.gov.au/altc-teaching-fellow-joy-higgs-am). The Education For Practice Institute was established by CSU in 2007 to ‘build on the University's strong tradition of preparing graduates to enter the world of practice and to contribute to our local, global and occupational communities’ (http://www.csu.edu.au/division/landt/efp/about.html).

Practice-Based Education rests on an understanding of pedagogy as ‘the ways educators frame and enact their teaching and curricular practices and their teaching relationships, to enrich their students’ learning experiences’ (Higgs 2011a, p. 9). According to Higgs, PBE ‘refers to university education that is grounded in the preparation of graduates for practice. Practice-based education provides an approach to education that prepares students for entry to professions, disciplines or occupations (op cit, 12).

The key foundations of PBE, detailed in Higgs’ Fellowship report are:

- situated or contextualised learning;
- learning in multiple communities of practice (including workplace, academic, multidisciplinary communities);
- socialisation into professional, industry, occupational worlds, roles, identities and career paths;
- engagement, through teaching-learning relationships and industry partnerships, in practice-based teaching and learning activities; and
development of capabilities and behaviours that will enable graduates to contribute to local communities and society as responsible citizens and professionals who display ethical conduct and duty of care (Higgs, 2011, p. 12)

The starting point for designing PBE is the student’s likely occupational destination and the practice characteristic of that occupation. In her PBE brochure, Higgs proposes the following questions should frame the development of the program:

- What is the practice of the occupation?
- What capabilities does the student need to develop to enter this practice community?
- What is the context of the program and what resources and opportunities does it provide?
- Who will be the key role models and educators to reflect the standards and expectations of the profession?
- How can authentic and relevant relationships and learning activities be created to foster students’ learning and socialisation? (Higgs, 2011b, p. 2)

The design of learning experiences to address these questions is guided by a set of eight key practices (see Figure 20) which complement the eight knowledge processes in the Learning by Design pedagogy. Whereas the knowledge processes name the cognitive dimensions of the learning experience, the PBE Key Practices name the spatial and social dimensions: defining the environment itself and the way participants in that environment interact. The way these two sets of guidelines can work together is further elaborated in section 7.5.3.
7.5.3 Applying the pedagogical models

Teaching is a craft as much as it is a profession: a set of strategies to communicate the skills and concepts which constitute a professional knowledge base. Models need to have the simple precision and flexibility of a basic tool of trade which facilitate the craft abilities articulated by Sennett (2008) and discussed at the start of this chapter: the ability to localise, question, and open up to new strategies and variations on the theme. The concepts presented in this chapter should be read as a set of possibilities for consideration and exploration – not as a blueprint. There is a number of ways in which the models can be applied, and I will explore three in this section:

- as a tool for professional learning;
- as a tool to facilitate student meta-cognitive development; and
- as a curriculum planning and review framework.
**Learning by Design as a tool for professional learning**

Between 2003 and 2006, Learning by Design was applied in schools in the ACT, Victoria and Queensland through an ‘experiment in classroom and curriculum transformation and professional learning’ (Kalantzis and Cope 2005, p. v). The experiment involved a research team from RMIT University (led by Bill Cope and Mary Kalantzis) and one hundred or so teachers. The three elements of the experiment were inter-related, with professional learning acting as the vehicle for introducing teachers to ‘an explicit theory of learning’ and providing them with ‘tools for designing, sharing and reflecting on classroom choices and learning experiences’ (ibid). The outcome of the professional learning workshops (typically involving 20-30 teachers) was the production of ‘Learning Elements’ – published learning and teaching sequences based on the knowledge processes (see: [http://newlearningonline.com/learning-by-design/the-learning-element/](http://newlearningonline.com/learning-by-design/the-learning-element/)). The workshop process involved the use of leading questions to stimulate reflection on practice, and workshops usually commenced with the mapping of teacher practice to the knowledge processes. In brief this is how it worked:

Teachers were asked to bring along to the workshop a photograph which visually represented an answer to the question: ‘How do learners learn in my school/classroom?’;

Workshop participants worked in groups of six around a table on which there was an A1 sized ‘placemat’ representing the eight knowledge processes. In turn the participants explained what was happening in the photograph they had brought with them, and were asked to place their photographs on the quadrant(s) of the placemat which best described which knowledge processes were being enacted by the learner(s) in the photograph (see Figure 21).

**Figure 21 The Learning by Design Placemat**

![Learning by Design Placemat](http://newlearningonline.com/learning-by-design/the-placemat/)

Photographs could be placed across the ‘boundaries’ between processes, representing learning involving a combination of knowledge processes.

Once all photographs were placed on the appropriate space on the placemat, teachers discussed and answered questions about the patterns which had emerged. For example:

- Were the photograph placements showing a variety of applications of the knowledge processes; or were learners in different classrooms/schools typically engaged in the same knowledge processes?
- What would need to happen in each situation represented in the photographs to engage the learners in other knowledge processes?
- Were any knowledge processes usually un/under-represented?
- Are the activities represented in each photograph part of a broader learning sequence which captures other learning processes?

It was not unusual for the placemat exercise to reveal that participant teachers’ students were engaged in a lot of experiencing (known and new situations) and conceptualising by naming; and a small amount of applying, often with little or no exposure to analysing.

Having been through this exercise, participating teachers would review a sample of their existing stock of learning and assessment activities and map these to the relevant knowledge processes, to assess the extent to which they were providing students with holistic learning experiences. The workshop would then move to developing learning elements which explicitly addressed one or more knowledge processes and which were presented in a ‘two-up’ template which included teacher notes on the left and a learner guide on the right.

Through their professional learning workshops, teachers engaged in creating a language to describe the process of designing and reviewing a curriculum and its constituent learning and teaching sequences:

Learning by Design is fundamentally about addressing the need for a shared professional language: a language which allows teachers to identify, name, discuss, analyse, reflect-on, explain and make explicit their choices and decisions about how they teach... Such a language allows practices to be shared and discussed - it means that feedback can be explicit and effective practices can be transferred and translated from one person to another. Such a language can help us to understand why some teachers are more effective in engaging students and bringing about deep intellectual learning than others and how every teacher can learn to teach in such ways (Peter Burrows 2006).

The ‘placemat’ exercise can be used in tertiary professional learning and can be readily adapted for use as a tool to facilitate dialogue between associate degree and degree program teams. In small trials as part of my Fellowship, groups comprising a mix of VET and higher education teachers used the placemat to explore how their respective learning and teaching domains were similar and different. For example, where such a mixed sector group found that VET learner activities were focused predominantly on experiencing and applying, and higher education learners on conceptualising and analysing, the group could then discuss how their different pedagogies could be expanded to include all knowledge processes by adapting each other’s approaches. On the other hand, a group which found its approaches were essentially similar would be in a position to align their programs more effectively to ensure that learners could move between programs more smoothly.

(See http://newlearningonline.com/learning-by-design/the-learning-element/ for examples of the learning element format, and http://newlearningonline.com/learning-by-design/the-knowledge-processes/ for sample activities mapped to the knowledge processes involved.)
Learning by Design as a tool to facilitate student meta-cognitive development

Using Learning by Design as a tool for meta-cognitive development involves essentially similar approaches to that taken for teacher professional learning with the same aim: to help students to appreciate learning as *skilled practice* (that is, the use of strategies and procedures to build the knowledge required for particular applications) and to provide them with a language to explain their learning. The placemat exercise can be adapted to have students participate in a workshop in which they use photographs to explain how they learn best, and to place their photograph on the relevant space on the placemat to name their knowledge process(es). In this way, students can see how the individual knowledge applications together form an integrated learning process, and develop the capability to name, organise, monitor and maintain control of their own learning.

Learning by Design and PBE as curriculum planning and review tools

Used in combination, Learning by Design and PBE offer a comprehensive framework for curriculum planning. Learning by Design offers a common language for discussing possible learning and teaching approaches. It acts as a checklist against which to review learning and assessment activities to ensure a balance of breadth and depth across the eight knowledge processes. PBE provides a set of pedagogical strategies aimed at preparing learners for occupational practice. Figure 22 shows how the two approaches can be used to implement the associate degree curriculum and pedagogy model illustrated earlier in this chapter (see Figure 17).

What I have done in Figure 22 is to name Higgs questions to frame the development about practice-based education as ‘key questions about work readiness’ (see page 198), and supplement these with a set of key questions about preparation for further study, viz:

- What practices are characteristic of the discipline(s) addressed in this program?
- What disciplinary capabilities do student need to develop to enter this practice community?
- What generic academic skills do students need to progress into further undergraduate study?
- How can the program ensure that graduates are ready for third year undergraduate learning?
- How can vocational and higher education teachers demonstrate and model integrated learning approaches?

Together these sets of questions become the framework for identifying occupational tasks and processes, generic work skills, and disciplinary and generic academic skills. It is a framework that ensures the curriculum design meets the AQF associate degree learning outcomes: that is qualifying individuals ‘who apply underpinning technical and theoretical knowledge in a range of contexts to undertake paraprofessional work and as a pathway for further learning’ (AQF 2011).
Having identified the skills and knowledge required for occupational practice and further study, program designers can then select appropriate learning experiences and knowledge process applications. Figures 23 and 24 illustrate how this might be done. Figure 23 shows how the signature knowledge processes (experiencing, conceptualising, applying and analysing) can be applied in structured workplace training. Figure 24 shows how an employed learner may undertake independent learning in their own workplace. In each case, the same knowledge processes are applied, but in different sequences and in ways that are appropriate to specific learner and learning circumstances.
In this example, students embarking on a work-placement would be provided with a checklist to guide their observation of occupational practices and their participation in the workplace. Once students have recorded their observations, they may be asked to share these with their peers, submit them for formative assessment, work as part of a group to compare work practices etc. Once they are familiar with the culture and requirements of their workplace, students may be instructed by their teacher or work supervisor about the techniques and processes relevant to their future occupation. They would be given the opportunity to apply their new skills, using an instructional manual and with the support of their supervisor and/or peers. Finally, students would answer another set of questions to analyse their learning and to identify areas for improvement.
Figure 24 represents a pedagogical approach suitable for students who are in employment. It aims to help them explore known work practices through a new lens, and to use their work practice as a framework for demonstrating their prior learning and current competency. It assists them to develop new/advanced levels of skill. If, for example, students have been provided with case study material regarding work practices, they could be provided with an assignment requiring them to: compare and contrast these case studies with their own experience; document and analyse policies, protocols and practices; and make recommendations for improved practice and apply these in their practice.

7.5.4 In summary

Used in combination, these pedagogical models can:

- provide a framework for planning the learning experiences for a cohort of students, and to address the circumstances of particular learners;
- provide a platform for discussions between associate degree and degree program teams; and
- facilitate student movement between programs.

I have shown two examples of how the models can be applied, and relevant applications will emerge through practice. As the Learning by Design researchers found in their experiments, it pays to make planning and professional learning activities as tangible as possible through using simple dialogical and processing tools. In addition to the placemat, you may need:
post-it notes; marker pens; small cards with the names of individual knowledge processes, PBE and other pedagogical practices (such as those in Figure 25 below); and a whiteboard.

**Figure 25 A sample of pedagogical practices**

- Make pedagogical approaches explicit as part of the program design process to help frame the dialogue amongst designers and between vocational and disciplinary teachers;
- Recognise the value of situated practice as a basis for theory learning (Lave & Wenger 1991) and use everyday experience as a way into specialised knowledge (Bernstein);
- Modes of assessment: should be criterion referenced and include methods to assess disciplinary knowledge and skills; generic academic and work skills and specific areas of competency;
- Coursework should allow for a combination of work-related and discipline based learning units, and program wide reflective practice;
- Facilitate work-readiness through work placement, simulated work-based practice, reflection and assessment; employer feedback on assessments; and teacher/learner dialogue about work cultures and productive practices;
- Facilitate further-learning readiness through assessment of research and study skills and disciplinary knowledge; academic feedback on assessment; teacher – learner dialogue about academic cultures and learning practices.

I cannot help but agree with David Dowling: associate degrees are difficult to design. We are asking a single qualification to achieve multiple outcomes for what will be increasingly diverse cohorts of students, including school leavers and existing workers from a wide range of socio-economic backgrounds. If associate degrees are to work in this complex domain, no shortcuts can be taken in the design process. Moreover, designers and teachers will need to work closely with students to review and evaluate curriculum and pedagogical approaches and to make and document adjustments in response to feedback. It should be possible to integrate much of this work into program delivery, by ensuring that allowance is made for regular reflection on practice by teachers and students, and for student reflections to be used as assessable work (*conceptualising and applying* generic academic skills).
Chapter 8 Implementing new tertiary pathways

Some expectations that students have about their university studies are enduring and are common for most student groups, including an expectation of personal and vocational relevance and coherence in what is studied and assessed and the capacity to be appropriately employed on graduation;

Professor Geoffrey Scott in Australian Government 2008b, p. 69

This has turned out to be a much lengthier report than anticipated. However, for two reasons, it was worth taking the opportunity offered by this Fellowship to comprehensively address major issues in this policy space. The first is that the associate degree sits in the policy hotspot at the intersection between VET and higher education. Second, so little about the associate degree’s characteristics and potential has been explored and documented in the Australian context.

Chapter 7 has laid out the argument for a new approach to curriculum design and development that uses hybrid vigour to generate strategies to bring different ways of learning and teaching together. I open this chapter with a reflection on the metaphysics of sameness and difference – encouraged by the work of researchers who work in the fraught arena of cross-cultural learning. I then turn briefly to some matters which have not been dealt with in detail in this report, but which are nevertheless critical to implementing associate degrees, and hence must be placed on the agenda. The chapter concludes with some recommendations for further action in developing and promoting tertiary pathways.

8.1 Moving beyond our metaphysical limits

Helen Verran, an historian and philosopher of science, has spent three decades researching how practitioners of (quite radically) different knowledge orientations can work effectively together. Her work offers strategies for building ontological and epistemological bridges which can expand a shared conception of ways and means without diminishing or undermining either way of knowing and doing.

During the 1980s, when she spent eight years lecturing in science education at Obafemi Awolowo University in Ile-Ife in southwestern Nigeria, Verran underwent what she describes as a profound metaphysical transformation. This occurred while struggling to reconcile the obviously successful, but nevertheless ‘wrong’ teaching methods of her Yoruba teacher trainees with her own training in the ‘right methods’ for teaching science and maths. As an example, Verran tells the story of Mr. Oyo who teaches a lesson on the topic ‘Length of our Bodies’. Mr. Ojo used methods prepared in advance by the group of trainees which involved Yoruba children using lengths of string to record each other’s height, as Verran explains:

In the lab we had measured each other: use string to represent height, lay string on the floor and use chalk to record the length, and then, when one of the few meter rulers became available, measure the distance between the chalk marks and record the measurement in a chart (Verran 2001, p. 2).
However, Mr. Ojo departed from the agreed method, leaving out the prepared ‘lecture’ on length altogether. Instead of having the children lay their strings on the floor, make their chalk marks, measure and record the length, he measured a child by placing the string under the child’s heel and putting a knot in the string at the point that matched the top of the child’s head. Then, taking a small 10 centimeter long card, he wound the string around the card until he reached the knot, instructing the children to ‘count the number of strings around the card [one, two, three, four, five, six, seven, eight, nine]. Write down the number. Multiply by ten. ‘How do we multiply by ten [ninety]?’ (op cit, p. 3). Then he held the bit of string remaining against the graduations on the card and had the children recite ‘ninety-one, ninety-two, ninety-three, ninety-four’. Yes, we have ninety-four centimeters. Diran’s height is ninety-four centimeters. Verran goes on to say:

I was scandalized. Mr Ojo was presenting a bundle of short strands of string, a plurality, as length, instead of demonstrating the prescribed singular extension. The notion of extension, said to be essential for children to grasp the ‘abstract’ element of length, seemed to be rendered secondary, if not entirely deleted (ibid).

As the lesson proceeds under Verran’s scandalised gaze, the children measure, wind the strings around the cards and accurately calculate each other’s height. This led Verran to conclude that ‘as a pedagogical performance the lesson could only be judged a complete success’ (ibid). Other teachers adopted Mr. Ojo’s method with the same success, and Verran records how she moved from disconcertment at their abandonment of the conventions of mathematics, through puzzlement that it worked so well, to the development of a theory of different generalising logics. In this process of discovery she conducted an extensive experiment in developmental psychology, designed to show that:

... the logic which Yoruba children learned as members of the Yoruba knowledge community and expressed in Yoruba language and number use, although distinct from, was nevertheless equivalent to, the logic children learned in a scientifically oriented schooling and expressed in English language’ (Verran 2007, p. 32).

Her experiment, using practices derived from Piaget’s experiments into cognitive development, involved children observing water being poured into vessels of different sizes and different amounts of peanuts being moved about, and providing responses to questions about whether and by how much the quantities changed (for example, when water was poured from one cup into two glasses). Reporting on the results of the experiment Verran writes:

Not surprisingly, the privileged bilingual children belonging to an emerging Yoruba middle class were far ahead of their village compatriots in terms of their cognitive development concerning quantitative generalising. This was demonstrated irrespective of whether the bilingual children were speaking Yoruba or English. The group of bilingual children I spoke to in Yoruba was also ahead of their English-speaking age cohort in Australia. In development of their capacities in quantitative generalisation bilingual children speaking Yoruba were the most advanced. This complicated study had showed what others before me had noted, that profound bilingualism often brings cognitive enhancement. But what had not been previously noted or commented on by comparative developmental psychologists were two rather surprising revelations that also emerged from the study. First, the logical basis of

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142 This lecture was all about length as a quality that things had, and about how length was infinite – what are assumed in western mathematics to be the ‘universal’ qualities of the concept.

143 The experiment involved 250 children, half of whom were monolingual Yoruba speaking living in Nigeria, and the other half Australian children. The Yoruba children fell into two groups – monolingual Yoruba speaking village children, and bilingual children who attended the campus school of the university.
In her own generalising about modes of generalising, Verran argues against two forms of ‘foundationism’ — a way of knowing that is ‘committed to ideals which are necessarily uniform’ (Verran 2001, p. 32) As discussed in Chapter 7 with reference to the power of dominant knowledge codes (page 158), foundationism denies the validity of that which does not fit within its metaphysical boundaries. In a modern mathematical frame, Yoruba ways of working with numbers may be regarded as primitive and wrong (a universalist reading), or perhaps of value within the confines of traditional Yoruba culture (a relativist reading). In either case, foundationism would keep the two forms of doing number quite separate and not allow them to cross-pollinate, as Mr. Ojo did to Helen Verran’s mathematically trained consternation. And yet, as Verran discovers through her experiment, bilingual Yoruba children who work in English and Yoruba modes of generalizing, were ahead of their monolingual counterparts and also ahead of English speaking children.

What I want to foreground here is the explicit setting side-by-side of non-cohering categories of generalising that many bilingual Yoruba children learn to do, and of which some would readily talk. I want to bring into focus questions of how we can make such insights routine, how we can bring them to the surface and manage them explicitly in learning, particularly in cross-cultural situations Verran 2007, p. 35).

Even cultural arenas characterised by less dramatic difference remain governed by assumptions so taken for granted that they act as metaphysical limits on what we are likely to consider possible. The idea that competency-based and disciplinary-based learning are incommensurable is one such metaphysical limit. Verran urges us to learn ‘how to go beyond those limits’ and make the apparently non-commensurable work to our mutual advantage.

8.2 Technologies of translation

Helen Verran has had a long term association with Australian indigenous communities, principally the Yolŋu of East Arnhemland, with whom she has explored issues of culture, language, learning and environmental management. Verran was a member of the broad team assembled by Michael Christie of Charles Darwin University (CDU) for his 2008 ALTC Teaching Fellowship program: Teaching from Country: Increasing the participation of Indigenous knowledge holders in tertiary teaching through the use of emerging digital technologies.

The central question explored by the Fellowship program was: ‘How can digital technologies be mobilised so that Indigenous knowledges are actively and effectively incorporated into higher education teaching programs while remaining faithful to the ancestral practices and protocols which govern them?’ (Christie 2010, p. 5). This question sat in the context of others about the philosophy and practice of Indigenous knowledge in the academy including:

- How do we rethink knowledge and pedagogy when divergent knowledge traditions work together?

• How do we rethink technology, spaces and temporalities in our work?
• How do we understand the experience of students – from both the Aboriginal and the academic perspectives?
• How do we remain attentive to issues of intellectual property and remuneration? (op cit, p 3).

Here is one of the Yolŋu consultants to the program talking about the centrality of place in Yolŋu education:

It’s all connected with the learning, association with the land. The trees are all related, the trees all tell a story. Certain bark, certain plants can be used for certain things, medicine, food, ceremonial rituals, ceremonies and so on. So it is different to the education you get in the classrooms because the classrooms don’t talk to you. We’re learning out there under a tree. We’re learning out there in the bush walking around. The trees are always communicating with you. The hills, the land, the air are always communicating, teaching you, and understands every need that Yolŋu children have to go through (transcript of video of Yiniya Guyula talking to John Greatorex: http://learnline.cdu.edu.au/inc/tfc/writings.html).

Yolŋu knowledge is located in the places though which it is articulated as practice: walking, telling stories, dancing, painting, gathering food, solving disputes, treating illness, celebrating well-being; mourning the dead. There are no classrooms involved in learning this knowledge and no books. To squeeze Yolŋu knowledge into classroom pedagogies is to turn it into a sub-set of the knowledge orientation that dominates that classroom context. Yiniya again:

Teaching balanda students in the classrooms is not the same as teaching the children out there in the bush. Because in the classrooms it is not the same as when teaching on someone else’s land, the resources, the connection with land, you don’t feel the rich stories that actually come from the land where the land of your fathers; it really is never the same as teaching out there through ceremonies, through the landscapes, the hunting, and survival of learning the strict discipline on the grounds of the old wise men... When I’m actually teaching on the ceremonial grounds, when I’m actually teaching in the bush, it is not only I that are teaching or talking, but the land is actually talking with me. I can turn around, the buluna wind blows gently and gives me the feeling of what the stories are and the stories are automatically being told by the land itself, through me. When I am standing on my own land I feel confident that the stories I’m telling are right (ibid).

If Yolŋu knowledge is to participate in the academy on equal terms, then its place needs to be mobilised as a resource in teaching and learning. In Michael Christie’s Fellowship program, the role of digital technology in enabling such a mobilisation of place is explored. In the interview with Yiniya, John Greatorex, the coordinator of Yolŋu Studies at CDU asks him:

When you’re using the technology, when we think when people will be using and teaching from out on their estates, where you’re comfortable, what things would you like the technology to do? [...] because there will be some limitations in the bandwidth and the power of the computers and the internet, to pass things. So seeing people, seeing videos; what things would you want the technology to be able to do? (ibid)

Yiniya’s reply is about the ways in which digital technologies may enable Yolŋu knowledge to be simultaneously on country and in the academy:

Lately, we’ve been showing people the setups on PowerPoints, videos that we’ve been taking of the lands, the stories, and they’re almost a few years, a few days, a few weeks older, but if there is a technology out there that we can use to be able to actually, I stand on the ground on my land out there, on Badaypaday or Marrŋatja or Wulkundiya, or Gupawupa, and have the cameras looking at me. At the same time I’m looking at the students, looking at the people, sitting back here in classrooms whether that be here in Darwin or whether that be down south, and we are both seeing each other as
we teach and you’re asking questions, and I’m actually standing on the ground at Badaypaday telling you: this is the image of the canoe that was used for hunting here by my Mukarr ancestors. So I am hoping that in the near future, that we can be able to use this sort of technology where we can actually see each other and talking, standing on the ground and you watching live coverage of the stories that I’m telling. And at the same time I’m looking at the faces of the students that are actually learning (ibid) 145.

What Yiŋiya envisages is something more that the use of digital technologies to transmit pictures and words across the distance between Eastern Arnhemland and Darwin. It is about using technology to situate the teaching ‘on the ground’ and convey a sense of that reality into the classroom. In this way, digital technologies have become technologies of translation, enabling two cultures to understand and work with one another.

I am not suggesting that the divide between VET and higher education knowledges is analogous to that between Indigenous and non-Indigenous cultures in Australia. They are entirely different dilemmas, but both are characterised by gaps in understanding that prevent the two from living well together. In both cases, there is a role for technologies of translation to enable the gap to be bridged and avoid one culture being subsumed within the other. These technologies need not be electronic, nor three dimensional objects. They frequently take the form of agreed protocols and rules of the game – the simpler they are the more robust they are likely to be. Table 34 codifies some of the technologies of translation currently used in the Australian tertiary sectors to bring the incommensurable into a negotiable common space and enable articulation and cross-sectoral offerings.

Table 34 Technologies of translation in the Australian tertiary system

<table>
<thead>
<tr>
<th>Technology</th>
<th>Meaning and examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Accommodating opposites</td>
<td>Translating practices across sectors, for example: Grading competency-based training outcomes (e.g. by using a rubric of ‘competent plus’ standards) to assist selection officers in articulating programs to identify the ‘fittest’ candidates for a place with advanced standing. Higher education might accommodate competency-based assessment outcomes by recognising evidence contained in a portfolio of artifacts related to the knowledge and skills addressed in the course/program (e.g. a collection of fashion designs and related documentation).</td>
</tr>
<tr>
<td>2. Adapting opposites</td>
<td>Repurposing of components of competency-based and/or disciplinary units to extend the scope of a single sector program, for example. packaging units of competency to create skill electives – that is, degree level subjects/courses which provide skills learning related to a broad disciplinary/professional knowledge base (for example, laboratory skills for pharmacists).</td>
</tr>
<tr>
<td>3. Creating the conditions for consistency and shared meaning through translation</td>
<td>This technique involves mapping the outcomes of a higher education and VET program using metrics which either: translate two unlike elements into a third common element, or deem one outcome to be equivalent to another. Dialogue between participating advocates is an essential part of the translation</td>
</tr>
</tbody>
</table>

145 When the report was written, the technology to achieve this two-way interaction had not reached Aboriginal communities of the Top End. However, online videos supplemented by still photos show what is being imagined in this extract. For Yiŋiya’s introductory lecture to Charles Darwin students, see: [http://learnline.cdu.edu.au/inc/tfc/yolngu_resources.html](http://learnline.cdu.edu.au/inc/tfc/yolngu_resources.html)
### Technology vs. Meaning and examples

<table>
<thead>
<tr>
<th>Technology</th>
<th>Meaning and examples</th>
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<tr>
<td>process, to ensure that generated meanings are indeed shared (including shared understandings about what constitutes equivalence, and agreements about how to address any irresolvable differences).</td>
<td></td>
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</table>

| 4. Working with frameworks, standards and specifications | These are devices such as learning and teaching standards, competency standards, and qualifications frameworks which create or expand a frame of reference to encompass and align diverse elements. For example: The AQF aligns vocational and higher education qualifications in a single ten-level framework in which all qualifications are classified according to the same elements (such as purpose, learning objectives, application of skill and knowledge). VET providers can customise content in Training Package qualifications and still meet national standards by ensuring that assessment is aligned to the standards expressed in the units of competency. |

| 5. Close examination of the overlooked | This dialogical approach requires people to ask, ‘what’s really going on here?’, and to observe and talk about practice in each other’s places. For example: Academic critiques of competency-based training show that a reading of the coded text in units of competency had led many to the conclusion that that competency-based training fragments epistemological and vocational meaning. However, this may not be the whole picture. Observation of learning and teaching practice and dialogue with teachers and facilitators may reveal that: (a) meaning is constructed by the vocational experience that the learners bring to their learning (Hodge 2010, p. 9) by those of the teacher/facilitator; and (b) the only thing fragmented is the representation of work, not the work itself. In other words, to know what is going on in competency-based learning, it is necessary to look beyond the artifact of the unit itself into the way skilled practitioners locate training artifacts (units, qualifications) as points of reference to the requirements of the system, and use their expertise and experience to create opportunities for real-world learning. |

The importance of symmetrical acknowledgement of different ways of knowing and of equitable dialogue cannot be overstated. An example: In recent years I have witnessed the responses of two faculties to the grading of competency-based training to accommodate higher education requirements. In Faculty A the level of articulation and level of credit awarded to VET graduates into degree programs is little if any better than the national average. Academics in Faculty A continue to argue that every articulating second or third student reduces their first year intake and that they cannot rely on the grading being a true representation of the knowledge required for degree level studies. In Faculty B the rate of articulation and articulant success rates are high. VET and academic staff have worked together to design a grading system and have become familiar with each other’s pedagogical practices and knowledge domains. They engage in dialogue about learning and teaching and collaborate to set up the conditions for mutual benefit. They collect data on student outcomes and have an evidence base for their practice. TAFE students articulating to degrees are doing as well or better than their peers who came into the bachelor degree direct from year 12 with high ATAR scores.
This is what it comes down to in the end: getting practitioners from both sides of the sectoral divide to get together in a spirit of cooperation and mutual learning, to explore the meanings of their respective practices. Perhaps from this new forms of integrated practice and cooperation will emerge.

8.3 Making connections

8.3.1 Building stakeholder relationships

The review of employer attitudes to associate degrees in Chapter 4 showed that some large industry agencies (including Engineers Australia and the Minerals Council of Australia) were both aware of and interested in the potential of associate degrees to address the growing demand for paraprofessional skills. On the other hand, representatives of a sample of small to medium level enterprises in Melbourne’s northern metropolitan region were largely unaware of associate degrees and uncertain about where to go to find information. Similarly, senior secondary students in the same region had little or no idea about associate degrees. Careers teachers talked about the difficulties they faced in keeping up to date with changes in tertiary offerings, and finding suitable materials to assist their students to make informed choices in an increasingly complex post-school environment.

There are multiple strategies for getting messages about associate degrees to industry and secondary schools and these are canvassed in section 8.3.2. The point here is to underline the importance of establishing ongoing relationships with key stakeholders. The need for school-tertiary relationships has been amply demonstrated by research into post-school transition, and the examples provided in section 6.1.2 show how three universities – Griffith, Sydney and RMIT – have developed programs to address the needs of their different potential cohorts. The need for sustained school-tertiary relationships becomes ever more pressing as schools wrestle with manifold changes – including the impact of changes to VET fee structures, the disappearance of traditional occupations and the appearance of new ones, and now a new AQF 6 qualification.

Ongoing relationships with the small to medium businesses that constitute the largest group of employers are equally important, and challenging to establish and sustain – particularly when funding is constrained. Appendix Four provides a brief report of an education-industry network which emerged in Melbourne’s northern region in the late 1980s. Most recently known as the Northern Partnerships Unit (NPU), and previously the Northern Industry Education Coordinated Area Program (NIECAP), this network provided a forum for schools, tertiary providers and employers to support young people in transition and to keep employers informed of developments in education. As noted in Appendix Four, NIECAP and the NPU have been located in various RMIT units. The NPU was most recently hosted by the RMIT School of Education which decided to close the unit at the end of 2012. However, RMIT Student Services has taken on responsibility for programs involving secondary schools, and the three Local Learning and Employment Networks in the Northern Region continue to operate. It is essential that such links are maintained for a range of reasons, not least of which is as platforms for communicating and interpreting information about tertiary options.
8.3.2 Media and messages

Part of the original Fellowship plan was to draft associate degree information based on the advice from secondary teachers and students, and to work with marketing staff to produce material for testing in schools. This tested material was then to be provided to associate degree program teams as a framework for program specific marketing materials. As the Fellowship unfolded and I worked with associate degree teachers, it became clear that the information for testing needed to be drafted by the teachers rather than a researcher, given that teachers have the relevant expertise and experience in communicating with students. A further consideration was the need for a coordinated approach to marketing associate degrees as a new form of program. While there is a broad understanding of the nature of undergraduate degrees which provides a framework for promoting individual programs, such a framework needs to be created for associate degrees in general before information about individual programs can be expected to have much meaning for senior secondary students and employers. As a result of consultations with stakeholders during the Fellowship, the following conclusions were drawn about how to get the message about associate degrees into the marketplace.

1. There is a need for tertiary providers offering associate degrees to work together on an information campaign targeted at secondary schools and employers. The aim of such a campaign would be to position the associate degree as a new paraprofessional qualification with pathways into undergraduate degrees, and to provide links to information about individual programs.

2. There is an important role for state governments to play in providing general information about associate degrees through their education and training and industry portfolios.

3. While a media campaign may raise general awareness about associate degrees, all stakeholders consulted agreed that using established networks was the best way to provide end users with the specific information required for decision making.

4. There is no single way of reaching stakeholder groups. Different preferences and circumstances require that information is available in print and multimedia formats (particularly short videos). The latter should be distributed in CD format as well as online to reach stakeholders without internet access or in low-bandwidth areas.

5. The best way to get to senior secondary students is through careers teachers who can review materials and add additional explanatory notes, if required, to assist students in their decision making.

6. There is a need for an accessible narrative about associate degrees to assist careers teachers in discussions with students and their parents.

7. Despite a widespread view that students will opt for online forms of communication about tertiary options, and that they have a preference for social media, students and their teachers said that printed brochures are an essential part of any marketing and information campaign. In particular, students said they liked to have a brochure to take home to discuss with their families.

8. A broad marketing campaign needs to be supplemented by program specific information developed with direct input from associate degree teachers. Careers
teachers pointed to the value of posters which are relatively inexpensive to produce, can be targeted to multiple audiences and mounted in relevant locations (for example, engineering posters in science and maths classrooms and adjacent corridors).

9. It is important that university marketing departments work with teachers to craft targeted communications campaigns.

Advice to universities about media and messages from their stakeholders

The students and careers teachers interviewed as part of the Fellowship program were almost unanimous in their view that universities and TAFE institutes should change their websites. They found all websites to be lacking in most regards. Students found course descriptions to be too dense, filled with non-essential information, and apparently addressed to audiences other than themselves. What they are looking for is quite straightforward: simple information, free from what they saw to be irrelevant or extraneous information and text. They wanted to be able to search easily and quickly for specific courses (meaning no more than two clicks in a search engine). Students were also quite clear about what information should be included in a course description:

- Prerequisite subjects, minimum ATAR score and additional requirements to be met;
- What the program/course involves – number of units/courses, number of hours per week;
- The employment opportunities and career pathway available on completion; and
- Alternative study pathways to achieving the same goals if all requirements cannot be met for the first choice option.

National promotion of associate degrees

It is clear that associate degrees need to be promoted nationally as a new AQF qualification. However, it is difficult to know how best to do this given the current marginal status of associate degrees in Australian universities and other higher education providers. The 486 per cent increase in enrolments between 2002 and 2011 is off a very small base and the total Australia-wide enrolment in 2011 was 6,891 EFTSU – compared to an undergraduate enrolment of 655,250 EFTSU (DfISRTE 2012). Any national promotional campaign would need to be focused on specific occupational outcomes, providers and employers, as sources of concrete examples of available career paths. On the other hand, those state governments where associate degree provision is quite strong (Queensland, New South Wales, Victoria and Tasmania) could mount broad promotional campaigns in collaboration with associate degree providers (for example, in the period leading up to tertiary open days, held between July and September each year). Such collaboration would enable each provider to design specific campaigns which referenced the statewide effort. This issue is addressed with reference to the Victorian Government in the recommendations for further action below.
8.4 Recommendations

The recommendations for further action arising from this ALTC Teaching Fellowship program are targeted at three bodies.

The first is the Australian tertiary sector, where recommendations are addressed to the Department of Industry, Innovation, Science, Research and Tertiary Education (DIISRTE), proposing support to institutions grappling with the challenges of a demand driven market and new student cohorts.

The second is the Victorian Government which is an appropriate locus of support for tertiary institutions within this state, and for coordination of efforts to promote new tertiary initiatives.

The third is RMIT, where action is proposed to consolidate the work done to date via the ALTC Fellowship to build an integrated tertiary environment and to enhance the effectiveness of stakeholder relations.

Recommendations for action in the tertiary sector

1. That the DIISRTE Office for Learning and Teaching invites tertiary institutions to join in the co-sponsorship of a national conference to promote critical reflection on curricula and pedagogical practices in the context of tertiary participation targets and a broader range of learner needs.

2. That the DIISRTE Office for Learning and Teaching initiates action to promote to tertiary institutions, as a contribution to local action, the research findings and resources produced by ALTC/Office for Learning and Teaching Fellows and grant recipients in relation to improvements in student transition into and between tertiary sectors.

Recommendation to the Victorian Government

3. That the Victorian Government, through the Department of Education and Early Childhood, endorses and resources a statewide information campaign on associate degrees aimed at secondary schools, senior secondary parents/guardians and employers, and conducted in collaboration with Victorian associate degree providers.

Recommendations to RMIT

4. That RMIT sponsors an evaluation of its current partnership initiatives with secondary schools to track post-school destinations of participating students, identify success factors, and propose options to consolidate and extend relationships between secondary schools and tertiary providers to improve transition and retention.

5. That RMIT invites northern region Local Learning and Employment Networks to participate in a strategic dialogue to explore ways in which existing partnerships can be strengthened as a basis for supporting more effective school-tertiary-employment transitions, and to promote associate degrees to prospective employers.

6. That (a):

   RMIT initiate a systematic collection of data on associate degree students and graduates, including student career and further study aspirations, and feedback on associate degree curriculum and pedagogy. As the data may offer an opportunity for comparing first and
second year student data in some areas, this survey should be administered to all second year associate degree students at the end of semester one each year, the same time at which the new University Experience Survey will be administered to first year students.

and (b):

RMIT collates data on graduate destinations as the basis for a longitudinal study of career prospects for associate degree graduates.

7. That a major marketing campaign is initiated in 2013-2014 to promote associate degrees to stakeholders. The campaign should encompass providing program specific information to careers teachers and prospective students, and strategies to engage with prospective employers around strategies to address industry and enterprise specific skill needs.
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Evaluator stance

The role of evaluator was enacted in four main ways:

- First, observing implementation of the Fellowship program and noting variations to it
- Second, assessing collaboratively with Dr Smith the extent to which the Fellowship program, as amended, was achieving its stated objectives
- Third, engaging in active and ongoing dialogue with Dr Smith about the variations to the initial Fellowship program and about the implications of her analysis and findings
- Fourth, offering feedback on progressive drafts of Dr Smith’s Fellowship report.

This stance evolved during the course of the Fellowship, in large part because the reach of the Fellowship’s activities expanded, and did so appropriately as I will outline below.

As evaluator, I attended, and occasionally participated actively in, a number of events involving stakeholders. It was not possible to attend all Fellowship program activities – the number and range of activities conducted grew as:

- the Fellowship’s field of inquiry was extended
- the Fellowship assumed a seminal role in practical planning for the future of associate degree implementation within RMIT.

Among those events I attended, and actively participated in, were:

- an employer focus group, involving employers from Melbourne’s northern region (March 2011)
- a secondary student focus group, involving students from a government secondary college in Melbourne’s north (March 2011)
- two meetings of the Fellowship’s Reference Group (January 2011 and May 2011) – the Reference Group membership comprised senior academic managers from RMIT University, other universities and TAFE providers, and employers
- the Associate Degree Forum held at RMIT University in August 2011, involving representation from across RMIT’s Colleges and Schools, and including presentations from representatives of other tertiary providers delivering associate degrees.

Over the period from late 2010 to June 2012, these activities were supplemented with numerous face-to-face meetings, telephone discussions and email exchanges between Dr Smith and me. This ongoing dialogue permitted me to offer suggestions about a variety of matters for Dr Smith’s consideration, including practical observations drawn from my own work across the education sectors, and items of interest arising from my own reading.

I also participated in a number of discussions involving Dr Leone Wheeler, Director of RMIT’s Northern Partnerships Unit. Dr Wheeler’s extensive experience, and wide networks among employers and schools, in Melbourne’s north proved invaluable in grounding the Fellowship in the perspective of key stakeholder groups.

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The Fellowship evaluation was conducted by Rob Sheehan, Sharp Words Consultancy, Editing and Writing. The Evaluation Report was completed in June 2012 as the Final Fellowship Report was being prepared.
I was invited to offer views on the relationship between the Fellowship’s objective and intended outcomes, and such matters as the proposed structure and content of surveys and focus groups.

Objective, activities and outcomes of the Fellowship

The Fellowship’s objective, and intended activities and outcomes, are outlined in section 1.2 of Dr Smith’s Fellowship report.

Fellowship objective

The Fellowship’s objective was:

- to contribute to improved student access to a range of post-school pathways through closer integration between tertiary educational sectors.

In my assessment, the Fellowship objective was well met. I believe a more limited contribution was envisaged than the one delivered, and reflected in Dr Smith’s Fellowship report.

Fellowship activities

Initially, the Fellowship proposed five primary activities. They were:

1. Investigation of how vocational and academic curriculum components are configured and delivered in current associate degrees
2. Review of current RMIT information for prospective students and collection of data from selected secondary colleges on senior secondary student conceptions of associate degrees
3. Survey of associate degree student learning preferences and vocational aspirations
4. Design and incorporation of an integrated tertiary pedagogy encompassing vocational/applied and academic/theoretical learning into selected RMIT associate degrees
5. Promotion of project outcomes and recommendations to stakeholders.

Each of these proposed activities was either completed or set in train over the period from late 2010 to early 2012 – the effective duration of the Fellowship. While these activities may not have been secured within the 12 month timeframe of the original Fellowship proposal, it is more important to note that each of them was advanced to the point where they will have a substantive impact on associate degree development and implementation.

Dr Smith’s report provides a detailed summation of the progress made in relation to each of these activities. The single activity on which sustained progress may appear to be lagging is that related to surveying associate degree student learning preferences and vocational aspirations. However, I would note that:

- It became apparent that a thoughtful and useful survey of RMIT associate degree students could not simply be overlaid on the existing student survey burden – that this was best done by timing the survey so that it fitted sensibly within the University’s wider survey regime
- The Fellowship report includes a firm recommendation that such a survey is undertaken on a systematic and ongoing basis (rather than a one-off basis related to
the Fellowship’s activities) – see section 8.4 of the Fellowship report, recommendations 6(a) and 6(b)

- There is a high level of support for this survey activity among RMIT’s senior internal associate degree stakeholders, and Dr Smith’s work role in 2012 is specifically engaged in activities that constitute a direct input into survey development and post-survey data analysis.

This single instance illustrates a valuable characteristic of Dr Smith’s approach to her Fellowship – she adapted the Fellowship’s activities to the realities of a change context without losing sight of the Fellowship’s primary objective.

**Fellowship outcomes**

The Fellowship proposal envisaged six outcomes. Each is listed below, followed by brief comment on the extent to which the outcome was achieved.

**Outcome 1**: Data on current associate degree curriculum and pedagogy in the context of student preferences and aspirations which can inform associate degree design and delivery.

As noted above, data collection on student preferences and aspirations is planned, though it was not completed within the period of the Fellowship. Dr Smith’s careful and considered analysis of stakeholder perspectives, as reflected in her Fellowship report, has provided a range of important insights to inform the framing and analysis of survey data when they are collected.

**Outcome 2**: Dissemination of information and strategies to support improved curriculum development and the introduction of new pedagogies.

The Fellowship process has assisted RMIT University associate degree stakeholders to revisit and revise the approach to associate degree pedagogy in the light of the Fellowship’s analysis of VET/higher education curriculum interactions. There are now embedded mechanisms within RMIT that are further advancing this outcome. One example of this is the creation for 2012 of a full time role for Dr Smith in furthering the position of associate degrees at RMIT – role that is supported by the Deputy Vice-Chancellor (Academic), the Dean – Teaching and Learning, and the Director TAFE. It is not too long a bow to characterise this role as the continuation of the Fellowship by other means – a ringing institutional endorsement of the value of the Fellowship.

The Fellowship report itself contains a wealth of information about improved curriculum development that will support the introduction of new pedagogies. The report also describes a number of models that can inform strategies seeking these ends.

Dr Smith has actively disseminated her findings in a variety of RMIT forums and her effectiveness in so doing is evidenced by the continued organisational focus on associate degree pedagogy which references her knowledge and the findings presented in her Fellowship report.

**Outcome 3**: Data to support the development of links with secondary schools and improved information for teachers, senior secondary students and parents.
It is one of the great strengths of Dr Smith’s approach to her Fellowship, and the Fellowship report itself, that the perspectives of secondary students and careers teachers form prominent points of reference. The yawning gap that is the post-school transition prospect and experience for many secondary school students is again highlighted in Dr Smith’s report. Her analysis of this gap is distinguished by an examination of secondary school student and teacher perspectives so far as associate degrees are concerned, and the mismatch between those perspectives and the settings of associate degree providers. Dr Smith has enlisted existing structures and mechanisms within RMIT to the cause of improving pathway management and engaging the school sector in that task.

A key outcome of the Fellowship is the focused attention it has generated on the need to provide accurate information about associate degrees to secondary school students, their parents and teachers, and to employers. The Fellowship report captures the ethical dimension to informing those who are users of associate degrees (students and employers) about the qualification, in a context where its distinctive learning and teaching characteristics, and its vocational outcomes, are not well understood by those users. The analysis presented in the Fellowship report provides the ballast for her recommendation (see section 8.4 of the Fellowship report) that ‘the Victorian Government, through the Department of Education and Early Childhood, endorses and resources a statewide information campaign on associate degrees aimed at secondary schools, senior secondary parents/guardians and employers’.

**Outcome 4:** Guidelines on implementing a tertiary pedagogy.

As noted under Outcome 2, the Fellowship process identified models that assist in coherently conceptualising a tertiary pedagogy. The models are presented in the report, along with references to activity within RMIT that specifically draw on aspects of the models in developing and implementing tertiary pedagogy.

It was an ambitious proposition to say that guidelines on implementing a tertiary pedagogy could be stated within the 12 months of the Fellowship. With that ambition in clear view, Dr Smith has worked towards establishing a detailed framework within which such guidelines will emerge to guide RMIT’s approach to associate degree provision. The progressive elaboration of guidelines is likely to be of considerable interest to other providers who are tangling with the task of articulating a tertiary pedagogy.

Dr Smith has carefully analysed the relationship between VET and higher education perspectives about the pedagogies that apply in each sector, and how those perspectives both inform and misinform the development of an ‘ecumenical’ pedagogy. She has helpfully focussed on what unites, rather than what divides, teachers who are grappling with the challenge of shaping a tertiary pedagogy. That more work remains to be done is clear from the report, and is the underpinning rationale for her recommendation (see section 8.4 of the Fellowship report) that a national conference is needed to ‘promote critical
reflection on curricula and pedagogical practices in the context of tertiary participation targets and a broader range of learner needs’.

**Outcome 5:** Report on project outcomes to be disseminated widely within RMIT and other tertiary institutions delivering Associate Degrees.

Dr Smith has followed a path of progressively disseminating Fellowship outcomes within RMIT University, including planning forums and learning and teaching forums. Dissemination continues through the avenue of her 2012 position noted earlier and which is central to the further developing, implementing and monitoring associate degree pedagogy at the University. Dr Smith was a key organiser of the RMIT Associate Degree Forum held in August 2011, referred to earlier. It was enthusiastically received by participants and Dr Smith is leading planning for a second Forum to be conducted in August 2012.

Once her Fellowship report is accepted by the Office for Learning and Teaching and uploaded for public access, Dr Smith intends to email associate degree coordinators across Australia to inform them that the report is available online and inviting their feedback about the report, and particularly about the report’s coverage of tertiary pedagogy. The email list was generated during the Fellowship when a record was created of associate degrees on offer nationally – see Appendix 3 of the Fellowship report.

RMIT University, in conjunction with LH Martin Institute, will host a conference on 25-26 October 2012 entitled ‘AQFs 5 & 6: Debating the future of mid-level qualifications in Australia’. Dr Smith will conduct a pre-conference workshop entitled ‘Developing associate degrees: stakeholder needs, curriculum and pedagogy’, which will draw extensively on the work of the Fellowship.

Finally, a number of recommendations in the Fellowship report countenance dissemination of the Fellowship’s outcomes through collaborative activity across the tertiary sector. The recommendations seek support from the Office for Learning and Teaching and from the Victorian Department of Education and Early Childhood Development to pursue approaches to developing tertiary pedagogy and to creating information resources about associate degrees for secondary schools, their students, parents/guardians and employers. System-wide approaches are required, and it is appropriate in my view that the task of putting them in place should be accepted by the system at large.

**Outcome 6:** Promotion of alternative tertiary pathways through an ongoing community of practice.

An Associate Degree Network was established at RMIT University in 2011 which effectively serves as an ongoing community of practice focussed on the associate degree, including the task of promoting them as alternative tertiary pathways. The Network is attended by all University organisational units offering an associate degree and all units developing an associate degree. Its regular and well-attended meetings focus on sharing practice insights about developing associate degrees as pathways and about framing appropriate pedagogy.
General reflections on the Fellowship

Dr Smith’s Fellowship proposal was ambitious in scope, and in what it sought to achieve in the time allocated. It became clear early in the Fellowship that despite its breadth, the proposed scope was too limited. Most notably, Dr Smith discovered the surprising absence of a coherent publishing history of associate degrees in Australia, and the equally surprising lack of a consolidated history of the many misadventures that have compromised the promise of effective pathways between VET and higher education for the benefit of school leavers in particular.

Developing a shared understanding of how to frame tertiary pedagogy, centred on the associate degree, could hardly proceed without a shared understanding of how the standoff between the post-secondary education sectors has become so difficult to resolve. Writing that history by broadening the scope of the Fellowship to incorporate the task represents an important service to both policy makers and practitioners.

The Fellowship’s original scope nominated tertiary providers and secondary school students, and their parents and teachers, as primary stakeholders in the Fellowship’s outcomes. It quickly became apparent that employers must also be present at the stakeholder table, and the writ of the Fellowship was enlarged to accommodate them. It was an astute extension of scope – it was clear that employers were largely unfamiliar with the associate degree. It is difficult to imagine that developing pedagogy for a qualification with a vocational outcome as a primary rationale could proceed responsibly without an appreciation of what employers thought about, and expected from, that qualification.

Early in the Fellowship it became clear that there was limited, indeed mostly non-existent, awareness of associate degrees – from the title to the content to the learning outcomes – among secondary school students, careers teachers and employers. It was important to establish some understanding of how a new kind of qualification might be ‘retailed’ by tertiary providers generally to the qualification’s end users – learners and employers. This was an enlargement of the Fellowship proposal, beyond improving existing information provided by RMIT to stakeholders. Nevertheless, it was a threshold concern that could not be set aside as a simple inconvenience. Indeed, as noted earlier, there are ethical considerations for the tertiary sector in attracting enrolments to associate degrees when there is limited or no understanding among key stakeholders of what they are.

During the course of the Fellowship, Dr Smith revealed the startling variety of ways in which tertiary institutions have conceptualised and operationalised associate degrees. That breadth of approach was perhaps not fully realised when the Fellowship program was proposed, and again it could not be set aside as a simple inconvenience. It demanded further exploration – sharing and mapping. Dr Smith created opportunities for that exploration to occur and to continue. The Fellowship report is likely to have wider resonance across the tertiary sector because of the deliberate decision to enfold that diversity within the analysis.

The notion of ‘scope creep’ is often derided as emblematic of poor project management. In the case of Dr Smith’s Fellowship, scope creep was anything but – it was recognised when it presented itself and an expanded scope taken on board when it was clear that the Fellowship’s outcomes would be less persuasive without addressing fundamental matters.
The Fellowship also pursued a change agenda that could articulate for associate degrees a distinctive purpose (or set of purposes) within the AQF. Change rarely happens as planned, especially when so many stakeholders sit beyond the confines of one institutional setting, or one sectoral setting. A strength in the way Dr Smith conducted the Fellowship was to assess what conversations conveyed about stakeholder perspectives, and to see where conversations led and might lead. She was opportunistic in pursuing the goals of the Fellowship, even if that meant diverging from the planned path. For a change project, that seems both appropriate and wise. In my assessment, an essential ingredient in the success of the Fellowship was Dr Smith’s unstinting readiness to adapt her Fellowship program activities so that they remained immediately relevant to the pressing and complex operational priorities of RMIT’s internal associate degree stakeholders (including teachers, learning and teaching coordinators, and senior academic managers).

The Fellowship planned to build bridges that would cope with new traffic in problem solving, sharing respectfully and mapping out ways ahead. Given longstanding habits of thinking, and longstanding cultural distinctions between the VET and higher education sectors, the extent of problem solving, sharing and mapping required could not be achieved definitively in the time available to the Fellowship. It takes a good deal longer than 12 months to shift perspectives, alter habits and then align new ways of doing with agreed and preferred outcomes. The Fellowship has established ongoing mechanisms for problem solving, sharing and mapping at RMIT in 2012. It has opened productive discussions with other tertiary providers on several fronts. A number of the recommendations made by Dr Smith in section 8.4 of her Fellowship report seek support to further the potential of those discussions to bring about purposeful change.

It is important to note that Dr Smith found her interactions with current and former ALTC Teaching Fellows to be extremely valuable, both on an individual basis and through forums organised by the ALTC/OLT.

Equally important was the willingness of RMIT University to support Dr Smith’s work throughout the extended period of her Fellowship. The contribution of the Fellowship to the University, and the broader tertiary sector, was recognised at every turn.

Personal note

I am grateful for the opportunity to work with Helen Smith as the evaluator for her Fellowship. The opportunity to share ideas, and to challenge and be challenged, in generous spirit is always a fillip. I’m not sure that I kept my side of that bargain as steadfastly as Helen kept hers.
Appendix 2 The associate degree in an international context

2.1 The North American associate degree

The associate degree (commonly referred to in the US and Canada as the ‘associates’ degree) was first introduced into the US tertiary education system in the early 20th century. It really came into its own with the establishment of the nationwide network of community colleges in the late 1940s and its adoption by community colleges as a strategy to respond to increasing demand for postsecondary education in the post-World War Two period. According to Coronado, the associate degree has three outcomes:

First, it provides a terminal degree to students who have completed two years of education at a community college and choose not to continue their studies. Second, it signals universities that students transferring to four-year institutions are prepared in freshman and sophomore studies. Third, it informs prospective employers that community college graduates have received a formal education that suits them for entry into the workplace (Coronado 1996, p. 4).

The US associate degree is known as either a transfer or terminal/occupational qualification147. The Associate of Arts degree (AA) and the Associate of Science degree (AS) sit in the former category, and programs with the term ‘applied’ in the title (such as the Associate of Applied Science (AAS) degree) sit in the latter (Gientzotis 2003, p. 10). Transfer associate degrees are more general/academically orientated. As Coronado notes, the transfer function is ‘at the heart of associate of arts and sciences degrees with achievement of the baccalaureate as the desired outcome’ (ibid). Coronado also notes that this was the original purpose of the associate degree. As community colleges took on a wider range of roles including technical education, the role of the associate degree correspondingly broadened to include an occupational focus. The transfer role still dominates in the US associate degree, particularly so now that 17 states have legislated to enable community colleges to deliver four-year degrees (TDA/LH Martin 2011, p. 2) to address skill shortages in specialist areas such as biology teaching and in a range of health care professions (Mackenzie 2011, p. 8). In other states, associate degree programs continue to supply regional business and industry with paraprofessionals, technicians, and professionals148 in programs primarily designed for this purpose. For example, the Colorado Red Rocks Community College advertises an Associate of Applied Science degree:

... for the student who is preparing for entry level employment in a career-oriented program of study or upgrading in a specific occupation. This degree is not intended for transfer; however, courses are considered for transfer on an individual basis by the receiving four-year college or university (see: http://www.rrcc.edu/degrees/applied.htm).

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147 See, for example: http://www.associatesdegree.com/. On this and college websites the terms associates degree and associate degree are used interchangeably. Some providers refer to the applied associate degree as ‘occupational’, others as ‘terminal’.

148 In the US, legal assistants are paraprofessionals who are not licensed to practice law but who can perform duties such as legal research and document preparation under the supervision of an attorney. Technicians, such as microcomputer technicians and automotive technicians, function in occupations that require knowledge of specific technical processes (Coronado 1996, p.8).
Descriptions emphasise occupational outcomes and specialised skills, such as the following Chicago-based Kennedy-King College guide to the AAS (Automotive Technology):

... to meet the changing demands of industry. Students will learn the technical skills essential to employment in the field of maintenance technology, auto body care, chassis, diesel, and power train, leading to employment in service, maintenance, and areas of technological specialty such as detailing, auto body paint and refinishing, in addition to management occupations or self-employment (see: [http://www.ccc.edu/Colleges/kennedy/Programs/Pages/Automotive-Technology-Associate-in-Applied-Science.aspx](http://www.ccc.edu/Colleges/kennedy/Programs/Pages/Automotive-Technology-Associate-in-Applied-Science.aspx)).

The AAS degree is designed for school graduates and also ‘to assist those already employed to update their skills’ ([http://www.fullbright.org.uk/study-in-the-usa](http://www.fullbright.org.uk/study-in-the-usa)). AAS degrees frequently incorporate a work-based, experiential learning component via an internship, clinical experience, practicum or work experience (Coronado 1996, p. 11). Gientzotis notes that, ‘in the absence of the apprenticeship pathway common to Europe and Australia, the vocationally oriented associate degrees have grown as important elements in the USA school to work, and worker training and retraining systems (Gientzotis 2003, p. 8).

Writing in 1996, Coronado reports on an increased acceptance of the AAS for transfer purposes, particularly with the removal of trade barriers and the need for companies to increase their skill base to compete in an international marketplace (Coronado 1996, p. 9). As noted in the TDA/LH Martin report, as community colleges extend their provision of occupationally focused four-year degrees to meet the demand for high level technical and paraprofessional training, similarly occupationally focused associate degrees are likely to become more acceptable as transfer qualifications than they have been as transfer qualifications into generalist university degrees.

Paraprofessional tertiary education in the Western Canadian provinces is essentially similar to that of the US, with community colleges based on the Californian model, and offering associate degrees in Arts and Science as pathways into degree studies and access to paraprofessional occupations. In Ontario, the largest province by population, the transfer function of community colleges has been limited (Arnold 2011). Originally designated as occupationally oriented, they offered two-year terminal qualifications, with the Committee of University Presidents opposed to colleges taking on any university-level programs and functions. However, as Arnold reports, student demand eventually led to changes in policy:

Students in Ontario and other jurisdictions have been generally way ahead of educators and planners in discovering the value of combining the strengths of the colleges in hands-on learning with the strengths of the universities in academic education (2011, p. 2).

In 1995, the Pan-Canadian Protocol on the Transferability of University Credits mandated that all Canadian universities provide full credits into first- and second-year university courses, whether taken at another Canadian university or college in British Columbia, Alberta and Québec (Arnold 2011, p. 7). Restrictions remained in place, however, as not all provinces were covered and universities reserved the right to determine academic prerequisites, admission criteria and certification requirements of academic achievement (Constantineau, 2009, in Arnold 2011, p. 8). Following a study in 2009-10 of college to university articulation via associate degrees, Arnold reported on improved levels of transfer but noted the need for resources and strategies to support students through the transfer process (ibid).
2.2 Foundation degrees in the UK

The introduction of the foundation degree (FD) in the UK came as a result of a series of government investigations into the structure of higher education and the changing nature of the labour market. The Foundation Degree Taskforce (FDTF) also cited evidence that competitor countries were already educating greater proportions of their workforce to the higher education level, and were planning further expansion (FDTF 2004, p. 5). A 1994 report, Choosing to Change, had recommended intermediate higher education qualifications combining vocational skills and access to higher education and related employment. In 1997, the National Committee of Inquiry into Higher Education identified intermediate higher education level qualifications as a strategy for increasing higher education participation. In 1999, the second report of the National Skills Task Force, Delivering Skills for All, recommended exploring a new system of two-year associate degrees in vocational subjects to support progression from qualification level 3 (ibid) and to achieve a target of 59 per cent of young people having the opportunity to enter higher education by age 30 (Allen & Gientzotis 2002, p. 10).

The prototype for the two-year foundation degree was piloted in the UK in 2000, and by 2003 was regarded as ‘a bold innovation’ with the potential to ‘stimulate a radical reorientation of higher education provision’ (FDTF 2004, p. 5). A White Paper on the future of higher education, released in 2003, saw the foundation degree as a means of ‘breaking strongly-embedded patterns of supply... succeeding where previous attempts have failed in raising the status of vocationally-oriented courses and the credibility of two year higher education qualifications’(ibid).

The FDTF identified the status and credibility of level 5 (intermediate) higher education qualifications in the UK as a barrier to educational reform intended to lead to wider higher education participation by under-represented groups, including low SES and existing workers. The concerns expressed in the Taskforce report speak of a higher education system struggling to adapt itself to the demands of mass education:

For a variety of reasons too complex to explore here, the existing qualifications on offer in England at the intermediate HE level 2 have never achieved the same broad public recognition as, for example, the Associate Degree in the USA and Diploma programmes in France. Even though over one third of undergraduate students are enrolled on NQF level 4 and 5 programmes, for over 100 years the dominant undergraduate qualification has been publicly perceived to be the three-year honours degree, and the stereotypical student seen as an 18-year-old school leaver on a full-time course (FDTF 2003, p. 7).

A number of studies have found that foundation degrees are attracting students from ethnic minority groups, more mature students and a higher proportion of students from lower socio-economic groups (Greenbank 2010, p. 57). The demand for foundation degrees doubled between 2003 and 2006 to 46,000 students and has risen steadily since then to a 2010 total of 100,000 (HEFCE 2010, p. 9). However, a number of studies have questioned the effectiveness of the foundation degree as a paraprofessional employment qualification: the ‘two-year route to a degree with a high market value because of its focus on employability’ envisaged by David Blunkett, then Secretary of State for Education and Employment, when he first introduced the idea of the foundation degree in 2000. To date foundation degrees in the UK are primarily pathways leading to further study. While courses are required to be skills based, and to include a mixture of work-related specialist skills (Burke et al 2009) as well as academic learning, there is little evidence that foundation
degrees are leading directly to employment. A recent paper by Greenbank (2010) cites research findings that most students appear to be using the foundation degree as a route to an honours degree, rather than as a way of obtaining an associate professional level qualification (Beaney 2006, in Greenbank 2010, p. 58). Dodgson and Whitham (2005, p. 20) found that more than half the students in their survey identified the ‘opportunity to progress onto an honours degree’ (that is, a three year degree) as the most attractive feature of the foundation degree. Greenbank argues that, apart from student preferences, the limited inroads made by associate degrees into the paraprofessional labour market result from a mismatch between ‘the subjects students are studying and the sectors where there is a demand for associate professional level qualifications such as FDs’ (Greenbank 2010, p. 60).

Greenbank’s conclusion, drawn on the basis of his analysis of the policy framework for the foundation degree, is that the qualification may be unable to meet government expectations for employment outcomes and pathways if it is entirely controlled at a national level: ‘It would therefore be better if institutions offering FDs were able to decide for themselves which objectives (particularly the choice between employment and progression) they wished to prioritise’ (ibid). Indeed the findings of an UK government report had laid out the framework for meeting multifaceted agenda, identifying key success factors in the US as ‘strong links with their communities and potential relationships with employers … and the provision of occupational and academic programs’ (Further Education Funding Council 1995, p. 9).

2.3 Associate degrees in The Netherlands

The associate degree was formally introduced into The Netherlands higher education system in February 2011 after a five year pilot delivery in selected universities was evaluated positively. The decision to pilot the associate degree was made in ‘direct response’ to the adoption via the Bologna Process of a three cycle system of higher education and the suggested introduction of an intermediate qualification in the first (undergraduate) cycle (Daale 2010, p. 176). Associate degrees are offered in universities of applied science (previously institutes of professional education) in The Netherlands’s binary higher education system (see Figure A2.1).
In this system, the associate degree was regarded as ‘the missing link between the professional higher education sector, the vocational institutions and the labour market’ (Daale 2010, p. 181). It was expected to meet several stakeholder (government, professional institutions and employers) expectations:

- To operate as a building block in the national lifelong learning structure by bridging the gap between secondary VET (up to level 4 in the national qualifications framework) and the professional bachelor degree (level 6);
- To contribute to increased social mobility by expanding higher education participation by low SES groups;
- To stimulate innovation and flexibility in higher education provision including the use of work-based learning, e-learning and the recognition of prior and non-formal learning;
- To respond to growing labour market demands for shorter qualifications (ibid).

Students in the pilot rounds (2006-07, 2007-08 and 2009-10) were drawn equally from the workforce and secondary vocational schools, and graduates could proceed into the final year of a degree at a university of applied science (Hoger Beroeps Onderwijs (HBO), higher professional education), enter or re-enter the workforce (and return to degree studies later), or combine part-time work and study.

In contrast to the UK, where the introduction of the associate degree was driven by government policy initiatives, in The Netherlands the main driver was a non-government policy coalition whose membership included:

- LEIDO – the National Innovation and Expertise Centre for Lifelong Learning, representing the professional institutions of higher education;
- The Dutch association of small and medium enterprises which joined LEIDO in 2002;
- PAEPON – the Platform for Approved Private Educational Institutions, the non-government agency responsible for quality assurance for private higher education providers; and
- EURASHE – the European association representing professional institutions of higher education across Europe.
This coalition received support from the Ministry of Education and approval to conduct pilot programs. However, the government responded to the coalition rather than acting as the initiator of the new qualification as part of a wider education and employment policy.

2.4 The Hong Kong experience

This summary of the associate degree in Hong Kong is primarily based on a recent assessment of the implementation of the 2002 Hong Kong higher education review (Hong Kong University Grants Committee (HKUGC) 2010). The brief for the 2010 assessment was broadened to include ‘both the local context of post-secondary education provision and the global context of rapid change that inevitably shapes the challenges and opportunities of Hong Kong’s system’ (HKUGC 2010, p. 3). It was also to assess the HKUGC-funded sector in the context of the ‘post-secondary education landscape’ (ibid).

Despite its close ties with the British education system, Hong Kong introduced US style associate degrees to address a policy goal of expanding access to higher education from 18 per cent (in 2003) to 60 per cent by 2010 (Gientzotis & Allen 2010, p. 10). The associate degree is classified as a sub-degree program along with the higher diploma. Sub-degree programs are delivered by the self-financing arms of HKUGC-funded institutions and other private providers and subject to fees unless the program is in a high demand skill area and subsidised for delivery through the Vocational Training Council and HKUGC-funded institutions (City University of Hong Kong, the Hong Kong Polytechnic University and the Hong Kong Institute of Education). Associate degrees are designed as either ‘broad-based’ or ‘vocation-oriented’ qualifications. While the exit point for the associate degree is at the same level as the Hong Kong higher diploma, in a bid to increase participation in higher education, the associate degree is designed to facilitate articulation with credit to degree studies.

The HKUGC report concluded that the better established higher diploma ‘fares better than the Associate Degree in terms of recognition by employers, given that the Higher Diploma has a longer history in Hong Kong and is generally considered an exit qualification for vocational or professional development’ (HKUGC 2010, p. 40). The Review Group went on to express concern if the higher diploma were to be ‘diluted or diminished, as they fulfill an important function in Hong Kong’. It also expressed doubts about the extent to which the associate degree was acting as a pathway to higher education:

We have concerns about the Associate Degree. Our consultations revealed that this qualification has neither established a clear identity in the public mind nor much legitimacy as a stand-alone attainment. [...] It may be that the Associate Degree has established itself as an important pathway through post-secondary education. The institution into which an individual articulates for the completion of a full degree depends upon the level of his/her attainment at the end of two years. A percentage of students are unable to articulate, either because of their level of attainment or because of pressures to enter the labour market. However, if the Associate Degree is essentially the first half of a full degree, it would be desirable to make that clear (HKUGC 2010, p. 41).

The comparison of higher education enrolments in Hong Kong between 2001 and 2010 in the table below supports the concerns of the Review Group in relation to higher education pathways.
Table A2.1 Enrolments in degree and sub-degree programs in Hong Kong: 2001-02 and 2009-10

<table>
<thead>
<tr>
<th>Qualification level</th>
<th>2001/2</th>
<th>2009/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor degree total</td>
<td>14505</td>
<td>17715</td>
</tr>
<tr>
<td>Bachelor public funded</td>
<td>14260</td>
<td>14629</td>
</tr>
<tr>
<td>Sub degree total</td>
<td>13251</td>
<td>36300</td>
</tr>
<tr>
<td>Sub degree public funded</td>
<td>7300</td>
<td>9748</td>
</tr>
<tr>
<td>Associate degree public funded</td>
<td>1686</td>
<td>524</td>
</tr>
<tr>
<td>Associate degree self funded#</td>
<td>3151</td>
<td>15563</td>
</tr>
</tbody>
</table>

Source: HKUGC 2010: 157

# The decline in publicly funded sub-degree programs is the result of the progressive withdrawal of public subsidy from 2003. Self-funded students are eligible for government grants and loans.

As these enrolment data show, higher education growth since 2001 has been at sub-degree rather than bachelor level, indicating that articulation rates are low (the 2010 Review does not identify a decline in direct bachelor level enrolments). The alignment of associate degrees with vocational training and continuing education under the Manpower Development Committee, rather than with other higher education qualifications under the HKUGC (HKUGC 2010:146), has been recognised as an influence on articulation rates. The HKUGC recommended that the role of the associate degree within an integrated post-secondary system be clarified and pathways made clearer (HKUGC 2010, p. 28).

Overall, the Hong Kong Higher Education Review Group concluded that there was merit in a two-stage degree structure, and a two-year qualification ‘that is seen not simply as an incomplete degree course but as a credible qualification leading to useful employment and an enriched personal experience’ (HKUGC 2010, p. 41). Whether this leads to the maintenance of two separate qualifications to meet pathways and employment needs, or the further development of the associate degree as a broad-based and vocational qualification, may depend to some extent on whether the Hong Kong government accepts the Review recommendations for coordination across all areas of post-secondary education, and on future funding of associate degrees.

As self-funding qualifications, associate degrees have made some headway in the Hong Kong higher education system, being available through fourteen institutions and offering credit into degree studies. For example, the University of Hong Kong offers seven associate degrees with credit into its own degrees and through agreements with Australian, UK and US universities. However, it does appear that the associate degree is being aligned to higher education pathways, with the higher diploma maintaining a vocational emphasis. The University of Hong Kong’s Associate Degree in IT has articulation arrangements with 26 universities and is delivered as a fulltime academic program. Its Higher Diploma in IT has articulation arrangements with just eight universities; however, it is recognised by the Hong Kong Institute of Engineers for associate membership and offers opportunities for work experience.

2.5 Emerging markets

Elsewhere in Asia and in Europe, diplomas are a more common paraprofessional qualification than the associate degree: for example, the French two-year general academic studies degree, or Diplôme d’études universitaires générales (DEUG). In Ireland the higher certificate plays the paraprofessional training role, sitting at one level below the degree and at the same level as a UK foundation degree.\footnote{See: \url{http://www.nfq.ie/nfq/en/about_NFQ/recognition_international_qualifications.html}}

For some time, US associate degrees have been offered through partnership arrangements with host countries. For example, American College, which was established in Singapore in 1986, offers a two-year university-level program in partnership with Broward Community College (US). Graduates of this US-style qualification can gain credit for up to two years of the four-year Singaporean degree.\footnote{See: \url{http://www.americancollege.edu.sg/bccarts.htm}} Recent enquiries indicate that the Singapore government is not considering introducing associate degrees. However, there is interest from employer associations in having a locally accredited paraprofessional qualification which is recognised internationally.

A current area of strong growth is in online associate degree provision with marketing targeted to individual countries – see \url{http://www.universaldegrees.com/country/singapore/} and \url{http://www.universaldegrees.com/country/australia/}.

A Universal Degrees associate degree is offered ‘in collaboration with Corllins University’, located in the US, but with what appears to be an entirely virtual identity.\footnote{See: \url{http://www.corllinscampus.com/}. Email and web contact details are provided via their virtual campus, but no physical address.} The Universal/Corllins associate degree is offered as a regular full-time online program and as a ‘prior learning program’ for adults with two years’ relevant prior work/life experience, or a combination of work/life experience and college credits.\footnote{See: \url{http://www.universaldegrees.com/universaldegrees/associate-degree.asp}} Everything is online: from application to payment, enrolment and assessment – and all for a discounted fee of US$549.\footnote{See: \url{http://www.universaldegrees.com/Preapplication/SelectProgramall.aspx}}
### Appendix 3 Associate degree provision in Australia 2011

#### 3.1 Australian universities delivering associate degrees: 2011

<table>
<thead>
<tr>
<th>University name</th>
<th>Title: Associate Degree in</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian Catholic University</td>
<td>- Business Administration (Indigenous Studies)</td>
</tr>
<tr>
<td></td>
<td>- Early Childhood Education</td>
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<tr>
<td></td>
<td>- Early Childhood Education (Indigenous Residential Program)</td>
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<tr>
<td></td>
<td>- Inclusive Education &amp; Disability Studies</td>
</tr>
<tr>
<td></td>
<td>- Indigenous Education</td>
</tr>
<tr>
<td></td>
<td>- Social Science (Aged Care)</td>
</tr>
<tr>
<td></td>
<td>- Social Science (Residential Care)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>University name</th>
<th>Title: Associate Degree in</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>- Associate Degree Specialising in Science (ANU/ CIT)</td>
</tr>
<tr>
<td>Australian National University</td>
<td>- Associate Degree Specialising in Engineering</td>
</tr>
<tr>
<td></td>
<td>- Associate Degree Specialising in Music</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>University name</th>
<th>Title: Associate Degree in</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>- Associate Degree [10 fields of study]</td>
</tr>
<tr>
<td>Bond University</td>
<td>- Sustainable Development</td>
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<tr>
<td></td>
<td>- Real Estate</td>
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</table>

<table>
<thead>
<tr>
<th>University name</th>
<th>Title: Associate Degree in</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>- Building Surveying</td>
</tr>
<tr>
<td>Central Queensland University</td>
<td>- Building Design</td>
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<tr>
<td></td>
<td>- Learning Management</td>
</tr>
<tr>
<td></td>
<td>- Learning Design</td>
</tr>
<tr>
<td></td>
<td>- Mine Technology (Specialisation)</td>
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<tr>
<td></td>
<td>- Mine Operations Management (Specialisation)</td>
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<tr>
<td></td>
<td>- Geosciences</td>
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<tr>
<td></td>
<td>- Civil Engineering</td>
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<td></td>
<td>- Electrical Engineering</td>
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<tr>
<td></td>
<td>- Mechanical Engineering</td>
</tr>
<tr>
<td></td>
<td>- Workplace Health &amp; Safety</td>
</tr>
<tr>
<td></td>
<td>- Information Technology</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>University name</th>
<th>Title: Associate Degree in</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charles Sturt University</td>
<td>Stand alone associate degrees</td>
</tr>
<tr>
<td></td>
<td>- Youth Ministry</td>
</tr>
<tr>
<td></td>
<td>- Vocational Education and Training</td>
</tr>
<tr>
<td></td>
<td>- Policing Practice</td>
</tr>
<tr>
<td></td>
<td>- Applied Science (Parks, Recreation and Heritage)</td>
</tr>
<tr>
<td></td>
<td>- Music Education</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>University name</th>
<th>Title: Associate Degree in</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exit point associate degrees</td>
</tr>
<tr>
<td></td>
<td>- Business Studies</td>
</tr>
</tbody>
</table>

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155 Unless otherwise specified, the information in the table below was accessed on 08/05/2011.

156 All programs follow the same core structure with title of the Associate Degree depending on electives taken. Fields include applied linguistics & language teaching, criminology & forensics; English as an international language; Australian studies, international relations & politics; languages & culture; philosophy; behaviour management; counselling; psychology.
<table>
<thead>
<tr>
<th>University name</th>
<th>Title: Associate Degree in</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curtin University of Technology</td>
<td>• Liberal Studies (Arts)</td>
</tr>
<tr>
<td></td>
<td>• Educational Studies</td>
</tr>
<tr>
<td></td>
<td>• Health and Rehabilitation Science</td>
</tr>
<tr>
<td></td>
<td>• Winegrowing</td>
</tr>
<tr>
<td></td>
<td>• General Studies (Science)</td>
</tr>
<tr>
<td></td>
<td>• Design for Theatre and Television</td>
</tr>
<tr>
<td></td>
<td>• Information Studies</td>
</tr>
<tr>
<td></td>
<td>• Health Science (Leisure and Health)</td>
</tr>
<tr>
<td></td>
<td>• Health Science (Mental Health)</td>
</tr>
<tr>
<td></td>
<td>• Horticulture (Production)</td>
</tr>
<tr>
<td></td>
<td>• Clinical Practice (Paramedic)</td>
</tr>
<tr>
<td></td>
<td>• Emergency Management</td>
</tr>
<tr>
<td></td>
<td>• Indigenous Community Health</td>
</tr>
<tr>
<td></td>
<td>• Indigenous Community Management &amp; Development</td>
</tr>
<tr>
<td></td>
<td>• Viticulture &amp; Oenology</td>
</tr>
<tr>
<td>Deakin University</td>
<td>• Arts, Business &amp; Sciences</td>
</tr>
<tr>
<td>Edith Cowan University</td>
<td>• Criminology &amp; Justice</td>
</tr>
<tr>
<td></td>
<td>• Event, Sport &amp; Recreation Management</td>
</tr>
<tr>
<td></td>
<td>• Hospitality &amp; Tourism Management</td>
</tr>
<tr>
<td>Monash University</td>
<td>• Business &amp; Commerce</td>
</tr>
<tr>
<td></td>
<td>• Community Welfare &amp; Counselling</td>
</tr>
<tr>
<td>Southern Cross University</td>
<td>• Creative Writing</td>
</tr>
<tr>
<td></td>
<td>• Information Technology</td>
</tr>
<tr>
<td></td>
<td>• Law (Paralegal Studies)</td>
</tr>
<tr>
<td>University of Canberra</td>
<td>• Justice Studies</td>
</tr>
<tr>
<td>University of Melbourne157</td>
<td>• Environmental Horticulture</td>
</tr>
<tr>
<td></td>
<td>• Agriculture</td>
</tr>
<tr>
<td></td>
<td>• Wood Products Management (phased out from 2008)</td>
</tr>
<tr>
<td>University of Queensland</td>
<td>• Applied Science</td>
</tr>
<tr>
<td></td>
<td>• Animal production</td>
</tr>
<tr>
<td></td>
<td>• Animal Welfare &amp; Inspection</td>
</tr>
<tr>
<td></td>
<td>• Equine Studies</td>
</tr>
<tr>
<td></td>
<td>• Marine Resources</td>
</tr>
<tr>
<td></td>
<td>• Plant Studies</td>
</tr>
<tr>
<td></td>
<td>• Wilderness Reserves &amp; Wildlife</td>
</tr>
<tr>
<td>University of Southern Queensland</td>
<td>• Business</td>
</tr>
<tr>
<td></td>
<td>• Construction</td>
</tr>
<tr>
<td></td>
<td>• Agricultural Engineering</td>
</tr>
<tr>
<td></td>
<td>• Civil Engineering</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>University name</th>
<th>Title: Associate Degree in</th>
</tr>
</thead>
</table>
| University of South Australia         | • Computer Systems Engineering  
|                                       | • Electrical and Electronic Engineering  
|                                       | • Environmental Engineering  
|                                       | • Mechanical Engineering  
|                                       | • Power Engineering  
|                                       | • Health  
|                                       | • Spatial Science  
| University of South Australia         | • Information Technology  
|                                       | • Engineering  
|                                       | • Health Science (Nursing)  
|                                       | • Languages & Culture Studies  
|                                       | • Built Environment  
| University of Tasmania                | • Applied Science (Marine Environment)  
|                                       | • Aquaculture  
|                                       | • Arts  
|                                       | • Music Studies  
|                                       | • Business Management  
|                                       | • General Studies  
|                                       | • Computing  
|                                       | • Furniture Design  
|                                       | • Science  
| University of Sunshine Coast           | • Arts  
|                                       | • Business  
|                                       | • Science  
| University of Western Australia        | • Creative Industries Associate Degree (UWS College)  
|                                       |                                                                                           |
### Dual Sector Universities delivering associate degrees: 2011

<table>
<thead>
<tr>
<th>University name</th>
<th>Title: Associate Degree in</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charles Darwin University</td>
<td>• Legal Studies</td>
</tr>
<tr>
<td>RMIT</td>
<td>• Applied Science</td>
</tr>
<tr>
<td></td>
<td>• Business</td>
</tr>
<tr>
<td></td>
<td>• Design (Furniture)</td>
</tr>
<tr>
<td></td>
<td>• Engineering Technology (Electrical/Electronics)</td>
</tr>
<tr>
<td></td>
<td>• Engineering Technology (Civil Engineering)</td>
</tr>
<tr>
<td></td>
<td>• Engineering Technology (Mechanical)</td>
</tr>
<tr>
<td></td>
<td>• Engineering Technology (Network Engineering)</td>
</tr>
<tr>
<td></td>
<td>• Fashion &amp; Textile Merchandising</td>
</tr>
<tr>
<td>Swinburne University of Technology</td>
<td>• Engineering</td>
</tr>
<tr>
<td>University of Ballarat</td>
<td>• Training &amp; Assessment</td>
</tr>
<tr>
<td><a href="http://www.ballarat.edu.au/?inst=30">http://www.ballarat.edu.au/?inst=30</a></td>
<td>• Information Technology</td>
</tr>
<tr>
<td>Victoria University</td>
<td>• Logistics</td>
</tr>
<tr>
<td><a href="http://www.vu.edu.au/">http://www.vu.edu.au/</a></td>
<td>• Culinary Management (International Students only)</td>
</tr>
<tr>
<td></td>
<td>• Enterprise Skills</td>
</tr>
<tr>
<td></td>
<td>• Dermal Therapies</td>
</tr>
</tbody>
</table>

Unless otherwise specified the information in the table below was accessed on 08/05/2011
### 3.2 TAFE Institutes delivering associate degrees: 2011

<table>
<thead>
<tr>
<th>Institute name</th>
<th>Title: Associate Degree in ...</th>
</tr>
</thead>
</table>
| **VICTORIA**                    |                                               | **Box Hill TAFE**<br>http://www.bhtafe.edu.au/Pages/default.aspx | • Commerce (Applied)  
• Hospitality Management  
• Computer Systems (Networking)  
• Biotechnology  |
| **Chisholm Institute TAFE**<br>http://www.chisholm.edu.au/Pages/default.aspx | • Delivers the Associate Degree in Arts, Business & Sciences in partnership with Deakin University  |
| **East Gippsland Institute of TAFE**<br>http://www.egtafe.vic.edu.au/ | • Arts, Business & Sciences  
• In partnership with Deakin University  |
| **Goulburn Ovens TAFE**<br>http://www.gotafe.edu.au/ | • Delivers the Associate Degree in Arts, Business & Sciences in partnership with Deakin University  |
| **Holmesglen TAFE**<br>http://www.holmesglen.edu.au/ | • Early Childhood Education  |
| **NMIT**<br>http://www.nmit.edu.au/ | • Accounting  
• Agriculture & Land Management  
• Early Years Study  
• Equine Studies  
• Illustration  
• International Business  
• Music  
• Tertiary Studies  
• Writing & Publishing  |
| **Sunraysia Institute TAFE**<br>http://www.sunitafe.edu.au/default.aspx | • Delivers the Associate Degree in Arts, Business & Sciences in partnership with Deakin University  |
| **ACT**                         |                                               | **Canberra Institute TAFE**<br>http://cit.edu.au/ | • Science (ANU)  
• Engineering (ANU)  |
| **WESTERN AUSTRALIA**           |                                               | **Polytechnic West**<br>http://www.polytechnic.wa.edu.au/ | • Aviation (Maintenance Engineering)  
• Aviation (Aeronautics)  
• Aviation (Management)  
• Network Technology  
• Hospitality Management  
• Business  |

---

159 Unless otherwise specified, information was accessed on 05/05/2011.
<table>
<thead>
<tr>
<th>QUEENSLAND</th>
<th>SOUTH AUSTRALIA</th>
</tr>
</thead>
</table>
  • Associate Degree in Engineering  
  • Associate Degree in Engineering (Computer Systems, Electrical and Electronic, Power)  
  • Associate Degree in Engineering (Mechanical) |
### 3.3 Registered Tertiary Providers delivering associate degrees: 2011

<table>
<thead>
<tr>
<th>Institution</th>
<th>No of associate degrees offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian College of Physical Education</td>
<td>3</td>
</tr>
<tr>
<td>Adelaide College of Divinity</td>
<td>1</td>
</tr>
<tr>
<td>Adelaide Central School of Art</td>
<td>1</td>
</tr>
<tr>
<td>Australian International Hotel School</td>
<td>2</td>
</tr>
<tr>
<td>Avondale College</td>
<td>2</td>
</tr>
<tr>
<td>Billy Blue College of Design</td>
<td>2</td>
</tr>
<tr>
<td>Blue Mountains International Hotel Management School</td>
<td>4</td>
</tr>
<tr>
<td>Entrepreneurship Institute Australia</td>
<td>1</td>
</tr>
<tr>
<td>Gibaran Graduate School of Business</td>
<td>1</td>
</tr>
<tr>
<td>International College of Management, Sydney</td>
<td>6</td>
</tr>
<tr>
<td>JMC Academy</td>
<td>8</td>
</tr>
<tr>
<td>JMC Academy (Sydney)</td>
<td>5</td>
</tr>
<tr>
<td>Raffles College of Design and Commerce (RCDC)</td>
<td>8</td>
</tr>
<tr>
<td>Queensland Institute of Business and Technology (QIBT)</td>
<td>1</td>
</tr>
<tr>
<td>Australian Technical And Management College (ATMC)</td>
<td>1</td>
</tr>
<tr>
<td>Sydney Institute of Business &amp; Technology (SIBT)</td>
<td>1</td>
</tr>
<tr>
<td>Tabor College NSW</td>
<td>3</td>
</tr>
<tr>
<td>Tabor Victoria</td>
<td>1</td>
</tr>
<tr>
<td>Tourism Institute Australia</td>
<td>2</td>
</tr>
<tr>
<td>Wesley Institute</td>
<td>3</td>
</tr>
</tbody>
</table>

### 3.4 Enrolment data

2009 enrolments in Associate Degree - by institution

<table>
<thead>
<tr>
<th>Inst</th>
<th>Associate Degree</th>
<th>Total enrolment (all levels)</th>
<th>Market share</th>
<th>As a % of all enrolments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>8592</td>
<td>1038511</td>
<td>100%</td>
<td>0.83%</td>
</tr>
<tr>
<td>Charles Sturt</td>
<td>2227</td>
<td>32467</td>
<td>26%</td>
<td>6.86%</td>
</tr>
<tr>
<td>Tasmania</td>
<td>1286</td>
<td>18252</td>
<td>15%</td>
<td>7.05%</td>
</tr>
<tr>
<td>Southern Qld</td>
<td>1284</td>
<td>21551</td>
<td>15%</td>
<td>5.96%</td>
</tr>
<tr>
<td>Intl College Mgt</td>
<td>507</td>
<td>541</td>
<td>6%</td>
<td>93.72%</td>
</tr>
<tr>
<td>Southern Cross</td>
<td>410</td>
<td>14267</td>
<td>5%</td>
<td>2.87%</td>
</tr>
<tr>
<td>RMIT</td>
<td>365</td>
<td>37340</td>
<td>4%</td>
<td>0.98%</td>
</tr>
<tr>
<td>ACU</td>
<td>294</td>
<td>17085</td>
<td>3%</td>
<td>1.72%</td>
</tr>
<tr>
<td>Curtin</td>
<td>280</td>
<td>36460</td>
<td>3%</td>
<td>0.77%</td>
</tr>
<tr>
<td>Adelaide Central</td>
<td>223</td>
<td>250</td>
<td>3%</td>
<td>89.20%</td>
</tr>
<tr>
<td>Billy Blue College</td>
<td>218</td>
<td>952</td>
<td>3%</td>
<td>22.90%</td>
</tr>
<tr>
<td>UniSA</td>
<td>194</td>
<td>30861</td>
<td>2%</td>
<td>0.63%</td>
</tr>
<tr>
<td>JMC Academy</td>
<td>192</td>
<td>1495</td>
<td>2%</td>
<td>12.84%</td>
</tr>
<tr>
<td>Queensland</td>
<td>126</td>
<td>38204</td>
<td>1%</td>
<td>0.33%</td>
</tr>
<tr>
<td>Melbourne</td>
<td>113</td>
<td>41861</td>
<td>1%</td>
<td>0.27%</td>
</tr>
<tr>
<td>Edith Cowan</td>
<td>107</td>
<td>24302</td>
<td>1%</td>
<td>0.44%</td>
</tr>
<tr>
<td>Holmesglen</td>
<td>85</td>
<td>710</td>
<td>1%</td>
<td>11.97%</td>
</tr>
<tr>
<td>Central Qld</td>
<td>82</td>
<td>18498</td>
<td>1%</td>
<td>0.44%</td>
</tr>
<tr>
<td>Swan TAFE</td>
<td>81</td>
<td>81</td>
<td>1%</td>
<td>100.00%</td>
</tr>
<tr>
<td>NMIT</td>
<td>72</td>
<td>313</td>
<td>1%</td>
<td>23.00%</td>
</tr>
<tr>
<td>Box Hill</td>
<td>69</td>
<td>540</td>
<td>1%</td>
<td>12.78%</td>
</tr>
<tr>
<td>Swinburne</td>
<td>53</td>
<td>19781</td>
<td>1%</td>
<td>0.27%</td>
</tr>
<tr>
<td>Monash</td>
<td>50</td>
<td>55291</td>
<td>1%</td>
<td>0.09%</td>
</tr>
<tr>
<td>ANU</td>
<td>43</td>
<td>17091</td>
<td>1%</td>
<td>0.25%</td>
</tr>
<tr>
<td>Aus College of Theology</td>
<td>37</td>
<td>2691</td>
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<td>1.37%</td>
</tr>
<tr>
<td>Deakin</td>
<td>32</td>
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<td>0.09%</td>
</tr>
<tr>
<td>NTU</td>
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<td>6977</td>
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<td>0.43%</td>
</tr>
<tr>
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<td>11376</td>
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<td>0.25%</td>
</tr>
<tr>
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<td>25</td>
<td>884</td>
<td>0%</td>
<td>2.83%</td>
</tr>
<tr>
<td>Harvest Bible</td>
<td>21</td>
<td>390</td>
<td>0%</td>
<td>5.38%</td>
</tr>
<tr>
<td>Sunshine Coast</td>
<td>16</td>
<td>7261</td>
<td>0%</td>
<td>0.22%</td>
</tr>
<tr>
<td>VUT</td>
<td>11</td>
<td>20183</td>
<td>0%</td>
<td>0.05%</td>
</tr>
<tr>
<td>Marcus Oldham</td>
<td>8</td>
<td>208</td>
<td>0%</td>
<td>3.85%</td>
</tr>
<tr>
<td>Christian Her</td>
<td>7</td>
<td>810</td>
<td>0%</td>
<td>0.86%</td>
</tr>
<tr>
<td>Bond</td>
<td>4</td>
<td>5493</td>
<td>0%</td>
<td>0.07%</td>
</tr>
<tr>
<td>Wesley Institute</td>
<td>4</td>
<td>546</td>
<td>0%</td>
<td>0.73%</td>
</tr>
<tr>
<td>Blue Mountains Intl Hotel Mgt</td>
<td>3</td>
<td>493</td>
<td>0%</td>
<td>0.61%</td>
</tr>
<tr>
<td>Tabor Vic</td>
<td>2</td>
<td>436</td>
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<td>0.46%</td>
</tr>
<tr>
<td>Tabor College Tas</td>
<td>2</td>
<td>94</td>
<td>0%</td>
<td>2.13%</td>
</tr>
</tbody>
</table>

Source: DEEWR, 2009 customised national enrolment data file
<table>
<thead>
<tr>
<th>Institution</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>1778</td>
<td>3479</td>
<td>3991</td>
<td>5194</td>
<td>5207</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Charles Sturt</td>
<td>897</td>
<td>2296</td>
<td>1926</td>
<td>1883</td>
<td>1666</td>
<td>50%</td>
<td>66%</td>
<td>48%</td>
<td>36%</td>
<td>32%</td>
</tr>
<tr>
<td>Tasmania</td>
<td>4</td>
<td>167</td>
<td>302</td>
<td>470</td>
<td>561</td>
<td>0%</td>
<td>5%</td>
<td>8%</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td>Southern Qld</td>
<td>199</td>
<td>240</td>
<td>352</td>
<td>451</td>
<td>546</td>
<td>11%</td>
<td>7%</td>
<td>9%</td>
<td>9%</td>
<td>10%</td>
</tr>
<tr>
<td>RMIT</td>
<td>4</td>
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<td>1%</td>
<td>3%</td>
<td>4%</td>
<td>6%</td>
</tr>
<tr>
<td>Int'l Coll Mgt</td>
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<td>0</td>
<td>159</td>
<td>414</td>
<td>271</td>
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<td>0%</td>
<td>4%</td>
<td>8%</td>
<td>5%</td>
</tr>
<tr>
<td>Curtin</td>
<td>224</td>
<td>261</td>
<td>233</td>
<td>232</td>
<td>239</td>
<td>13%</td>
<td>8%</td>
<td>6%</td>
<td>4%</td>
<td>5%</td>
</tr>
<tr>
<td>Billy Blue Coll</td>
<td>0</td>
<td>0</td>
<td>119</td>
<td>281</td>
<td>194</td>
<td>0%</td>
<td>0%</td>
<td>3%</td>
<td>5%</td>
<td>4%</td>
</tr>
<tr>
<td>Southern Cross</td>
<td>230</td>
<td>207</td>
<td>200</td>
<td>182</td>
<td>184</td>
<td>13%</td>
<td>6%</td>
<td>5%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>ACU</td>
<td>30</td>
<td>34</td>
<td>59</td>
<td>131</td>
<td>182</td>
<td>2%</td>
<td>1%</td>
<td>1%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>JMC Academy</td>
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<td>13</td>
<td>57</td>
<td>177</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
<td>3%</td>
</tr>
<tr>
<td>UniSA</td>
<td>53</td>
<td>65</td>
<td>46</td>
<td>101</td>
<td>132</td>
<td>3%</td>
<td>2%</td>
<td>1%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Queensland</td>
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<td>0</td>
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<td>79</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
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Source: DEEWR, 2009 customised national enrolment data file.
Appendix 4 Working with stakeholders

Linking Education, Industry and Community in Melbourne’s North

RMIT’s strategic engagement in Melbourne’s northern region started in 1988 through work at the Phillip Institute of Technology, and was continued with the establishment of Northern Partnerships/Community Service program in 1995, and then a broader Community and Regional Partnership Group in 1999 (Making a Difference in the North, 2004). It is now embedded in practice through the University’s industry and community engagement activity. The 2004 report identified the depth and breadth of the activity in the north, including linking with the Northern Industry Education and Training Links (NIETL) and NorthLink, environmental sustainability, advanced manufacturing, clinical health services, cultivating Chinese Herbal Medicines, and extensive projects with non-government and community organisations, business and industry, state and Commonwealth government agencies, and schools. The University had specific obligations to the northern region community which was detailed under a former Act which formed RMIT University in 1992:

... to work for the development and provision of educational, professional, technical and vocational services to the community and in particular, the fostering of participation as a university of technology of persons living or working in the Northern metropolitan region of Melbourne.

History of Cooperation

There is a longstanding history of cooperation in the region by education providers, industry, government and community organisations, to ensure that educational programs meet the needs of locally based industry and provide a ‘planned continuum of career development’ for local residents and others who work or study in the region (Credit Transfer Report, 1991). Mulroney (1994) documents the development of the early networks that formed partnerships with education, industry and community participation. Examples of collaboration included the Credit Transfer in the Northern Region of Melbourne Committee, the Northern Industry and Education Training Link (NIETL), NorthLink, the development of the La Trobe Technology Precinct, and the Northern Interactive Education Coordinated Area Project (NIECAP) which at that stage linked together schools, higher education and industry in order to improve the relevance and quality of education in the areas of science and technology. This case study refers to two such activities that are of particular relevance to the provision of tertiary pathways, in particular the Credit Transfer project and NIECAP.

Credit Transfer

The Committee to Facilitate Credit Transfer in the Northern Region was established in 1988. Committee members represented all the major education providers including the then Batman Automotive College (now Kangan Institute), Broadmeadows College of TAFE (now Kangan Institute), Phillips Institute of Technology and Melbourne College of Textiles (both now part of RMIT University), Northern Metropolitan College of TAFE (now Northern Metropolitan Institute of TAFE) and La Trobe University. The committee took a proactive approach to facilitate the development of articulation arrangements rather than just documenting those that existed. Mulroney (1994) notes that the major activities of the committee were:

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160 This history of RMIT's engagement with industry, schools and communities in Melbourne's north was researched and documented by Dr Leone Wheeler, Director of the RMIT Northern Partnerships Unit
• development of effective, formal credit transfer arrangements between the institutions;
• dissemination of information to students regarding credit transfer opportunities in the region; and
• promotion generally of the concept of credit transfer and pathways for students in the region

The work was carried out by working parties which were formed and disbanded as required. Study areas included science and applied science, engineering, accounting, business, music and art, information technology, agriculture and agribusiness, and social science. The 1991 Credit Transfer Report noted that the approach to credit transfer was practical and focused on readily achievable outcomes. Mulroney (1992) recognised that this was a factor in the success of the Committee along with ‘the personal contact that takes place through committee meetings and working parties’. Because of the nature of the operation built on relationships, other positive outcomes resulted; for example, the Science Working Party explored the sharing of equipment and the collaborative teaching into courses with small numbers.

The Committee to Facilitate Credit Transfer in the Northern Region provides an example of what can be achieved when people are willing to work together at a regional level across institutional boundaries.

NEICAP

The work with schools in the north was facilitated through the Northern Interactive Education Coordinated Area Program (NIECAP) which was established in 1988 within the Faculty of Applied Science, RMIT Bundoora West Campus. The NIECAP program was one of four Coordinated Area Programs initiated and funded as a result of the recommendations made in the Baklien Report: a report on science and technology education to the Victorian government. A major objective of the program was the creation of links between schools, industry, post-secondary institutions and the general community.

In 1994, NIECAP was located within the Office of the Pro Vice Chancellor (Academic Services and Equity) and broadened the focus of its activities to include a range of additional curriculum areas and vocational education and training.

Mulroney (1994) documents some of the early projects which included:

• a Chemistry Enrichment Program, in which each year more than 500 year 12 students from 30 local schools spent a day in the Institute performing experiments on a range of modern chemical instruments;
• a Computer Camps for Girls in which year 10 and 11 girls take part in a week of wide-ranging computer based activities;
• School-Industry Links program in which NIECAP worked with companies and schools in the region to enable teachers and students to access information;
• School Work Program in which year 11 students spent one day per week in the workplace for a period of thirteen weeks; credit was obtained for school studies;
• Teacher Release to Industry Program in which teachers are given time release to work in a company developing curriculum material; and
• Manufacturing Industry: Careers and Opportunities, a joint project with NIETL which aimed to increase awareness and improve the perceptions of manufacturing industry by students, schools and the community.

Since 1996, the NIECAP program has been located in various areas of RMIT including Research and Development, International and Community Development, Student Services
and currently Northern Partnerships Unit (NPU) within the School of Education. However, the work of providing pathways to education, training and employment for young people and marginalised learners continues. The NIECAP name is no longer used, but the legacy of the program lives on through the work delivered directly through NPU, Student Services, Office of Director TAFE and others at RMIT University, and via partnerships with three Local Learning and Employment Networks (Banyule, Nullumbik, and Inner Northern), DEECD, relevant local government authorities, industry networks, schools and relevant community organisations.

Examples of the type of work include:

- The securing of work placement commitments from employers in the North for secondary students undertaking VET in Schools, VCA and SBATs now happens through the Workplace Learning Coordination program funded by DEECD.

- The Whittlesea Youth Commitment (WYC), first established in 1998, continues with education, welfare and employment services sectors to ensure a seamless provision of support for young people in the City of Whittlesea. WYC is supported by The City of Whittlesea, RMIT University and Hume Whittlesea Local Learning and Employment Network.

- Regional careers and work ready events such as Try a Trade, Make Choices Breakfasts, Real Industry Interviews, Northern Career Forum, annual Youth Employment Opportunities Fair, and regional VET in Schools, VCAL and SBAT Awards night.

- Evidence based research to inform youth based program continues and recent work includes a report on disengaged youth in the North (NMIT, 2010), and evaluations of the Hume and Whittlesea Youth Commitments (Wheeler et al, 2011).

- The science and technology awareness events continue through collaboration among Universities, for example, the In2science where students regularly attend primary and secondary schools, tutoring students during maths and/or science classes for two to three hours a week during a semester. RMIT University runs a Regional Science Road Show and the school holidays Get Real science experience (which now also includes Hands on Health) type activities.

- The equity access to Universities by students and careers teachers in the north continue to happen through programs such as Schools Network Access Program (SNAP) at RMIT, Schools Access La Trobe (SALT), and other programs such as Access Melbourne and the Portfolio Partnership Program for Victoria University.

Communities in Melbourne’s north have a history of working together on school, industry and community links. As Mulroney (1992) said, ‘experience in the north of Melbourne indicates that it is possible for organisations to achieve far more working in partnership than they can by working alone’.

The learning from this work for current times, as economic conditions get tighter, educational organisations compete for the same resources, and the funding for school industry partnership projects reduces, is that now might be the time to relearn ‘how to share, act cooperatively, pool resources and knowledge to achieve common goals.’ This is especially important for developing and providing educational, professional, technical and vocational services to the community in the north of Melbourne.

For details of NPU programs and activities to the end of 2012, see: http://www.rmit.edu.au/northernpartnerships
Appendix 5 A case study of young people in transition\textsuperscript{161}

5.1 Authentic conversations and the building of trust: A year in the life of careers teachers at Thornbury High School

Career advisors at Thornbury High believe authentic conversations and having an open door policy are key strategies for building trust and developing realistic pathway plans for Year 10, Year 11 and Year 12 students.

The two career advisors (equivalent to 1.3 EFT) at Thornbury High School play an important part in developing pathways and careers for their students. Their role is multi-faceted including provision of careers advice; coordinating VET studies and work experience; and representing the school at the Northern Melbourne VET Cluster meetings. A key component of the career advisors’ role is the development of a Pathways Plan for each senior student.

The Pathways Plan documents individual student subject and pathways histories from Year 10 to Year 12, and students are also tracked after they complete Year 12. The Plan includes the main subjects studied over the period, the changes in preferences for each student, the study conditions and other items such as the support base at home, languages spoken, and out of school activities. The teachers believe it is the way the document is used that is the most important. It takes time to build trust and put a student at ease so that realistic and authentic conversations can be held about career aspirations and interests. It is important to be a good listener and be able to pick up on cues to obtain a holistic picture of the student.

The Pathway Plan is generated in Year 10 when the career advisors have a one on one talk with each student about the subjects they may study and progress to date. Some Year 10 students undertake a Year 11 VCE subject, so it is important to assess their progress and make a judgement on how they are travelling and advise according to progress. Other matters such as attendance, paid part-time work, out-of-school activities, work experience, school program involvement and what they do in their spare time, for example, sport are also mapped. The teachers also talk with the students about having a balance in their lives. Based on a range of information gathered, students are then provided with possible future choices and options.

Year 12 is naturally the most intense year for students and also for the teachers who advise them. The teachers are involved in much ‘hand holding’ along the way. Individual meetings are arranged and the Pathways Plan updated, including a projected ATAR score. Generally the idea is to aim slightly higher than current reality so as to give students something to aspire to. Towards the end of term 3 the teachers help students complete the VTAC online based on the Pathways Plan. They also provide help with RMIT SNAP and other equity scholarship programs.

\textsuperscript{161} This case study was undertaken and documented by Dr Leone Wheeler, Director of the RMIT Northern Partnerships Unit.
Typical activities for a careers teacher for a year include:

**Term One:**
- A one on one meeting with each year 12 student to review results, predict ATAR and revise Pathways Plan.
- Attending career information events held by various universities and TAFE Colleges (target key feeder institutions to the College).

**Term Two and Three**
- Meeting each year 10 student to commence a Pathways Plan. Some students start with very unrealistic expectations so the career teachers use a very personal approach and after a time they get a sense of the student’s interest area.
- Once mid-year results are published, meeting with year 12 students to recalculate the ATAR score and adjust the Pathways Plan.
- Meeting with each year 11 student in term 3 to review mid-year reports and adjust Pathways Plans accordingly.
- From August through to September, providing help to year 12 students to complete the online VTAC applications. Some students require a lot of assistance, especially those completing equity applications such as RMIT SNAP, La Trobe SALT program and others.

**Term Four and post school assistance**
- Further help/advice is given to year 12 when their ATAR score are published in December, and when offers come out in January.
- Follow up contact is made with all year 12 students post leaving school and assistance provided with pathways to employment or further training if required.

**Other points to note:**
- All years 10-12 students receive course counseling at the time of subject selection. Year 10 students have individual appointments with a parent and a staff member to choose their subjects for years 11 and 12. Some students also request extra advice and assistance.
- It is compulsory for every Indigenous student from year 8 onwards to have a Pathways Plan. This is completed in partnership with the school’s Indigenous tutor. Generally the year 7 and year 8 students do not have a sense of what they want to do in the long term, it is more about keeping them on track and in school.
- Some students will have a clear idea of where they want to go at year 10 and by year 12 this will not change. Others will change dramatically; for example, one student in year 10 wanted to be a maths/science teacher, then a pharmaceutical/bio medical, then thought about dance, counseling, arts, psychology and finally decided on nutrition. The important thing is to ensure students do not lock themselves out of careers when subject selection is on so that so that they are able to follow their interest and passion.
- All students are issued with a school diary which includes a planner, a sample study plan and space for recording projected ATAR.
- Conversations about associate degrees are only held with students who are applying for courses through VTAC. The advice is about pathways. The students note that associate degrees have lower ATAR scored in the VTAC guide (some are advertised with no ATAR scores). Students are advised that they can undertake an associate degree and then go into employment, but it is a pathway into a degree program.
A minority of students also require a lot of support. Some might have come from alternative programs within the education system, do not fit into the mainstream, have home problems, might drop out for a while, go to TAFE and then come back into the system. Also from time to time a student may suffer from drug, mental health or other issues. The key objective is ‘to make sure they end up some place’, be that in employment, training or other support programs. It is important that detailed notes are taken which track all the interviews so that the careers advisor can connect when they need to.

That pathway might not be straight forward, for example, one student did not fit into the mainstream, wanted to go to TAFE, then dropped out, also had home problems. The teacher worked with the student and eventually found a pre apprenticeship.

VCAL students also require extra support. Typically in a class there is one group of students who know they want to go into a trade and VCAL gives them a clear pathway. Others are not sure of what they want to do and this is where the career advisor must understand the interests of the student and then advise an appropriate VET option, for example, childcare, hospitality, automotive, School Based Apprentice and Traineeship. Another part of the role is finding an appropriate employer for their VET in School subject.

Career teachers play an important role in providing pathways advice to students. The findings of this case study is backed up by two focus group interviews with 10 careers teachers in the Whittlesea and Inner Northern regions of Melbourne which were held in December 2010. Participants noted the role is a very busy one, yet critical in advising students. They acknowledged that the best part about the job is working with the students, particularly when they receive positive feedback from students who are able to pursue their chosen pathway. The emphasis for all is on providing pastoral care and sound career advice and helping students to establish possible career goals for the future. In the end the tool does not matter, what is really important is the building of trust with students, having an open door policy when possible, and engaging in authentic conversations that lead to real pathway outcomes for young people.