VET and HE - sector wide leadership

opportunities for sectoral cooperation and integration in the new tertiary environment

Allan Ballagh

RMIT is Australia’s Largest Dual-Sector University

- 71,311 students
- 50,496 Higher Education
- 20,815 VET*
- 11,146 international students in Melbourne
- 16,350 students studying in other countries
- 2,764 Australian students studying off-campus

* 60% of VET load is AQF 5/6
VET includes 540 year 11 and 12 students

(Statistics and Reporting December 2009)
The emerging tertiary vision

‘... we can take the strength that comes from offering both vocational and higher education qualifications and drawing on research by providing new combinations of these forms of education and training. We, and Australia, are still not capturing the full benefits that a dual sector institution can deliver. Our qualifications framework is still treated too rigidly...’

Prof Margaret Gardner: ‘A Tale of Two Cities’
Vice Chancellor’s inaugural address, May 2005

Tertiary learning: an historical perspective

- 1887 - Working Men’s College founded
- WW2 - College used to train and support war effort
- 1960 - Royal Melbourne Institute of Technology
- 1992 - RMIT granted University status (dual sector)
- 2000 - RMIT International University Vietnam
RMIT’s Strategic Themes

1. **Global** in attitude, action and presence
2. **Urban** in orientation and creativity
3. **Partnered** with professions, industries and organisations

Inclusive of both VET and HE

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The Bradley Report: towards an integrated tertiary sector

**Key characteristics of an effective tertiary education and training system**

The principal characteristics of a fully effective tertiary system would be:

- the equal value given to both VET and higher education, reflecting the importance of their different roles in the development of skills and knowledge and their contributions to our economy and society;
- the recognition that institutions may have a primary mission in one sector, but should still be able to offer qualifications in the other sector as under current arrangements;
- a shared and coordinated information base and approach to anticipating future labour market needs, industry needs and demographic trends;
- a capacity for the whole system to provide integrated responses to workforce needs for industries and enterprises, including those in specific localities and communities like outer metropolitan and regional areas where there is significant population growth, low levels of educational attainment and participation and uneven provision;
- an efficient regulatory and accountability framework; and
- clearer and stronger pathways between the sectors in both directions.
The Bradley Report: towards an integrated tertiary sector

The value of distinctive sectors

A more coherent system

A more flexible system

Recommendation 43
That the Australian Government negotiate with the states and territories to expand the national regulatory and quality assurance agency (Recommendation 20) to cover the entire tertiary sector (including vocational education and training and higher education) and that the Australian Government assume full responsibility for the regulation of tertiary education and training in Australia by 2010.

2006 national Worldskills competition: ‘Design Challenge’
Strategies to integrate vocational and professional learning

• Dual Awards
• Skills electives for degree students
• Higher education electives for TAFE students
• Integrated pathways, incorporating Associate Degrees

Dual Awards:

• VET + HE qualification
• Value-adds to degree and theoretical skills
• Opportunities to work in discipline areas in industry whilst studying
## Dual Awards (currently on offer):

<table>
<thead>
<tr>
<th>Degree Combination</th>
<th>Award Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>B App Sci (Construction Management) Diploma Building</td>
<td></td>
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<tr>
<td>B App Sci (Project Management) Diploma Building</td>
<td></td>
</tr>
<tr>
<td>B App Sci (Environmental Sci) Cert IV OH&amp;S</td>
<td></td>
</tr>
<tr>
<td>B Arts (Criminal Justice) Cert IV Alcohol and Other Drugs</td>
<td></td>
</tr>
<tr>
<td>B Environmental Sci Cert IV Frontline Management</td>
<td></td>
</tr>
<tr>
<td>B App Sci (Laboratory Medicine) Cert IV Frontline Management</td>
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</tr>
<tr>
<td>B App Sci (Pharmaceutical Sci) Cert IV Frontline Management</td>
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</tbody>
</table>

... and the list will continue to grow

## Dual Awards (from 2011):

<table>
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<tr>
<th>Degree Combination</th>
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</tr>
</thead>
<tbody>
<tr>
<td>B App Sci (Complementary Med - Osteopathy)</td>
<td>Cert IV Massage Practice</td>
</tr>
<tr>
<td>B App Sci (Laboratory Medicine)</td>
<td>Cert IV Small Business Mngt</td>
</tr>
<tr>
<td>B Arts (Music Industry)</td>
<td>Cert IV Small Business Mngt</td>
</tr>
</tbody>
</table>

... and the list will continue to grow
Dual Awards: Pharmaceutical Sci + Cert IV in Frontline Management

• **4 year program** – 3 years coursework and one year industry placement
  • Focuses on careers in the pharmaceutical industry
  • **Year 1** - basic underpinning disciplines (chemistry, cell biology, human biology, biostatistics)
  • **Year 2** – specific discipline focus (biochemistry, physiology, pharmacology)
  • **Year 3** – industry focussed areas (e.g. drug R&D, clinical trials, drug regulations)

Dual Awards: Pharmaceutical Sci + Cert IV in Frontline Management

**Year 4** – Industry Placement
• 40-week full-time placement (assessed)
• supported with a bursary/stipend provided by industry
• **concurrent Cert IV in Frontline Management**
  • integrated at the placement site
  • additional skills in people and project management
  • enhanced experience in industry
  • enhanced employability
Elective Options

- Skills electives for degree students
- Degree electives for VET diploma students*

Skills Electives for degree students

- Offered to HE students through the university wide electives program
- VET and HE collaboration on curriculum, teaching, assessment etc.
Skills Electives for degree students

- Construction Skills
- Alcohol & Other Drugs
- Point of Care Patient Testing
- Business Skills for Creative Industries
- Occupational Health & Safety Units
- Education - Training & Assessment

... and the list will continue to grow
The RMIT Construction Management program

- provides students with industry relevant education and learning
- a model for staff exchange and curriculum collaboration between HE and TAFE in construction
- promotes pathways for dual-sector qualifications

The RMIT Construction Management program

Bachelor of Construction Management – two vocational units:
- Plumbing and Fire Protection
- Air-Conditioning and Refrigeration

Practical skills in plumbing, air-conditioning and refrigeration technology + Theoretical learning in the principles of Building Services
Evaluation of Construction Management Program

Number of students who enjoyed the hands-on experience

McLaughlin & Mills, School of Property, Construction and Project Management, RMIT, 2007

Evaluation of Construction Management Program

Greater understanding of type of work
Greater understanding of theoretical work

McLaughlin & Mills, 2009 DUAL SECTOR EDUCATION: TAFE AND HIGHER EDUCATION COLLABORATE IN CONSTRUCTION MANAGEMENT. School of Property, Construction and Project Management, RMIT
Evaluation of Construction Management Program

McLaughlin & Mills, School of Property, Construction and Project Management, RMIT, 2007

Degree electives for VET students*

Following the success of the skills elective for degree students, in 2011 25 Diploma of Construction students will be enrolled in a higher education elective# …

# A work integrated industry placement: incorporating project work (together with HE degree students), industry mentor, reflective journal, …

Counts for credit in the degree part of the pathway
RMIT Integrated Engineering Pathways

Integrated Pathways: Associate degrees

RMIT Associate Degrees offer entry to the workforce at paraprofessional level and vertical and horizontal pathways with credit.
Integrated Pathways: Associate degrees

Principles of Associate degree program design:

• vertical articulation: a guaranteed pathway into one or more relevant Bachelor Degrees with 1.5 years credit in a three year degree and 2 years credit into a four year degree

• horizontal articulation: a guaranteed pathway into one or more relevant Diplomas of Advanced Diplomas;

• mapped against relevant national and state vocational qualifications with clearly defined entry and exit points.

• a guaranteed level of credit for relevant Diplomas and Advanced Diplomas (up to 1.5 years).

Current associate degrees:

• Engineering Technology (Design & Develop)
• Engineering Technology (Systems & Logistics)
• Engineering Technology (Advanced Manufacturing)
• Engineering Technology (Electrical/Electronics)
• Engineering Technology (Civil Engineering)
• Network Engineering
• Fashion and Textiles Merchandising
• Information Technology
• Design (Furniture)
• Graphic Technology
• Business

2010 enrolment: 479 EFTSL
Associate degrees: research and development
ALTC Fellowship : Dr Helen Smith

Finding out about associate degrees programs and student characteristics

(a) Review of current and planned associate degrees (structure, industry links, cognate base, articulation, career options)

(b) Analysis of what target groups know about associate degrees and how and why they made their choice of study

(ie collecting and analysing the facts of the matter)

Learning in the integrated tertiary sector: What might an appropriate curriculum and pedagogy look like?

- **assessment** – combination of competency-based and other criterion referenced approaches
- **coursework** – combination of work-related and discipline based learning units and program wide reflective practice;
- **competency development** – through work placement and simulated work-based practice
- **work-readiness** – industry feedback on assessments and/or dialogue with learners
- **higher-learning readiness** – academic feedback on assessment and/or dialogue with learners
IT Cadetship Pathway

Combine TAFE and Degree qualifications while working in the IT industry

The cadetship is designed to produce quality students with both educational and industry qualifications into the IT industry. The cadetship presents a genuine integrated pathway with relevant work experience, not only for today’s ITT needs, but also in work of all industries requiring ITT technicians, more professionals and entrepreneurs in the future.

PROGRAM FEATURES

• Study full-time while working four days per week
• Gain extensive work experience in the IT industry and industry-recognised certification
• Multiple entry and exit points provide students with greater choice and flexibility
• Opportunity to gain TAFE and higher education qualifications including Diploma, Associate Degree and Degree by undertaking an accelerated program of studies over four years
• Participants are initially employed within the industry as a Certificate IV Trainee and later as a Cadet at Diploma and Bachelor degree levels.

Integrated tertiary delivery:

School of Global Studies Social Science and Planning

“The School is composed of 3 clusters:

• human services, community services and social policy;
• international, language and justice studies; and
• sustainability and urban planning.

Each cluster is composed of related higher education and vocational disciplines and a research centre”.

RMIT University
LH Martin Institute – 12 November 2016
Integrated tertiary delivery

School of Global Studies Social Science and Planning

• Advanced Diploma of Translating and Interpreting is articulated with the Master of Social Science (Translating and Interpreting Studies)

• Graduates of the Adv Dip with a degree will be eligible for up to one semester credit in the Masters program

RMIT model for the Advanced Manufacturing Precinct (AMP)

Research Driven with Integrated Education & Training:
Project based learning across degree; ad dip, assoc degree, advanced trades

Research Institutes:
Design, Platform Technologies, ....

Industry (Strategic Partnerships)
Aerospace; Automotive; Biomedical; Dental; Sports; Appliances
What is advanced manufacturing?

• New manufacturing processes and technologies are being developed and introduced now to enable advanced manufacturing of the future. Electron Beam Free Form Fabrication, Laser Direct Metal Deposition, Fused Deposition Modelling, Selective Laser Sintering, Stereolithography and 3D Weaving, can build final products direct from a computer model.

• Irrespective of the product, future of advanced manufacturing in Western knowledge based economies will rely on:
  - Research into new manufacturing technologies and advanced materials
  - Rapid/Direct transfer of designs from computer (CAE) to manufacturing
  - High speed automation (systems approach, optimal system integration, lean)
  - Sustainable technologies (towards zero waste and zero emissions)

What works?

• Leadership/champions – within the organisation and from industry

• Cooperative and collegiate relations between sectors – parity of esteem and equal involvement

• Study options which are clearly in the students’ interests – integrated not bolted on
What are the issues?

- Realising a harmonised tertiary regulatory framework
- Harmonising the architecture of qualifications across HE and VET: through the frame of the revised AQF and VET Products for the 21st Century.
- Cultural factors – getting beyond long-held assumptions to secure on the ground cooperation at a provider level
- Leadership and commitment
- Holding a steady course in a very complex and noisy policy environment and operational environment

Conclusions

Early days …

- Need for systematic and longitudinal evaluation of outcomes for students
- Need for professional development for VET and higher education teachers about the how, what, why
- Need for sustained commitment from the Australian and State governments to emerging directions
- Sustained leadership and advocacy
- “The price of success is eternal vigilance”
The workforce of the now

Australian Apprenticeships - Laos

Sepon Apprenticeship Program: RMIT in partnership with OzMineral (Previously Oxiana-LXXML)

- Global University
- Global Passport