INDUSTRY ✚ VET ✚ HIGHER EDUCATION

3D FOCUS ON ARTICULATION PATHWAYS

The Corporate Strategy Approach
to Articulation and Credit Transfer

Integrated Articulation and Credit Transfer (IACT) Project

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1. Key Messages

For both Vocational Education and Training and Higher Education, student recruitment in the domestic and international marketplaces is critical to success. Pathways that attract students with Vocational Education and Training backgrounds are becoming significant in Higher Education strategic planning and marketing. By being able to offer a strong choice of streamlined articulation pathways designed to provide workforce-aligned qualifications, both Vocational Education and Training and Higher Education tertiary education institutions may achieve a competitive advantage in student recruitment.

The current processes used by tertiary education institutions for managing articulation and credit transfer between Vocational Education and Training and Higher Education have been largely unsuccessful however, for reasons outlined in this paper. A new approach which includes industry as a major player and partner with the tertiary education sector provides the best opportunity in more than two decades to deliver change.

This renewed focus however must be built on a firm foundation, which the Integrated Articulation and Credit Transfer project terms a Corporate Strategy Approach. As PhillipsKPA (2006b, p. 8) state, 'articulation and credit transfer must be central to institutional vision and strategic priorities'. The basis of this approach is the establishment of relationships of mutual respect and trust between the Vocational Education and Training and Higher Education sectors, grounded in Memoranda of Understandings, and supported by infrastructure including dedicated articulation units in institutions, senior staff, and policies and procedures which meet Australian Qualification Framework requirements as well as best practice international standards.

Articulation and credit transfer is a potential catalyst for economic development through skills broadening and enriching. Educational institutions need to rise to the challenge if they are to capitalise on the opportunities provided by the revised AQF and the student and industry demand for articulation pathways.

This resource sets out the steps that are required to achieve such a significant cultural change. Institutions who are able to embrace such transformation may well find themselves at the cutting edge of innovation not only in Australia, but also the world.

For information on the broader context which underpins this resource, please see Articulation: A Clearer Picture or a New View?

1.1 List of Acronyms Used in this Report

AQTF	Australian Quality Training Framework
ASQA	Australian Skills Quality Authority
CDU	Charles Darwin University
CQU	Central Queensland University
DET	Department of Education and Training
DEEWR	Department of Education, Employment and Workplace Relations
GU	Griffith University
HE	Higher Education
HEFCE	Higher Education Funding Council for England
HEPPP	Higher Education Partnership and Participation Program
IACT	Integrated Articulation and Credit Transfer
MOU	Memorandum of Understanding
NCVER	National Centre for Vocational Education Research
NSW	New South Wales
RPL	Recognition of Prior Learning
SA	South Australia
SAF	Structural Adjustment Fund
SBIT	Southbank Institute of TAFE
TAFE	Technical and Further Education
TEQSA	Tertiary Education Quality and Standards Agency
UK	United Kingdom USQ University of Southern Queensland
USQ	University of Southern Queensland
VET	Vocational Education and Training
WDEM	Workforce Driven Engagement Model

1.2 Definition of Terms

Articulation: Articulation arrangements enable students to progress from a completed qualification to another with admission and/or credit in a defined qualification pathway (Australian Qualifications Framework Council, 2011).

Credit is the value assigned for the recognition of equivalence in content and learning outcomes between different types of learning and/or qualifications. Credit reduces the amount of learning required to achieve a qualification and may be through credit transfer, articulation, recognition of prior learning or advanced standing (Australian Qualifications Framework Council, 2011).

Credit transfer is a process that provides students with agreed and consistent credit outcomes for components of a qualification based on identified equivalence in content and learning outcomes between matched qualifications (Australian Qualifications Framework Council, 2011).

Higher Education: A higher education institution is a body that is established or recognised by the Commonwealth or a state or territory government to issue qualifications in the higher education sector. It may be a university, self-accrediting institution or non-self-accrediting institution (Australian Qualifications Framework Council, 2011).

Industry is used in this paper to refer primarily to employers rather than to industry representative bodies, although it may include the latter.

Integrated is used in this paper to describe the educational product resulting from engagement between Vocational Education and Training, Higher Education and industry, and the collaborative development of articulation pathways and qualifications as a result of this three-dimensional engagement.

Pathways: Pathways allow students to move through qualification levels with full or partial recognition for the qualifications and/or learning outcomes they already have (Australian Qualifications Framework Council, 2011).

Recognition of prior learning (RPL) is an assessment process that involves assessment of an individual's relevant prior learning (including formal, informal and non-formal learning) to determine the credit outcomes of an individual application for credit (Australian Qualifications Framework Council, 2011).

A registered training organisation is a vocational education and training organisation registered by a state or territory registering body in accordance with the Australian Quality Training Framework (AQTF) Essential Standards for Registration within a defined scope of registration (Australian Qualifications Framework Council, 2011).

Specified credit is credit granted towards particular or specific components of a qualification or program of learning (Australian Qualifications Framework Council, 2011).

Tertiary education refers to both Vocational Education and Training and Higher Education

Three dimensional, or **3D** in the context of this paper means involving VET, HE and industry (employers) as equal partners.

Unspecified credit is credit granted towards elective components of a qualification or program of learning (Australian Qualifications Framework Council, 2011).

2. Introduction

Little has improved in articulation and credit transfer since the findings of *Higher Education: A Policy Discussion Paper*, written some twenty four years ago. This paper noted that credit transfer arrangements were largely 'ad hoc' and reflect decision-making processes made at the faculty level rather than at the institutional level, with resulting inconsistency in credit arrangements and in credit given to students (Dawkins, 1987).

While articulation and credit transfer practices have been established nationally for more than twenty years, it is still the case that only some 11% of people who obtain VET qualifications subsequently acquire a degree, while approximately 14% of people who attain a Bachelor's degree as their first qualification subsequently attain a vocational qualification (Australian Bureau of Statistics, 2011).

In addition, the proportion of students gaining credit for previous VET study is only about 4.3% (Bradley, Noonan, Nugent, & Scales, 2008, p. 192). National VET and HE participation statistics by NCVER show that over 96% of commencing domestic HE students with prior VET study did not receive credit or recognition for their VET studies in 2009 (NCVER, 2011, Table 15). Whilst this may be partly due to entering a different field of study, it also indicates that there are significant structural barriers preventing articulating students from gaining credit for VET studies when enrolling in HE studies.

Such low levels of articulation between the sectors clearly reflect the fact that articulation and credit transfer policies and processes in their current forms have not been successful, and should be much higher, especially considering that Australia has six dual sector institutions offering both VET and HE qualifications.

To understand the current institutional trends in articulation and credit transfer policies and processes, in-depth interviews were conducted by Integrated Articulation and Credit Transfer (IACT) project staff with education and training providers in both the VET and HE sectors in Queensland during 2009. The research found that credit transfer in Queensland VET and HE institutions was characterised by the following:

- a lack of information about articulation pathways from VET to HE for students to follow;
- institutions' administrative arrangements for articulation and credit transfer often are not 'evidence-based, equitable and transparent' nor 'applied consistently and fairly with decisions subject to appeal and review' (Australian Qualifications Framework Council, 2011);
- lack of dedicated articulation and credit transfer coordination units in most Queensland tertiary institutions (Griffith University and SBIT being the only exceptions);
- a predominance of ad hoc (individual or case by case) credit transfer determinations;
- no allowance in time allocations of staff for the considerable time and cost required to develop structured credit transfer arrangements;
- little availability of credit transfer on an automated basis at the point of enrolment;
- lack of industry involvement in the negotiation of articulation arrangements between the VET and HE sectors, which is at odds with the importance placed on the involvement of industry in curriculum

development and delivery, and in developing career pathways which are industry-relevant;
- the focus of VET training packages solely on job outcomes, with no consideration of potential articulation pathways to HE.

(Byrnes, Paez, Jackson, Dwyer, & Blacker, 2010)

By contrast, the United Kingdom (UK) Government has been promoting articulation and credit transfer in order to raise the educational qualifications of the population since 2001, by encouraging workforce development partnerships between employers and higher education across all qualifications, particularly through two year 'Foundation Degrees'. Enrolments in these degrees have seen a dramatic increase since their introduction, from 4320 students in 2001 to 99,475 students in 2010-11 (Higher Education Funding Council for England, 2010). The characteristics of the qualification include:
- employer involvement in the design and review of programs;
- the development of skills relevant to a particular employment sector alongside academic learning;
- workplace experience sufficient to develop an understanding in the relevant area;
- credit accumulation to facilitate accreditation of prior learning, flexible study and transfers between courses; and
- a smooth progression route to an honours degree program (which comprises 1 additional year).

(Higher Education Funding Council for England, 2010)

A report on Foundation Degrees which describes the key trends in student numbers, the characteristics of programs, attributes of students, progression and qualification rates, and employment outcomes found that results of Foundation Degrees were very positive. For example:
- 56 % of the entrants in 2007-08 who followed a full-time, two-year program received a higher education award by 2008-09;
- for part-time students on three-year courses who entered in 2006-07, slightly lower proportions of students received a higher education qualification (47 %) by 2008-09;
- 47 % of full-time foundation degree qualifiers were in employment six months later, and 65 % were undertaking further study;
- higher proportions of part-time qualifiers were in employment six months later (85 %), and fewer were undertaking further study (48 %);
- of the foundation degree qualifiers who went on to the final year of an honours degree, 67 % graduated in the same year.

(Higher Education Funding Council for England, 2010).

The Foundation Degree model has the potential to provide tertiary education and industry with a framework for addressing skills shortages as it has an inbuilt, guaranteed articulation pathway from this qualification to a full three year degree.

2.1. Momentum for Change

The Federal Government responded to the *Review of Australian Higher Education* (Bradley, et al., 2008) with a number of policy initiatives aimed at better integration of the tertiary education sector. These initiatives include:

- formation of a single Ministerial Council for Tertiary Education and Employment;
- revised Australian Qualifications Framework, with particular attention to improving articulation and credit transfer between sectors;
- establishment of the Tertiary Education Qualifications and Standards Agency (TEQSA) for HE and the Australian Skills Quality Authority (ASQA) for the VET sector, with the long term view toward amalgamation of the two agencies;
- expansion of the role of Skills Australia to include provision of advice on workforce development and industry needs for both HE and VET sectors;
- inclusion of VET in the Education Infrastructure Fund, previously only available to HE; and
- inclusion of VET/HE projects under the Structural Adjustment Fund (SAF) and the Higher Education Participation Partnerships Program (HEPPP).

The New South Wales Government is taking advantage of these policy changes by developing a strategic approach to align the tertiary education sector with its priorities for economic and social development and is now fostering partnerships between the Government, education providers and industry to better align graduate supply with immediate and longer term workforce needs (NSW Education Plan, 2010).

The South Australian (SA) government has also developed a five year plan for skills and workforce development that advocates greater collaboration between TAFE SA and the State's three public universities along with adapting priorities for change in the delivery of tertiary education to support rapid responses within the SA economy (Training and Skills Commission, 2009, 2010).

2.2. Industry Demands Change

Recent studies on workforce planning predict a serious shortfall in appropriately qualified people in the next few years (Australian Industry Group, 2006, 2007; Australian Industry Group and Deloitte, 2008; ElectroComms and Energy Utilities Industry Skills Council, 2010; Healy & Lonne, 2010; Skills Australia, 2010a; Training and Skills Commission, 2009).

HE, VET and industry have underestimated the value of articulation and credit transfer pathways in addressing the skills shortages that now face the Australian economy. While there are examples of articulation and credit transfer arrangements between the VET and HE sectors (particularly recently), the missing link continues to be the involvement of industry in the process. Conversely, PhillipsKPA (2006a), Skills Australia (2011), Training and Skills Commission (2009) and Dow, Adams, Dawson and Phillips (2010) concentrate on the VET/Industry alliance but fail to explain the impact of the necessary linkages between industry, VET and HE which commence with articulation and credit transfer arrangements and build into workforce development outcomes for industry.

Employers have stated that in most jobs both vocational and higher education skills are desirable, and a pathway from VET to HE provides the skill mix they need, whilst also providing a career pathway (Australian Industry Group, 2006; PhillipsKPA, 2006a; Toner, 2011; Training and Skills Commission, 2009).

Australian employers are concerned about issues which are impacting on their ability to develop a skilled workforce. These issues include the following:

- The (lack of) *quality and relevance* of training provided in preparing individuals for specific jobs;
- The *lack of responsiveness* of education and training suppliers to industry needs;
- The need for an improved interface between industry and providers *across all sectors* including school, VET and HE;
- The need for *better linkages* between the education and training sectors
- The lack of work placement opportunities for students;
- The need for increased *collaboration between stakeholders* in developing workforce planning solutions; and
- The need for clearly *articulated career paths* and career advice for school-leavers and others looking for career information as a basis for making education and training choices.

<div align="right">(Training and Skills Commission, 2009, pp. 33-34, italics added)</div>

Employers have said that the education and training system needs to pay closer attention to employer requirements and enable greater flexibility and coherence in training pathways across the sectors. Graduates are entering the workplace who are inadequately prepared for the job they are supposed to be trained to do (Australian Industry Group, 2006; Rittie & Awodeyi, 2009). Not only employers, but some recent graduates themselves have stated that they are inadequately prepared for the job they are required to do (Watson & McIntyre, 2011).

Skills Australia (2010a) calls for 'a new partnership approach to workforce development at government, industry and enterprise level' and a 'shared agenda between all of the players responsible for workforce development' including business services, industry development bodies, education providers, industry bodies and individual enterprises. Skills Australia (2010b) state that the lack of clear, comprehensive articulation and credit transfer structures causes significant frustration for students trying to articulate with credit for previous studies.

To address these issues, tertiary education providers need to ensure that educational programs are relevant, and the only way to ensure this is for industry to be a primary negotiator in the design of both qualifications and articulation pathways between them. This would seem to be common sense, but does not appear in fact to be commonly or systematically occurring.

3. Responding to the Challenge of Change

Articulation and credit transfer has been boosted by the revised Australian Qualifications Framework (Australian Qualifications Framework Council, 2011) which has merged VET and HE qualifications into one continuum from school to the highest levels of HE. This significant advance makes Australian educational institutions potentially world leaders in educational reform. Much of Europe, for example, is still struggling with separate qualifications frameworks bedevilled by major quality control issues (Byrnes, Paez, Jackson, Dwyer, & Blacker, 2011).

Dalitz, Toner and Turpin (2011, p. 156) state that

> *The current cohesive, single structure of qualifications, ranging through VET to the university system, facilitates knowledge and skills upgrading … overlapping VET providers and universities is thus potentially valuable.*

Articulation and credit transfer, facilitated by the revised AQF, is a potential catalyst for economic development through skills broadening and enriching, as envisaged by *Transforming Australia's Higher Education System* (Australian Government, 2009, p. 9). Educational institutions need to rise to the challenge if they are to capitalise on the opportunities provided by the revised AQF and the student and industry demand for articulation pathways. IACT research has shown that, if a student is aware of an articulated career pathway and has ambition to enter HE, they are likely to arrange their VET study pathway to accommodate HE entry requirements (Byrnes et al., 2010). At the present time however, whilst there has been some movement toward articulation and credit transfer, few institutions have understood the depth of changes required in their strategic plan, structures, policies and procedures if they are to take full advantage of the potential provided.

As PhillipsKPA (2006b, p. 8) state 'articulation and credit transfer must be central to institutional vision and strategic priorities'. IACT research suggests that there are few, if any, tertiary education institutions that currently employ all of the changes that are required to make articulation central to their institutional vision and strategic priorities.

This resource sets out the steps that are required to achieve such a significant cultural change. Institutions who are able to embrace such transformation may well find themselves at the cutting edge of innovation not only in Australia, but also the world.

4. Characteristics of Current Articulation Agreements

Despite the strident call from industry to be involved in partnership with VET and HE to tackle the workforce issues facing the economy, the majority of current articulation agreements involve discussions between educational organisations but are not aligned to workforce needs, as there is no input from industry. To date, Industry Skills Councils, employers and professional organisations have had little if any input into articulation agreements.

How VET-HE articulation pathways are to be achieved within the context of recent policy initiatives and to drive innovation in developing an education solution to respond to workforce issues requires consideration of a complex array of interlinking factors including:

- The nature of the engagement between VET, HE and industry, which needs to be an equal partnership of mutual respect, commitment and leadership in order to resolve, at the local level, the many complex issues which will be encountered, including funding and accountability differences between the education sectors, administrative issues, and curriculum and assessment differences;
- Improvement of tertiary education systems and procedures for student articulation and credit transfer between VET and HE, such that the *AQF Qualifications Pathways Policy* on credit transfer is applied (Australian Qualifications Framework Council, 2011), and articulation and credit transfer become part of the 'business model' of each institution;
- Consideration by all stakeholders of articulation when developing new qualifications, including innovative approaches such as integrating VET and HE qualifications into one seamless program;
- Information provision for all stakeholders, particularly school and VET students and employers, on career pathways which have a VET-HE articulation and the many advantages to students and employers of such pathways;
- Transition support programs for students moving from the VET to the HE sector, due to the differences in curriculum, support, administration and teaching and learning styles between the sectors.

While policy initiatives at the macro (government) level are designed to provide the momentum to address the skills shortage, these initiatives need to translate to the micro (education institution) level through developing a Corporate Strategy approach that covers the interlinking factors that contribute to articulation and credit transfer pathways for students. This strategic approach then provides the underpinning structure between VET and HE that is necessary to engage collaboratively with industry to address their workforce development needs.

Traditional 'one dimensional' and 'two dimensional' approaches to articulation are outlined below. These will then be contrasted with the 'three dimensional' approach recommended by the IACT project. Finally, the Corporate Strategy approach which is necessary to underpin educational institutions' approach to a 'three dimensional' approach is described.
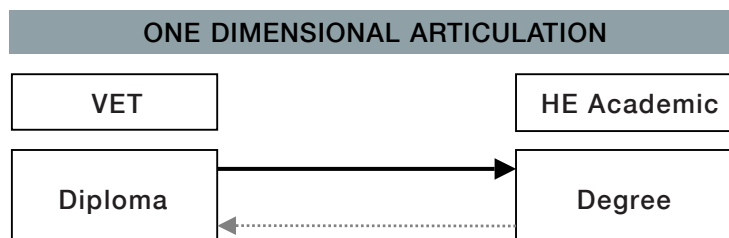
4.1. One Dimensional Articulation

'Ad hoc' credit transfer arrangements are characterised by a 'case by case' or individual assessment of credit transfer; they are 'one dimensional'. Each student individually applies for credit and is considered by the relevant lecturer or faculty admissions officer on a case by case basis. Such decisions, by definition, cannot meet the *AQF National Policy and Guidelines on Credit Arrangement's* recommendation that credit decisions should be 'evidence-based, equitable, transparent, consistent, inclusive, fair, valid and reliable' (Australian Qualifications Framework Council, 2009, pp. 6-7).

In a report of a study of credit transfer arrangements in Victoria, Walls and Pardy (2010, p. 25) found that ad hoc credit considerations are subjective, inconsistent and dependent on the 'differing positions of those involved in granting credit'. This approach can also result in a considerable time lag for students whilst their application is processed by staff that have many other demands on their time, particularly at peak admission periods. For known credit pathways this may be a matter of weeks, but for applications without a precedent this can be much longer.

PhillipsKPA (2006a, p. 14) argue that ad hoc credit determinations are inefficient, resource-intensive, and require significant input of staff time to manage transfer processes. Teaching staff struggle to complete credit determinations in addition to their usual teaching and administrative duties. Problems are compounded when accountability for articulation and credit transfer arrangements is not clear. In the absence of clear guidelines and dedicated staff time, despite the best intentions, inequitable decisions are bound to occur.

The IACT team agrees with this assessment as case-by-case determinations will not meet operational requirements of the AQF Qualifications Pathways Policy; decisions will not be applied consistently using equitable and transparent processes based on precedent data, nor will individual academics provide any influence over student management systems or transition programs.

4.2. Two Dimensional Articulation

4.2.1. Single Subject Approach

A 'two dimensional' variation of the 'ad hoc' approach is when academics from VET and HE develop an articulation agreement based around a single area of study through either a faculty or campus, either with or without reference to AQF guidelines or institutional administrative processes. The agreement is usually negotiated by teaching staff who have little time to undertake negotiations which are not part of their normal duties, and who may not have the expertise and knowledge of models in use elsewhere to assist them. Once the agreement is implemented, the credit transfer process is usually managed by faculties or by administrative or admissions staff rather than trained credit transfer staff, potentially resulting in issues of interpretation and therefore equity (Hassard, 2011).

Research undertaken by the IACT project team indicates that these arrangements are common; however they lead to frustration as they tend to be dependent on particular individuals' commitment and knowledge. When this person changes roles or leaves the institution the arrangements collapse and may require the parties to recommence negotiations to re-establish the arrangement (Byrnes et al., 2010).

4.2.2. Institution to Institution Approach

A more structured 'two dimensional' approach is the Institution to Institution Approach. This more 'corporate' approach is characterised by institutional management of agreements between VET providers and HE providers, with a high level of commitment and support for articulation and credit transfer at executive levels. Management of the institutional approach is complex and requires specialised, trained staff who deal with multiple stakeholders. This more structured approach is becoming more common, particularly where both VET and HE providers see the value of pathways for students. The approach is seen as having strategic benefit to the institutions concerned.

The articulation agreement arises within a faculty or campus who contact the manager responsible for the specialised unit, who in turn contacts their counterpart in the opposite sector to advise of an interest in developing an articulation agreement for a specific program or course. The managers utilise a 'precedent database' of previous credit transfer determinations. Precedents are created when credit is given for one specified unit of study against another specified unit, such as from part of a VET qualification to part of a HE qualification. A database of such precedents is used by staff and prospective students to quickly and objectively determine credit equivalence. If no precedent is evident the request is referred to the faculty for a decision. There are many examples of this centralised type of approach including Griffith University's Academic Credit Transfer Office and Southbank Institution of Technology through its Higher Education Unit.

TWO DIMENSIONAL ARTICULATION

VET Provider		HE Provider
Diploma	→	Degree
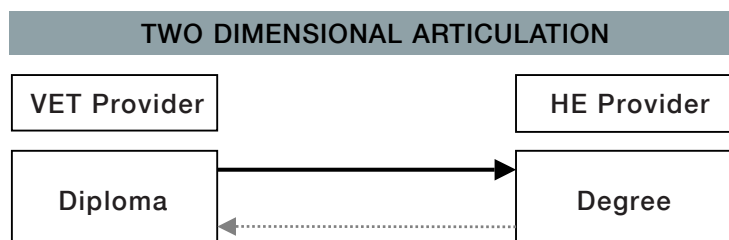
The MOU agreements developed using a two dimensional approach lead to increased pathways for students. Examples include: the University of Canberra which has 170 articulation arrangements with the Canberra Institute of Technology (Cram & Watson, 2008), Griffith University which has 96 MOUs and 125 local articulation arrangements (Hassard, 2011) while Southbank Institute of Technology has 150 agreements, with 72 students enrolled in dual awards with universities in 2005, and 560 students in 2010 (Toohey, 2011).

4.2.3 Multiple Partner Approach

An approach that is emerging as a more efficient business model is one where relationships between multiple partners are formed at the corporate level of the organisation. These relationships are highly structured and are negotiated at the executive level of the organisation as opposed to faculties. These relationships do not include industry as part of the negotiations, only educational institutions. Examples of multiple partner relationships that have been developed include the following:

Joint TAFE/university facilities:
- Newcastle University and Hunter Institute of TAFE at Ourimbah, NSW
- Edith Cowan University and West Coast TAFE at Joondalup, WA
- Deakin University with Chisholm, Gippsland, South West and Sunraysia TAFE's in Victoria

Joint university/TAFE/high school campuses:
- Southern Cross University, North Coast TAFE and a senior high school at Coffs Harbour,
- University of Southern Queensland, Southern Queensland Institute of TAFE and a high school at Stanthorpe.

State-wide agreements:
- TAFE South Australia with all the South Australian Universities
- TAFE New South Wales with Australian Catholic University, Central Queensland Charles Sturt University, Curtin University of Technology, Macquarie University, Newcastle University, University of New England, University of NSW, University of Western Sydney, University of Woollongong
- University of Southern Queensland with TAFE Queensland, TAFE New South Wales and TAFE South Australia
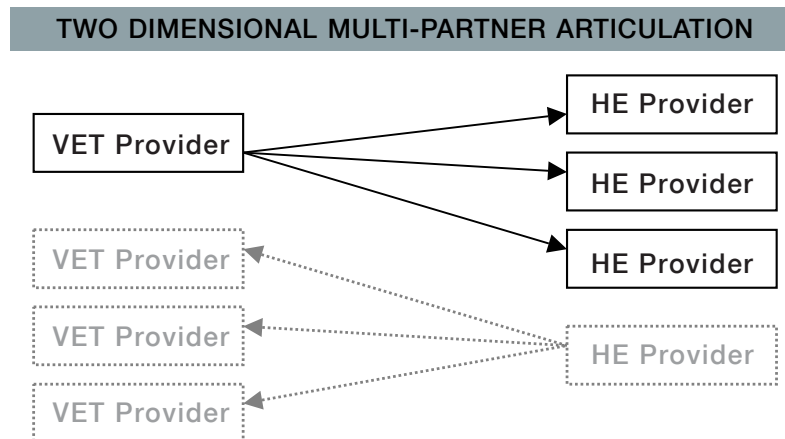
The multi partner approach provides the basis of an organisational structure necessary to enable VET and HE to extend their relationship and collaborate with industry through a Workforce Driven Engagement Model outlined below, as each sector has developed mutual trust and respect through consultation about articulation and credit transfer processes.

4.3. Three Dimensional Approach

A more holistic alternative to the above described two dimensional approaches is the Workforce Driven Engagement Model developed by the IACT project which defines a collaborative relationship between industry, VET and HE driven at the corporate level of educational organisations. It is the central platform to take advantage of the policy changes being implemented by the Federal Government, however the education sector as a whole first needs to develop a coherent, trusting relationship between the sectors.

The approach relies on all parties collaborating from the outset in an equal arrangement which benefits each of the parties. Industry profits by acquiring employees who meet skills needs, tertiary education profits from offering graduate outcomes that meet skills needs and graduates profit from gaining qualifications that meet skills needs.

The IACT project team conducted an action research project to explore if it was possible to develop a qualification and articulation pathway to meet a specific workforce need, if industry was involved in the negotiations from the outset. The health industry was selected for this project, as discussions with industry representatives indicated that there were identified skill shortages at the technical level but the existing qualifications supporting the industry were not suitable to meet this need.

The result of the action research project is the Workforce Driven Engagement Model (WDEM) which provides a framework for engagement between industry and the tertiary education sector. The sole aim of the WDEM is for the development of an educational solution to meet a workforce need.

A three dimensional approach provides the key to developing partnerships and as such has been recognised and implemented as policy through the New South Wales Education Plan (2010 p. P 3) which aims to:

> establish more effective consultative mechanisms between the State and Commonwealth governments, industry and the tertiary sector to better align graduate supply with immediate and longer-term NSW workforce needs.

The implementation of the NSW Education Plan is being led by TAFE NSW who have collaborated with universities and the professional body Chartered Practicing Accountants to develop an Associate Degree in Accounting. Similar collaborations are occurring in other industries across the sector, which will see TAFE delivering Associate Degrees through which graduates will be eligible for direct entry into the university partner's degree programs. TAFE NSW recognises that new approaches are necessary to support pathways that are sustainable and relevant to industry which also have the capacity to reach significant numbers of students from low SES backgrounds.

THREE DIMENSIONAL APPROACH
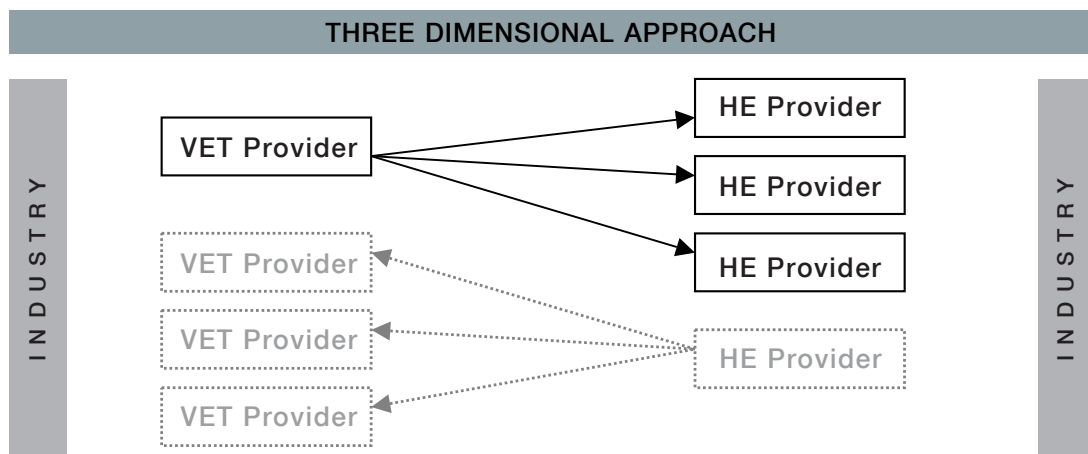
4.4. Corporate Strategy Approach

The IACT project has coined the term 'a Corporate Strategy Approach' to articulation, as the articulation relationship is central to strategic institutional operations. From the point of view of staff, students and institutions, the Corporate Strategy approach to credit transfer arrangements, especially a precedent database, provides an improved level of clarity, consistency, transparency and simplicity of operation (PhillipsKPA, 2006a, 10) as is now also required by the revised AQF.

A move towards a corporate approach to developing formal cross-institutional articulation arrangements is imperative if tertiary education is to move away from negotiating credit between individual organisations. Ideally, all universities in a jurisdiction negotiate concurrently with a central body located within TAFE, on the basis that the VET qualifications offered are from National Training Packages.

The IACT project staff negotiated and documented the process for the development of state-wide agreements between USQ and the Departments of Education and Training (DET) (on behalf of TAFE) in Queensland, New South Wales (NSW) and South Australia (SA). Development of the NSW and SA agreements was based on the precedents agreed to when developing the Queensland agreement. Each of the agreements was negotiated by senior staff in each organisation supported by academic staff and may be used as a model for action by other education providers. For example, the contact points for these agreements were:

- The General Manager, TAFE NSW Training and Education Support, NSW Department of Education and Training;
- Principal Policy Officer, TAFE SA Higher Education Services, Department of Further Education, Employment, Science and Technology;
- Director, Queensland VET Development Centre, Queensland Department of Education and Training.

When the Workforce Driven Engagement Model (WDEM) is included in the Corporate Strategy approach, the possibilities for significant strategic advances for both the institutions concerned and the economy as a whole may be realised.

5. Defining the Corporate Strategy Approach

5.1. Resourcing the Approach

Articulation agreements which have a high level of commitment and leadership by both the VET and HE sectors and which support investment of time and resources into articulation and credit transfer are critical to successful relationships.

Whilst the two dimensional approaches outlined above indicate that articulation and credit transfer is on the strategic planning agenda of tertiary institutions, who should be responsible for facilitating the articulation interface between education providers and industry needs?

PhillipsKPA (2006b, p. 8) maintains that 'articulation and credit transfer must be central to institutional vision and strategic priorities' and this is supported by other researchers (Cram & Watson, 2008; Hassard, 2011; McDonald, Fyffe & Goodwin, 2010; Toohey, 2011). They maintain that a strategic approach requires a person at senior management level in each (VET and HE) institution who is responsible for achieving articulation and credit transfer targets which are embedded in strategic plans. This person needs to act as a 'champion' for the cause, keeping articulation and credit transfer high on the institutional agenda, and supporting those working at the grassroots level. The senior management person responsible for articulation and credit transfer should be central to facilitating a three dimensional collaboration both between education sectors *and* with the relevant industry which will employ the resulting (VET and HE) graduates.

There also needs to be officers at all levels with responsibility for ensuring that articulation and credit transfer policies and procedures are developed and implemented, including key academic and administrative staff.

5.1.1. Accountability for the Corporate Strategy
Successful corporate strategy requires a member of the executive to be held accountable for its implementation. This person requires knowledge of the issues pertaining to the operation and delivery of curriculum perspectives, and experience engaging with industry. The entry of the VET sector into the delivery of degree programs and HE into the delivery of diplomas provides a focus for the importance of developing a corporate approach.

In the TAFE system a position such as Director of Education and Training in each institute is a typical title for these senior positions. In the university sector the responsibility for developing and managing these relationships is harder to quantify but may be, or report to, Deputy Vice Chancellors/Pro-Vice Chancellors or Directors who manage partnerships. TAFE South Australia and TAFE New South Wales have a central unit responsible for the corporate strategy.

This member of the executive is responsible for developing the Corporate Strategy approach to articulation agreements. This person requires the authority to change the systems which will lead to providing the responsiveness required, through:

- participation in cross sectoral discussions about curriculum alignment with workforce development;
- negotiating partner agreements;
- credit alignment between organisations;
- internal and external marketing of collaborative arrangements;
- developing and managing early engagement strategies;
- automating credit arrangements;
- liaising with student management staff to adjust systems to provide automation of credit transfer, student tracking and reporting; and
- changing organisational culture.

5.1.2. Operation of the Corporate Strategy Approach

Administration of the Corporate Strategy approach is complex and requires specialised, trained staff, who can deal with multiple stakeholders.

Examples of the administration to support the Corporate Strategy approach is Hunter TAFE Recognition Services, Griffith University's (GU) Credit Transfer Office (Hassard, 2011) Southbank Institute of Technology (SBIT) through its Higher Education Unit (Toohey, 2011). For further information refer to the Governance Flowcharts used by GU and SBIT to manage the workflow of articulation arrangements.

These centralised units provide a central point of contact for institutions requesting articulation links and for dissemination of credit information to students. Functions of these units include:

- participation in joint sector planning groups;
- ensuring that credit is applied consistently across the organisation in accordance with institutional policies;
- participation in student recruitment, where appropriate;
- providing accurate information for pathway marketing publications;
- assisting students with all aspects of their enrolment (not just credit);
- tracking and reporting of student and institutional activity in relation to credit;
- producing detailed data for academic analysis and measurement; and
- providing input into early engagement and orientation strategies.

5.2. Governance Approaches

5.2.1. MOUs

Each organisation uses Memoranda of Understanding (MOU) as a framework for the management of cross-institutional relationships. Diplomas and Advanced Diplomas provide the pathway into the same or related fields between the sectors. Each agreement is supported by a governance structure managed by the senior executive accountable for development and implementation of the corporate strategy: typically joint committees or advisory groups as outlined in a number of case studies (PhillipsKPA, 2006b), which support curriculum mapping and course design as a feature of successful models of articulation. The IACT team commissioned two case studies to illustrate the Corporate Strategy approach envisaged by PhillipsKPA.

Hunter TAFE and Newcastle University have established a high level corporate governance structure to manage their relationship, while Griffith University has established the *TAFE Queensland and Griffith University Links Committee*, which meets six monthly, as does Queensland University of Technology (QUT) (Hassard, 2011). Each committee has reporting and future planning functions and serves to enhance a greater understanding and increased mutual respect between the two sectors. These links enable the organisations to leverage mutual partnerships, such as the Griffith, QUT, TAFE *Adult Learner Social Inclusion Project* funded through the Department of Education, Employment and Workplace Relations (DEEWR) which supports the widening participation agenda (Aird, Miller, Van Megen, & Buys, 2010b).

The mutual respect that develops as a result of governance structures for management of articulation and credit transfer may also provide the avenue to work within a workforce driven engagement model with industry. Mutual respect and commitment to the articulation and credit transfer partnership must be deliberately developed and nurtured by both (VET and HE) parties.

5.3. Information Provision for Students

Articulating students are a rich and diverse addition to HE campuses. All efforts should be made to recruit and retain these students. The report of the Student Transition Factors details assistance that can be extended to attract students to articulate from VET to HE.

5.3.1. Websites

PhillipsKPA (2006a, p. 9) state that those education providers who are providing information effectively for students incorporate the following into their communication strategy (usually through their website):

- A searchable database showing credit for various pathways;
- An explanation of terms;
- Some contacts for further information;
- Admission and enrolment information;
- Application forms;
- Policies and procedures;
- Answers to frequently asked questions; and
- Appeal processes.

A search by the IACT project of all Australian university websites for policies and procedures on articulation and credit transfer indicates that, of all thirty-nine universities, thirty provide searchable information. However, only twenty one (54%) of the universities display their precedent credit transfer databases in an easily found and accessible location.

Readily available, accurate and up to date information about articulation and credit transfer is integral to providing a transparent and consistent service for students.

An example of a corporate approach which could be adapted for Australia to provide a central point for this information is the Canadian Ontario Council on Articulation and Transfer website, which provides an up-to-date source of information and credit transfer for all colleges and universities. It provides an easy to navigate site for students graduating from either high school or a tertiary institution about options for further study, including links to career advice, pathway options, admission requirements and contact details for a transfer advisor and transfer policy for each organisation. Currency of information on the site is the responsibility of each institution (Ontario Council on Articulation and Transfer 2011).

5.3.2. Orientation

An orientation program that is tailored specifically for articulating students is useful strategy in addressing transition issues and should be considered by universities. A customised orientation program is an initiative that has been implemented at the University of Canberra (Cram, Croucher, & Lines, 2008). This modified program was designed to provide transitioning VET students with the best possible start to their HE studies. Queensland University of Technology has implemented an orientation program aimed at all new students enrolling for the first time, rather than only in first year (Kelly M, personal communication, 2011).

5.3.3. Transition Programs

PhillipsKPA (2006a, p. 9) point out that students who are granted credit for VET studies may need assistance to adjust to different teaching, learning and assessment approaches as well as different expectations, policies and procedures. They state that transition support is most effective when the two education sectors contribute to the transition process, which ideally begins before the student completes their VET study and finishes when students have fully settled into the higher education learning environment.

While orientation strategies offer significant support to students, it is also important to acknowledge that early engagement with VET students is an essential element of the transition process. Expanding the initiatives and processes implemented by the organisation, in order to undertake a holistic approach to student transition ensures the best outcomes for both students and tertiary education providers. Griffith University and Southbank Institute of Technology both accept that this is necessary. Griffith University surveyed their students and the feedback received indicated that universities need to proactively engage with students planning to articulate to HE, whilst they are undertaking their VET studies and before they articulate to HE (Hassard, 2011).

There are many strategies and initiatives that can be implemented to ensure a smooth and successful transition for articulating students. One such strategy identified by Watson (2006) is to offer foundation studies in academic literacy as part of undergraduate degree programs. Courses such as 'Principles of University Learning' offered at Central Queensland University (CQU) or 'Academic Literacies' offered at Charles Darwin University (CDU) assist in the development of academic skills and address many of the concerns expressed by articulating students.

5.3.4 Information for Students and Employers

Building on the work undertaken by the University of Tasmania and Tasmanian Polytechnic (2010), the IACT project has developed graphic depictions of pathways from lower level qualifications to degrees. The IACT project believes the use of graphic depictions responds to the challenge to engage students, teachers/lecturers, careers advisors and employers in thinking about pathway possibilities with examples of how visual pathways between the VET and HE sectors can be more graphically shown to students. Using such a graphic pathway resource, students can easily see the entry and exit points and requirements of a career pathway from Certificate 1 in VET to (potentially) a doctorate in HE in any subject area.

5.4. Systems

The *AQF Qualifications Pathways Policy* sets out the operational requirements of institutions when processing articulation and credit transfer applications. The policy has a particular focus on consistency in credit arrangements both within and between educational institutions and sectors and sets out principles and procedures for good practice which should apply nationally to credit arrangements between all education and training sectors. It states that articulation decisions by institutions will:

- be evidence-based, equitable and transparent;
- be applied consistently and fairly with decisions subject to appeal and review;
- recognise learning regardless of how, when and where it was acquired, provided that the learning is relevant and current and has a relationship to the learning outcomes of the qualification;
- be academically defensible and take into account the students' ability to meet the learning outcomes of the qualification successfully;
- be decided in a timely way so that students' access to qualifications is not unnecessarily inhibited;
- allow for credit outcomes to be used to meet prerequisites or other specified requirements for entry into a program of study leading to a qualification or for the partial fulfilment of the requirements of a qualification; and
- be formally documented for the student including any reasons for not giving credit.

(Australian Qualifications Framework Council, 2011, p. 76)

Rather than being a peripheral addition to existing systems, PhillipsKPA state that articulation and credit transfer must be a central and integral part of admission, enrolment and administrative systems, if articulation is to be successful:

> Systems contributing to effective credit transfer arrangements include credit transfer policies and procedures, formal cross-institutional agreements, clear reporting lines, allocation of responsibilities and accountabilities, committee structures, student data collection, monitoring of student progress, administrative systems and information that leads to rapid and consistent decisions on applications for credit transfer as well as accurate and timely advice for students.

(PhillipsKPA, 2006a, p. 9)

5.4.1. Automated Enrolment System

IACT research (Byrnes, Beaumont, Paez, Jackson, Blacker and Dwyer, 2010) indicates that Australian universities are developing the capability to capture retention and progression data for transitioning VET students, although this is dependent on the HE student management system configuration. This information is important for tracking the success of students who articulate from VET to HE, in order to (a) document the retention and progression of these students and (b) implement supporting transition programs for these students if required. Ideally student management systems would also enable students to automatically receive credit for their VET qualification on enrolment at university, and for HE to VET articulating students to automatically receive credit for their HE qualification or part qualification on enrolment at a VET Registered Training Organisation.

Griffith University have developed Automated Student System Rules which allow the efficient and timely transfer of credit for large numbers of pathway students entering from the same or similar VET qualification to University degrees. Rules can be built into a System that link:

- one and/or many University courses to one and/or many VET units;
- one VET qualification to a number of University programs and/or courses.
- A VET student's individual program of study can be modelled to the automatic rule and then modified to reflect VET units completed or University courses to be completed as indicated in the example below.

(Hassard, 2011)

5.4.2. Precedent Database

A database of precedents is used by staff and prospective students to quickly and objectively determine credit equivalence.

It takes 3.5 times longer to assess credit transfer where there is no precedent database or structured credit pathway agreement (Jarvis & Associates, 2004, p. 18). A credit transfer agreement between TAFE Queensland and the University of Southern Queensland (USQ) involving credit transfer from one TAFE Advanced Diploma into one Bachelor degree, took approximately one day a month for 18 months, or approximately 3-4 working weeks total time, by one lecturer (Young G, personal communication, 29/11/2010). The lecturer's time alone equates to some $6,000. This does not include the time of other TAFE, USQ Faculty and additional staff in meetings concerning the proposed arrangement.

A case study undertaken by IACT sought to calculate the time taken and therefore cost of an articulation negotiation involving a variety of credit transfer pathways between one TAFE campus and one USQ Bachelor degree. The overall cost of the agreement, including both TAFE and USQ staff time, was $13,095, not including final approvals and implementation.

Since time is money, a precedent database is a far more efficient way to process credit applications.

5.4.3. Models

The IACT project undertook research on current and innovative models of articulation and credit transfer The use of embedded and concurrent models of articulation can provide transitional pathways for students; however the implementation of these innovative models requires adjustment to enrolment and delivery policies by higher education providers. These adjustments are more readily achieved through internal negotiations with faculties and external negotiations with education providers in the opposite sector to achieve an outcome. The executive responsible for the Corporate Strategy is able to influence cultural and policy changes that would enable embedded and concurrent models to be jointly developed. Implementation may mean a change to academic policies on enrolment for example within the university sector to allow a student to partially complete a qualification while studying within the opposite sector.

Further these models of articulation might be used as:
- a negotiation tool for VET and HE providers;
- a resource for tertiary education providers and industry stakeholders to link articulation pathways to workforce skills needs;
- a reference for the various pathways that could potentially form a basis for relationships and agreements between stakeholders;
- a method of professional development for staff about articulation and credit transfer; and
- a way of improving cross-sectoral understanding about issues relating to articulation and credit transfer.

5.4.4. Mapping

Policies relating to the equivalencies of credit provided to students have been one of the more difficult issues to address, particularly the amount of credit provided to students undertaking similar degrees throughout Australia.

Content mapping provides evidence about the degree of 'equivalence' or 'match' between learning and assessment undertaken in the VET sector against a destination qualification in the HE sector in order for the student to avoid duplicating learning that has been assessed previously.

Research conducted by the IACT Project indicated that, of those Queensland universities who had credit transfer arrangements in place with VET providers, 100% of respondents reported that the arrangement was based on (content) mapping (Byrnes et al., 2010). This gives strength to the assumption that mapping is considered a critical, non-negotiable, and motivational basis for any ongoing relationship or credit transfer agreement or arrangement. However the inconsistency in credit given by different universities for the same National Training Package is a major barrier at the present time.

In engineering programs the high levels of flexibility in the core and discipline units in VET qualifications means that faculties have to expend considerable time, energy and resources mapping credit transfer on a case-by-case basis due to the uncertainty that mathematics, science and science principles have been covered in sufficient detail to provide the student with the pre-requisite knowledge in each field of study before they tackle higher level subjects (King, Dowling, & Godfrey, 2011). It is recommended that HE providers build and share their databases based on curriculum mapping between qualifications to increase efficiency in credit transfer arrangements. The IACT project undertook research on this topic of mapping including alternative approaches.

To overcome the barriers associated with inconsistent credit between HE providers requires a high degree of cooperation between providers. This becomes more achievable where there are designated senior executives that have collaborative arrangements between sectors as there is an element of trust. The Corporate Strategy approach which engages multiple partnerships is one avenue that could be used to test this approach.

5.4.5. Flexibility of Delivery

Articulation agreements on their own do not provide successful access for students wishing to undertake study in the opposite sector, particularly where there is inflexibility in delivery modes. The lack of flexibility was cited as a drawback for engineering students who were likely to be studying part-time while being fully employed. Only Central Queensland University (CQU) and the University of Southern Queensland (USQ) offer all their engineering programs by distance education, whereas most other universities only provide on campus face to face delivery (King, Dowling and Godfrey, 2011).

It is recommended that a consortium of universities jointly develop core and specialised courses for delivery online and then cross-accredit them in their programs. This could be achieved using a three dimensional approach incorporating industry; however it requires engagement at the corporate level of education providers to provide the infrastructure necessary to collaborate (King, Dowling and Godfrey, 2011).

6. Conclusion

A cultural change has begun, driven by the need to have a much stronger alignment between governments, industry bodies, employers, vocational education and training providers and universities.

The IACT project has demonstrated that the innovative application of a three dimensional focus, including industry in the articulation and credit transfer process, on what has historically been a two dimensional dynamic between education sectors is the key to the implementation of change. Structured articulation pathways and linkages between the three key stakeholders (industry, VET and HE) are a significant factor in developing education and training solutions in line with industry and economic needs.

Both sectors need to extend their traditional relationships from one and two dimensional approaches to a three dimensional, tactical approach to articulation and credit transfer which incorporates industry as a major player: a corporate, strategic approach. Such an approach requires organisational infrastructure to support the new dynamic.

The first step is to be more structured in the approach to articulation and credit transfer negotiations by moving toward state-wide approaches to articulation negotiations, ideally involving all universities and TAFEs negotiating a single agreement with common credit outcomes for each qualification, such has occurred in South Australia.

A senior person in each institution must be accountable for developing and managing the relationships between each sector, including industry. Systems must be reviewed to ensure that articulation and credit transfer is an integral part of the strategic plans, policies and procedures of the organisation. Enrolment and information systems should enable students to be provided with all the information they require to enable them to make decisions based on articulation and credit transfer options. Credit should be automatically provided at enrolment through upgrades in the student management system.

Innovative models of articulation such as concurrent enrolment, rather than 'end on' models, are one avenue to encourage transition from one sector to another along with adequate staffing within each sector to work together to provide academic support. Orientation and 'academic scaffolding' programs should cover all students entering the institution for the first time, rather than only those entering first year.

The economy needs education provision to change, industry demands change so that graduates are better equipped, and students will benefit from these changes. Some institutions are already demonstrating that it is possible to change. To be competitive, institutions must embrace a corporate strategy approach to articulation and credit transfer.

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