Clearing the Pathway: Improving the Transition for students moving between AQF levels 5, 6, and 7.

**ALTC Funding Priority:** Improving Tertiary Pathways-Maximising the outcomes for students engaging in transition between the vocational education sector and the higher education sector.

**Project Abstract**

This project examines pathways between vocational education and higher education in the built environment. Less than 10% of the built environment workforce has higher education qualifications, compared with almost 50% with vocational education qualifications. In the built environment discipline, students are the least likely of all Australians to move between VET and HE or to continue their lifelong education. The barriers to AQF levels 5, 6, and 7 are precipitous for this discipline. As a key economic leader, the industry suffers critical skills gaps, with chronic shortages of professionally qualified graduates. This project examines tertiary pathways models in this discipline that account for successful high retention student transitions between these levels and using the DEMO evaluation matrix developed by NCSEHE, will isolate the critical success factors within these models. This evaluation and dissemination will allow outcomes to be adopted across other disciplines by all tertiary providers, thus enhancing opportunities for all students to participate in transitions that promote lifelong learning.

**Keywords:** pathways, transition, articulation, AQF, lifelong learning, built environment
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1. Project Introduction and Purpose

“I never thought someone like me could go to a university”

(Daniel, Construction Pathways student, RMIT, 2010; & Prime Minister VET award winner, 2010)

Participating in tertiary education is fundamental to the economic, social and cultural well-being of the individual and the nation. The emphasis on the provision of increased participation has never been greater: the Australian government is committed to greater participation in higher education and has committed to a target of 40% of all 25-34 year olds holding a bachelors qualification by 2025. Bradley, Noonan, Nugent and Scales (2008) indicate this urgency:

“It will be crucial for Australia to have enough highly skilled people to adapt to the rapidly changing future. Higher Education will be a major contributor to the development of a skilled workforce but, as never before, we must address the rights of all citizens to share in its benefits(p. xi)

Increasing participation in higher education will rely upon a number of factors. One key factor will be the increased access to higher education from individuals with VET qualifications. Pathways to lifelong learning must be part of the provision of mainstream tertiary education and not confined to special access, limited articulation or entry programmes. At present student transition between AQF levels 5, 6 and 7 is problematic and often haphazard with many students not accessing or not aspiring to higher education. This is a significant social, economic and cultural loss to both the individual and the nation. Bradley (2009), notes that “much remains to be done to improve connectedness and ensure that pathways operate efficiently for all Australians.” (p, 181).

Most tertiary institutions have, at a policy level, embraced pathways and articulation models for students. Yet as Karmel (Cited in Walls and Pardy, 2010) notes, the actual implementation is devolved to local alliances, partnerships or institutional arrangements that do not necessarily work in favour of the student. Current research still indicates substantial evidence of rigidities, inflexibilities and obstacles to learning and teaching that hinder individuals with VET qualifications accessing higher education with due recognition of their existing qualifications (NCVER, 2010). The further development of seamless pathways between these AQF levels 5, 6 and 7 in particular, is a key objective of the Federal Government (AQFC, 2009).

The movement between VET (AFQ levels1-5) and HE (AQF 6-10) takes place on a spectrum ranging from well organised to haphazard according to Karmel (2010). Student mobility between the sectors or AQF levels is not linear- in many cases policy and organisational processes lag behind the patterns of lifelong learning careers of students (McLaughlin and Mills, 2010). Research by Harris, Rainey & Sumner (2006) identified the issues as “crazy paving” which describes how student demand drives movement between the sectors in random and unexpected pathways. The phenomenon involves indirect transfer, where movement of tertiary students is not linear, but instead involves several moves within and between institutions and sectors.

Current research indicates evidence of some existing excellent pathways initiatives between VET and HE. But in spite of these initiatives, built environment industry students remain stubbornly

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1 * Research provided by ALTC funded Lifelong Learning Pathways Project 2010
under-represented in tertiary pathways. Only 9% of individuals in the built environment industry possess higher education qualifications, whilst almost 50% possess some level of vocational qualification. The remainder of the industry possess no qualifications (41%). Significantly the built environment industry is also well above the national labour force industry average for those 25-44 year olds who lack any formal qualification (31%) (ABS, 2008).

Of all disciplines, the built environment has been one of the weakest in promoting movement between the VET and HE sectors. Although the figures vary across tertiary institutions, of all built environment students qualifying at AQF 4, less than 10% continue on to higher education (CPSISC, 2010). This figure is significantly reduced for workers currently employed in the industry, with less than 1% of VET qualified persons seeking re-entry to the university discipline. Complexities in sectoral boundaries, barriers to transfer arrangements, external industry inducements, cultural and system weaknesses that operate hierarchically, amongst other factors, contribute to poor retention of built environment students beyond VET levels.

Consequently very few companies in the industry have a flexible workforce that is able to exercise skills broadening to match changing work requirements, especially in the area of new technology. Persistent skill shortages and skill gaps in this industry reflect this inflexibility. Narrow entry-level training that encourages students to exit at the AQF level 3 or 4, and a higher education focus on the professions has been to the detriment of the student and the industry. In effect the industry is not capitalising on the total potential of its workforce with most qualified students exiting at AQF 4 or 5. Without a thorough investigation of the reasons for students not aspiring to further education and an examination of those pathway models that promote retention of built environment students, the skills and knowledge base of the industry will continue to suffer. The flow-on effect to other industries is substantial.

Whilst the teaching of the built environment programs (engineering, construction management, building surveying, project management, quantity surveying etc) is organised differently across various tertiary institutions within Australia, the curriculum, student cohort, workforce and qualification structure within all institutions provides almost identical graduates that all join the same industry. Examining case studies of successful built environment pathways, where students who aspire to achieve qualifications beyond VET and successfully do so, is critical for the future. Similarly examining built environment students movement between HE and VET will provide educators with a current picture of learner’s needs to be work-ready for this industry. Discovering the inherent learning and teaching elements that maximise the outcomes for students engaging in transition will provide valuable insights and templates of best teaching and learning practice.

But examination of the factors that contribute to success and maximise transition for built environment students between VET and HE will be limited without further adoption of the outcomes across all providers of built environment disciplines in Australia. One critical element of this project is the trialling of these outcomes at two of the partner universities, and the involvement of professional accreditation bodies in the project reference group overseeing these trials. It is these features that will contribute to wider adoption of the outcomes and inclusion of the outcomes in the accreditation processes of the professional bodies.

The built environment industry is a significant contributor to GDP; an essential element of national productivity and as such provides significant drivers to the Australian economy. Improving access to higher education beyond AQF level 5 in built environment disciplines will not only improve the future workforce of the industry and increase national productivity, but improve personal, economic and social well-being for those students seeking lifelong employment in the industry. Successful adoption of these outcomes will not only assist current and future students, but will also improve opportunities for those individuals, currently employed in the industry. Because of the current student segregation and non-participation in higher education, the need for this project is
paramount for the retention of knowledge and skills within the industry, thus contributing to sector efficiency and the overall productivity of the nation.

1.2 Project Objectives

- Review existing successful pathways transition models between VET and HE in the discipline of the built environment.
- Examine the efficacy and fluidity of such transition models
- Evaluate the sustainability and equity of these transitional models using Gale’s (2010) Invention (DEMO) model
- Map teaching and learning elements of the successful models that maximise student transition
- Trial these elements in two of the partner universities to this project and
- Promote and disseminate these elements to the discipline and the wider sector

2. Project Rationale and Outcomes

2.1 Developing a Qualified Workforce for the Future

Tertiary institutions have a crucial role in developing the workforce of the future. Expanding student options and providing clear, fluid pathways to higher level qualifications in key industry areas is fundamental to meeting Australia’s needs. To deliver the Australian Government target of an additional 217,000 students at bachelor level or above by 2025, the interconnection between vocational and higher education must be enhanced. Skill needs and future work opportunities do not recognise the boundaries of VET and HE currently in place in all states of Australia. Australian industries require individuals with skills and knowledge from both VET and HE sectors.

Raffe (2003) has suggested that seamless pathways between VET and HE are an attractive metaphor for policy makers and the reality is dissonances between the sectors of Australian tertiary education, divergence of policy intentions across state and national jurisdictions and multiple institutional practices that both enable and inhibit student mobility. Yet in spite of these disconnects, excellent pathways models exist. A number of researchers have highlighted successful models across disciplines (Wheelahan, 2008; Harris, Rainey and Summer, 2006; Walls and Pardy, 2010) and in the built environment discipline (McLaughlin and Mills, 2009). To improve movement across the VET/HE spectrum, it is important that these models be analysed, evaluated and communicated to the wider sector. Analysis of successful models that maximise student outcomes and dissemination to the tertiary sector and the wider industry will enable emulation and encourage greater industry engagement and student transition.

2.2 Why Target the Built Environment Discipline for Clearing Pathways Between VET and HE?

The built environment sector employs one in seven people in Australia. Built environment industry professionals make up 9 per cent of the workforce (ABS, 2008a). There is a strong link between national productivity and a qualified labour force. Without sufficient qualified workers, industries such as the built environment will have difficulty continuing to produce their current level of output, let alone expand output to keep pace with global markets. Modelling indicates the built environment industry will be unable to meet domestic consumption in the coming decades (DEEWR, 2008). Australia as a nation will not be able to build the schools, hospitals and infrastructure it needs without a better qualified built environment workforce. It is a lead economic industry and its workforce needs qualified professionals at all levels.
In essence, the built environment industry is perfectly placed to address increased participation and improved access from VET to HE. It has one of the most diverse labour forces in Australia, of whom up to 50% possess some level of VET qualification, while only 9% possess HE qualifications. Most built environment students do not seek HE qualifications (AQF 6 and above). In the built environment industry the divide between vocational qualifications (AQF levels 1-5) and higher education qualifications is stark. It is important to examine this divide and promote improved movement between these levels to fully utilise the skills of the individuals. Without this movement the industry cannot deliver a skilled future workforce for Australia.

3 Value and Need for Project

Less than 10% of the workforce in the built environment has a tertiary qualification at AQF level 6 or above. This project will act as a leader in identifying the needs of students moving between AQF levels 5, 6, 7 and stand as a monument to improved performance.

The industry and the tertiary institutions providing VET and HE qualifications to the industry are significantly divided. The transition between vocational education (up to AQF level 5) and higher education (beyond AQF level 6) is negligible in the built environment disciplines. This project will examine pathways models between VET and HE in this discipline to establish critical factors that contribute to student transitions and maximisation of student outcomes. The project will also examine learning and teaching strategies embedded within these models. The success of these models will be evaluated using the evaluation matrix for university intervention programmes developed at the National Centre for the Study of Student Equity at Uni SA. The results will be trialled at two partner universities.

This study has immense value for all built environment students and staff, the wider industry and the whole tertiary sector, especially those disciplines struggling with the pathways between VET and HE. It is supported by the involvement of the Industry Skills Council (CPSISC). Without this study the built environment discipline and the industry it services will remain frozen in a “qualifications and skills divide.” This will result in significant loss of potential both of the individual students and of the wider industry. Skills loss is expensive and costly to the nation.

Whilst distinct sectors are important (Bradley et al, 2008), there is a more pressing need to create better, universal and transparent pathways across tertiary education for built environment students. Employers value higher-level skills and qualifications, mostly as a response to the context of globalisation, technological change, changes to the nature of work and skill shortages in the built environment industries. However, the sector in which these qualifications are gained is of little relevance to employers. Employers argue for an integrated post-secondary skill environment where the difference between the sectors does not restrict the capacity of individuals to move between them. In many cases the mix of qualifications and skills required by the workplace spans both sectors (Foley, 2007).

Examining successful transition models and then applying the critical elements of successful transition that maximise student outcomes to two partner organisations represents positive “on-the-ground” action research. It disseminates and encourages participation for the benefit of all students. Involving industry accreditation bodies and governance bodies as project reference group members also ensures on-going sector wide acceptance and adoption of the project outcomes. This will in turn benefit the discipline, tertiary education and the industry.

3.1 Value of Project to Students

Studies by Harris, Summer and Rainey (2006) indicates that students, including those in the workforce, want movement between vocational education and higher education. Student
movement between HE and VET is three times higher nationally than linear movements from VET to HE. It is also significant that student” traffic” involves various combinations of complete and incomplete qualifications and concurrent enrolment. It appears students and workers are engaging in multiple entry and exit points as their lifelong learning needs indicates. This project, by trialling and disseminating successful pathways nationally, will formalise these learning pathways and provide the educational benefits these students and workers are demanding.

As a result of this project, the built environment discipline students will be better able to undertake learning at AQF levels 5, 6, and 7, contributing to both personal satisfaction and career based lifelong learning. In addition as a result of this study, built environment discipline students will be able and encouraged to move in and between VET and HE as their needs and aspirations dictate.

3.2 Value of Project to the Tertiary Sector

The range of initiatives undertaken to enable pathways learning and teaching models have mostly been concentrated within the dual sector universities (Wheelahan, 2001). These models have included articulation, credit transfer, recognition of prior learning, appointment of specialist pathways officers and the provision of enabling courses. Much of this concentration is due to the cohort attending such institutions for VET qualifications, which has driven improvements in pathways models (Harris et al, 2006). The lead university of this project, RMIT, is a complete tertiary sector university and in this application has teamed with two other partner institutions, UWS and Curtin University who both have significant experience in the issues of pathways and their critical importance in delivering a skilled workforce in the built environment.

This project, as part of its methodology, will trial best practice transition pathways in a non-dual sector partner university, Curtin University, and target all Australian universities for dissemination and enabling procedures to achieve improved transition for the built environment discipline. The inclusion of UNSW on the reference group will also assist in project trialling. Successful dissemination of the project outcomes will benefit all tertiary providers, by highlighting elements and features of best practice teaching and learning models for emulation and adoption.

The project deliverables detailed in the communication/dissemination plan- newsletters, videos and academic papers will enhance dissemination and improve sector-wide understanding of the problems and solutions to student transition between AQF levels 5, 6 and 7. In addition, the high calibre representation on the project reference group, including the current ALTC pathways fellow Dr. Helen Smith, also a representative on the international think-tank, Dusseldorf Skills Foundation, and the ALTC discipline scholar, Assoc. Professor Sid Newton will ensure on-going, long term embedding of the project outcomes.

3.3 Value of Project to the National Agenda

Australia as a nation, is facing a national skill shortage. The shortfall in qualified workers over the next five years is predicted at over 195,000 people in total (Bradley et al, 2008). This shortfall is expected to increase exponentially as the current labour force ages, the supply of available qualified people declines and industry requirements change. For the past decade robust economic growth has seen a tightening of the labour market with strong demand across many occupations. This demand has been spread unevenly with key industries such as engineering, and construction at the forefront of drastic skill shortages (DEEWR, 2008 & CPSISC, 2010). More significantly, tertiary qualified professionals within these industries have been in continuing demand. Access Economics predicts that from 2010, demand for skilled professionals with bachelor qualifications across these industries will exceed supply levels.
Increasing participation of built environment discipline students in higher education will assist in national targets of 40% of all 25-34 year olds attaining a bachelor's qualification. This project will value-add to the qualifications of the built environment industry, a key economic driver. Improved productivity, GDP and well-being of the nation’s workforce can be linked to improvements in the training and education of its workforce. This is particularly true in the built environment industry. This project has the capacity to make significant improvements to Australia’s workforce and the quality of infrastructure (schools, hospitals etc) provided for its citizens.

4. Project Management

This project builds upon a number of successful pathways projects that have targeted student outcomes. Over an eight year period the project leaders have undertaken LTIF funded research into the investigation and trialling of pathways and articulation models (McLaughlin and Mills, 2009). These projects have developed insights into successful retention and articulation models in both the built environment and the wider tertiary sector.

The ALTC funded research into Lifelong Learning Pathways (McLaughlin and Mills, 2010); has been successful in promoting change in teaching and learning practice in relation to transition and student pathways across the discipline of the built environment, with industry conferences focussed upon pathways and the development of discipline specific tactics to enable improved learning and teaching opportunities (McLaughlin and Mills, 2010). The final report for this project will coincide with the industry launch of the ALTC sponsored Pathways book and video (Oct, 2011). This project will build upon the skills and project management knowledge gained through these and other projects.

The project team will be organised by a project manager/Research Associate who will work within a detailed Research and Dissemination plan. The plans for this project will be prepared in accordance with the ALTC/The Learning Partnership guidelines. Each member of the group represents one of the primary stakeholders, and their involvement facilitates dissemination beyond the project. The team comprises academics, administrators, industrialists, accreditation associations, and disciplines scholars.

4.1 Project Approach

The project will utilise one of the key outcomes of the DEEWR/NCSEHE (2009) project into participation in higher education- the matrix for designing and evaluating higher education access programmes (DEMO). The matrix identifies a number of characteristics of successful and effective university outreach programmes. These characteristics enable identification of effective teaching and learning strategies in programmes designed to improve access to higher education from under-represented groups. The project leaders have been successful in using the matrix across the current ALTC pathways study. By applying this matrix to built environment transition programmes or models, it will be possible to isolate success factors which can then be trialled in alternate settings.

4.2 Project Objectives

- To develop baseline knowledge and data about current transition pathways between VET and HE in built environment disciplines in Australian tertiary institutions
- To analyse this data using the design and evaluation matrix (DEMO) to identify elements of successful transition models
- To identify the key teaching and learning elements of these transition models to isolate factors inherent in built environment discipline retention of students.
- To trial the outcomes of these teaching and learning elements in two partner universities.
- To disseminate the best practice elements to the built environment discipline and the sector

4.3 Project Outcomes

- A database of transition models in the built environment discipline stored and available from Australian Universities Building Educators Association.
- Improved transition (VET/HE) rates for built environment students
• Improved understandings and awareness of specific teaching and learning strategies to maximise the outcomes for students engaging in transition and enhance lifelong learning pathways for built environment students
• Interactive teaching and learning tools for built environment faculties
• Improved productivity in the built environment industry due to improved access to higher education
• Closer co-operation of built environment sector staff (VET/HE)
• Embedding of Teaching and Learning strategies for improved transition of built environment students in all institutions
• Increased numbers of built environment workforce with higher education qualifications.

4.4 Project Deliverables
• Multi-mode resources- Project newsletter, and Project video
• AUBEA Workshops 2012 (Industry bodies and all Australian universities with built environment programmes).
• Industry workshops (sponsored)
• Academic publications
• Final project report

4.5 Project Methodology
The project will be based primarily on case study research methodology (Yin, 2008). This approach will allow the collection of both qualitative data through interviews and focus groups and quantitative data relating to each particular pathway model. The project will utilise the DEMO Design and Evaluation Matrix for (University) Outreach, developed by the UniSA National Centre for Student Equity in Higher Education. The Matrix provides assessment of the overall likelihood of programme effectiveness. Using evaluations of programme design and breath, the matrix provides measures of effectiveness and sustainability. Developed by NCSEHE in conjunction with DEEWR, the matrix provides information in a readily available format for future sector adaption. The establishment of this approach will also enable on-going dissemination to the wider industry throughout the project.

The project has four distinct phases and is situated in the built environment as the lead discipline over a 12 month period. It should be noted that several of the phases are overlapping or ongoing during the project, since the project model will be flexible enough to allow continuing development for the life of the project and beyond. The four project phases are specifically:

PHASE 1 (0-6 month) In this stage, the project will focus upon built environment (pathways) models using Gale’s (2010) DEMO model to analyse and evaluate their sustainability. The DEMO matrix provides a simple score that allows the models to be compared. The Matrix will analyse successful initiatives and transparent pathways that have allowed planning, increased student transition, provided better responses to the needs of the students and industry, and allowed greater flexibility in skills/qualifications movement. This phase will develop baseline knowledge about current pathways and articulation practices within built environment disciplines in Australian universities for dissemination to the wider industry.

PHASE 2 (6-8 month) This phase of the project will create a sustainable model of pathways teaching and learning exemplars that maximise access and participation by built environment student groups. The aim of this phase is to collect data that maps effective learning and teaching models to achieve improved transition..

PHASE 3 (8-10 month) This phase of the project will trial pathways exemplars developed in Phase 2. The aim is to examine the performance of the exemplars at course and program level in the partners universities. This phase leads to understanding of best practices and answers the research question: “How do built environment exemplars leverage student transition between VET & HE?”
**PHASE 4 (10-12 month)** This phase of the project will disseminate these transition models in tertiary institutions seeking to address student cohort movement and transparent, efficient pathways. The aim of this phase is to evaluate and disseminate these best practice exemplars across both the built environment sector and the wider higher education sector.

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<tr>
<th>Phase 1: test VET/HE pathways models using DEMO</th>
<th>0-3mths</th>
<th>3-6 mths</th>
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<td>Phase 2: Develop T &amp; L exemplars from DEMO</td>
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<td>Phase 3: Trial T &amp; L exemplars &amp; validate in 2 partner institutions</td>
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<td>Phase 4: Dissemination and project publications</td>
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**5.0 Evaluation Framework**

Evaluation will occur continuously through the project life. The Evaluation framework will be undertaken by an independent expert academic who is familiar with the research and the built environment discipline. Prof. Denny McGeorge, from UNSW is a highly experienced and knowledgeable expert in the field, who will undertake a number of interventions. At the early stages of the project (0-3 moths), Prof McGeorge will work with the research team to develop a Formative Evaluation. This provides information for improvement by identifying aspects of the project that are successful and areas in need of improvement. The study will focus on the content and design of the project, with results disseminated to staff. At later stages of the project (6-9 months), a Summative Evaluation will provide an overall perspective of the project. The study will focus on the value or worth of the project and is designed for accountability or continuation purposes.

**6.0 Collaboration**

This project brings together an expert and respected team of researchers in the area of pathways and transition between VET and HE. All of the project team and reference groups have leadership roles within their institution and wider sector networks. The project director and reference group chair is also chair of Academic board at the lead university, thus enabling dissemination and adoption. A number of members of the project team have worked together on previous or existing ALTC projects. The team has a viable communication plan involving the professional bodies to further develop the project outcomes for long-term change in the built environment industry.

A number of members of the project reference group lead or chair built environment accreditation bodies, this enhancing industry dissemination and embedding of the outcomes. The project team will collaborate closely with these industry associations to ensure embedding of the project outcomes. The strategies listed under dissemination will also involve collaboration with industry partners.

In addition the project team will closely consult with all 15 tertiary institutions offering built environment disciplines in Australia. This consultation will occur at the Australian Universities Building Educators Association annual conference in April 2012. A conference theme has been provisionally allocated to Improving Tertiary Pathways between VET and HE.

All members of the project team have in-kind support from their respective universities and institutions. This in-kind support for time allowance and resource support will facilitate collaboration both across the participating institutions and the wider sector.
6.1 Links with other ALTC Projects

This project links closely with a number of current ALTC projects-
- Lifelong Learning Pathways (Mills and McLaughlin, 2010)
- ALTC Fellowship on Pathways (Dr. Helen Smith, 2010)
- ALTC Transition from VET to HE (University of Western Sydney) and
- ALTC Discipline Scholar for Architecture, Building and Design (Sid Newton, 2010)

Members of the Project Team for this proposal are represented in various capacities for each of these current projects. But this project introduces new members including an Early Career Researcher. This representation will ensure collaboration and on-going opportunities for cohesion and sector wide implementation of this project’s outcomes.

7.0 Dissemination and embedding strategies

The project deliverables detailed in the communication/dissemination plan will enhance dissemination and improve sector-wide understanding of the problems and solutions to student transition between AQF levels 5, 6 and 7.

7.1 Assess climate of readiness for change

An essential part of the engagement strategy is the incorporation of requirements into the accreditation criteria and guidelines for built environment programs. Accreditation processes have moved in recent months because of the recent ALTC Professional Standards Project. The newly established Threshold Learning Outcomes for construction impacts directly on this project. The ALTC discipline scholar, Assoc. Professor Sid Newton, will ensure on-going, long term embedding of the project outcomes.

The project team will also work with the following industry accreditation and related bodies a number of whom are on the project reference group to ensure that pathways principles are embedded in built environment education and accreditation:
- Australian Institute of Building (AIB)
- Australian Institute of Quantity Surveyors (AIQS)
- Australian Institute of Building Surveyors (AIBS)
- Royal Institute of Chartered Surveyors (RICS)
- Chartered Institute of Building (CIOB)
- Pacific Association of Quantity Surveyors (PAQS)
- Construction Property Services Industry Skills Council (CPSISC)

This means that the accrediting bodies will benefit from the project and have been targeted as enthusiastic adopters of the project outcomes. This willingness to amend accreditation as this time is an underpinning feature of the project rationale.

7.2 Effective dissemination throughout the project

On-going dissemination during the project will allow the opportunity to receive comment, the potential to gain extra data/exemplars and the capacity to modify the project based on feedback. This strategy offers a chance to involve external and new stakeholders, to establish informal partners and to extend ownership. Other advantages include the ability to publish progressive reports, interim evaluations and the preliminary data analysis.

Dissemination through Information Provision

This approach involves the distribution of information in written form (newsletters, bulletins and videos) to universities, professional bodies and accrediting authorities. The distribution will occur throughout the life of the project in accordance with the staged methodology described above. Distribution channels will include formal reports, pathways and articulation processes written around the exemplars collected, staff
Dissemination through Engagement Strategies

This approach is an extension of the information provision and its prime aim is to promote acceptance and adoption of the project outcomes at other institutions. Essentially it is about enabling others and promoting awareness through practical activity. Stakeholders are identified as university schools offering built environment programs. The dissemination initiatives to be implemented will include:

**Workshops sessions**: To promote awareness, engage potential users, gather exemplars, provide advice and training in implementing initiatives within programs and to report on progress. The workshops will showcase by example what project outcomes have been achieved and how best they should be utilised. They are also an opportunity to gain additional data and gather feedback. The project team has already held one highly successful pathways workshop at AUBEA, 2011.

**Built Environment Pathways Network**: The information collected throughout the project will allow distribution of newsletters and reports, and advise of potential conferences and relevant publications. Forming a BE Pathways network will become a force that will advocate change towards improving pathways/articulation practices based on evidence and innovative exemplars.

**Conferences**: Project participants will present at relevant conferences and report project findings to the wider industry. One conference will be AUBEA, April 2012 for the built environment industry.

**Cascades**: Project funds ($20,000) will be allocated to all project partners to undertake sponsored research and trial the successful models in alternate settings across AQF levels 5, 6, 7.

**Pathways Book Launch**: Case studies examined in this research will form the basis of an ALTC sponsored monograph on successful built environment articulations.

7.3 Enable transfer of project outcomes

The impact of the project needs to continue after the project finishes. It is imperative that the outcomes and experience of the research will be both findable and adaptable. The project outcomes will be sustained through a number of mechanisms including:

**Academic publication**: in high quality journals/books so that results are publically available for reference and future research. Including the publication of the Pathways book which will be sent to all Heads of school of construction management and relevant university DVC (A)

**Conference themes**: The industry conference run by the Australian Universities Building Education Association, has been targeted over the last few years (see reference) the editorial board has moved to accept conference themes that relate to closely to the project outcomes. This ensures future research in the field by peers.

**External Examination**: Members of the research team (Mills) and the reference groups (Newton & Main) are part of ongoing industry accreditation as external examiners. As part of this process they will encourage Heads of Schools and Deans to embrace the project outcomes.

8.0 References


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