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Engaging industry: embedding professional learning in the business curriculum: final report 2011

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Abstract

Professional learning has become a feature of business curricula in universities throughout Australia and around the world. 'Professional learning' is often used to denote educational programs that are explicitly linked to industry and professional bodies through industry placements, industry projects and teaching approaches that highlight contemporary industry issues. Professional learning encompasses the skills, qualities and attributes that are required by a profession and the processes through which those skills are learnt: that is, the methods of teaching - case studies, role plays, field trips, work placement and the like. Professional learning encourages deep learning in relation to the student's future profession, and includes industry engagement, work-integrated learning and authentic learning environments.

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2011, professional, learning, business, curriculum, final, report, industry, engaging, embedding

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Engaging industry: embedding professional learning in the business curriculum

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Executive Summary

Professional learning has become a feature of business curricula in universities throughout Australia and around the world. 'Professional learning' is often used to denote educational programs that are explicitly linked to industry and professional bodies through industry placements, industry projects and teaching approaches that highlight contemporary industry issues. Professional learning encompasses the skills, qualities and attributes that are required by a profession and the processes through which those skills are learnt: that is, the methods of teaching – case studies, role plays, field trips, work placement and the like. Professional learning encourages deep learning in relation to the student's future profession, and includes industry engagement, work-integrated learning and authentic learning environments.

The need for university graduates to be career and work ready has been well documented. Graduate capability and employability skills feature in business programs in Australia, and universities are increasingly mindful that graduates' transition into professions should be supported by a range of preparatory initiatives in the curriculum. This report outlines an Australian Learning and Teaching Council funded project on professional learning in the business curriculum; an initiative supported by the Australian Business Deans Council Teaching and Learning Network, and emanating from a business discipline scoping study (ABDC, 2008). The project included Victoria University (Lead), RMIT University, University of Technology, Sydney, and the University of Wollongong. The project aimed to investigate how to build professional learning through industry engagement in business courses in Australian universities.

The two year project involved an initial scoping of current practice, the sourcing and development of case studies, and a final phase of dissemination of case studies and findings. An action research methodology was adopted to provide a participatory and reflective approach to the project. Documented analysis and review of institutional and faculty mission statements was undertaken to gauge institutional and faculty approaches to professional learning and to increase knowledge and understanding of the institutional context and support structures in which professional learning takes place.

Interviews, focus groups and surveys were conducted with representative stakeholders from the academy and professional and industry associations to determine the parameters of professional learning; to collect case study material; and finally for dissemination purposes. This process was complemented by a literature review, which gathered existing empirical evidence on the impact of professional learning and considered relevant conceptual issues and underpinning theories. The review also informed the development of a definition of professional learning.

The new definition of professional learning is:

> *Professional learning is the development of professional capabilities through teaching and learning experiences and activities that integrate academic, discipline-specific and industry-referenced knowledge, skills and attitudes*.

It is acknowledged that conceptually, professional learning is incredibly broad and is manifested in a range of teaching and learning activities, assessment practices and innovative programs. The range of professional learning related practices is illustrated through a typology and a number of documented cases collected from business programs and academics in institutions across Australia.

These materials contribute to our resource and knowledge base and can be used to further develop the business curriculum and enhance professional learning for students. Of particular interest was the interface between universities and industry and how this informed the development, delivery and evaluation of professional learning.

The key outputs of the project are:
- An online resource manual (www.embeddingprofessionallearning.com)
- A wide range of professional learning cases
- A professional learning typology
- Good practice principles for professional learning
- A teaching approaches matrix (mapping professional learning types against targeted graduate capabilities and approaches to teaching)
- Assessment guidelines
- Categorisation of enablers and impediments
- Curriculum mapping and evaluation.

The project was initially focused on taking stock of the business curriculum in universities and ascertaining means to improve graduate employability. Subsequently it identified ways to embed and disseminate strategic, systematic approaches to enhance professional learning in the business curriculum.

Chapter 1 Introduction

The need for university graduates to be career and work ready has been well documented in recent years (BIHECC 2007; Herrington & Herrington 2006; Bennett 2006; Kiggins, Cambourne & Ferry 2005). Graduate capability and employability skills feature in business programs across Australia, and universities are increasingly mindful that graduates' transition into professions should be supported by a range of preparatory initiatives in the curriculum. This emphasis on employability has been further reinforced in the numerous post-degree employment studies and rankings that include employment status and salaries, notably the Australia-wide Graduate Destination Survey, and other ratings in publications such as the Good Universities Guide, which rates success in getting a job.

The need for further investigation of how business students learn skills and gain knowledge related to their profession was identified in an Australian Learning and Teaching Council (ALTC) funded business discipline scoping study (ABDC, 2008). Endorsing the scoping project recommendations the Australian Business Deans Council (ABDC) Teaching and Learning (T&L) Network agreed to three follow-on projects, one of which was this project: an exploration of professional learning in the business curriculum. The report produced from this study documents the range of professional learning practices in the business curriculum through illustrative cases and contributes to our resource and knowledge base so as to further develop and enhance professional learning for students.

Project Brief

This project explored and documented approaches to professional learning in the Australian higher education business curriculum. Of particular interest was the interface between universities and industry and how this has informed the development, delivery and evaluation of professional learning. The specific aims of the project were to:

> - Scope current practice in the delivery of professional learning in business faculties in Australian universities
> - Develop a typology or framework of professional learning
> - Document paradigmatic case studies as exemplars of good practice prototypes for each category in the framework
> - Identify good practice principles in the development, delivery and evaluation of professional learning
> - Produce a resource manual to assist business academics in the development and delivery of professional learning underpinned by industry engagement.

Project Objectives

The aim of this project was to investigate how to build professional learning through industry engagement in business courses in Australian universities. It did this by embedding the framework and exemplars in communities of practice within participating institutions, and beyond in the ABDC T&L Network. The outcomes are intended to further embed principles of professional learning throughout business higher education in Australia.

The project objectives were to:

Current Practice Scoping
Objective 1: Identify current practice related to the facilitation and delivery of professional learning in business faculties in Australian universities.
Objective 2: Identify good practice principles in the development, delivery and evaluation of professional learning underpinned by an external engagement strategy.

Development and Embedding of Resources and Case Studies
Objective 3: Achieve greater engagement of staff and students with industry, government and the professions through the incorporation of professional learning activities in the business curriculum and development of sustainable mutually interdependent partnerships.

Dissemination of Case Studies and Findings
Objective 4: Provide resources that will increase staff awareness and enable staff to integrate professional learning experiences, and increase student awareness to enable students to build their professional identity and prepare them for professional practice.
Objective 5: Promote and encourage implementation and embedding of policies and strategies that have proven successful in ensuring a professional practice perspective in the curriculum.
Objective 6: Disseminate the case studies and findings related to Objectives 1–5 throughout Australian universities to facilitate the creation of communities of practice that renew business curriculum and improve students' learning experiences and outcomes.

Structure of the Report

This report has been written in chapters. Chapter 2 presents an outline of the methods used to address the project aims, along with a discussion of project stages, development of the project logic model and key stakeholders. Chapter 3 is a review of the research literature and empirical findings. Chapter 4 describes the project outcomes and deliverables and includes: a typology of professional learning, including a brief description of approaches to pedagogy and curriculum for each type; a description of illustrative cases; a teaching approaches matrix; enablers and impediments; good practice principles; a curriculum mapping tool; assessment guidelines; and approaches to industry engagement. Chapters 5 and 6 respectively are a discussion of the implications of the project for future practice and engagement, and an overview of the dissemination of the project.

Chapter 2 Methodology

The approach to this ALTC project comprised:

- ➢ A literature review designed to inform the project by providing: a definition of professional learning that differentiated it from other learning activities; a description of models of professional learning currently being used in universities and business education; best practice principles for professional learning based on theory and practice; and guidance for successfully integrating professional learning into the curriculum, including how and when to engage industry.

- ➢ Documented analysis and review of institutional and business faculty mission statements (of 38 ABDC faculties) to gauge institutional and faculty approaches to professional learning and increase knowledge and understanding of the institutional context and support structures in which professional learning takes place.

- ➢ A survey of business academics to produce an inventory of professional learning practice to facilitate the categorisation of professional learning and development of a professional learning typology. The collection of information on professional learning practice of individual business academics employed a case study approach to provide a comprehensive database of practices, inviting participation from all 38 ABDC faculties (see Appendix III).

- ➢ Focus groups and workshops with business academics engaged in professional learning, conducted at several universities across five states.

- ➢ Development of professional learning case studies using the inventory of practice collected in the survey of academics, to illustrate the breadth of practice and external engagement strategies for each category in the typology.

- ➢ Development of resources to guide practice based on the typology and case studies collated from across the higher education sector in Australia. These included a series of good practice principles; a set of enablers and impediments that need to be considered when implementing professional learning activities; guidelines on teaching approaches to develop specific professional capabilities in students, and some assessment tips to support designing professional learning.

- ➢ Workshops with business academics to facilitate a critical review of the emerging typology, good practice principles, industry engagement approaches and perceived enablers and impediments to professional learning.

- ➢ Industry advisory group input and review of the framework to explore innovative approaches to academe–professions–industry liaison and to review key findings and perceived enablers and impediments to professional learning identified by business academics.

- ➢ An evaluation of the stages achieved through an ongoing process of reviewing the work of focus groups and industrial panels and through feedback from presentations to conferences and related committees.

- ➢ Dissemination of project outcomes through a website, presentations and workshops, and in the compilation of a final report.

Project Stages

The stages of the project can be viewed in more detail in Appendix II.

Project Logic Model

The logic model is an effective project management tool that assists with planning, implementation and evaluation. It involves identifying and mapping logical links between program resources, activities, outputs and outcomes (W.K. Kellogg Foundation 2004). The logic model thereby provides a useful framework for evaluating a program's outcomes and their impact measured against explicit goals and deliverables. The logic model for this project is presented in Appendix I, which includes the methodology aligned to each project outcome.

Stakeholders

The key stakeholders for this project were business academics who had developed and delivered professional learning curriculum; industry and professional associations; university business students; Associate Deans Teaching and Learning (Business); and the Australian Business Deans Council.

Chapter 3 Literature Review

Introduction

This section presents findings from a literature review and empirical investigation into embedding professional learning in the business curriculum of Australian universities. The study can be framed within the government's terms of reference for the Bradley Review, which sought to examine the higher education sector's 'fitness for purpose in meeting the needs of the Australian community and economy' (Bradley 2008: 205). The relationship between university education and employment and the engagement of the higher education sector with the business sector is highlighted. A broader education context led to the Bradley Review encouraging Australian universities to become internationally competitive through teaching that supports 'a highly productive and professional labour force' (Bradley et al. 2008: 5).

Professional learning has become a feature of many undergraduate programs in Australia and around the world. The term is often used in health science courses in relation to teaching practices such as clinical placements and practice clinics, and in engineering courses in relation to industry placements and industry projects. In business faculties, professional learning is delivered in a variety of forms. *Business as Usual*? (ABDC, 2008) highlights the importance of generic business graduate skills as well as 'soft skills'. External stakeholders are increasingly emphasising these skills and the role of the university in their development (Allen Consulting Group 2006; Australian Industry Group 2006; Barrie 2005; Bowden et al. 2002; Business Council of Australia 2006a, 2006b; CPA Australia 2005; DEST 2002, 2005, 2006; Goldsworthy 2003; Hager et al. 2002). These generic skills lead to employability and work readiness and are the skills needed by graduates to become adaptive and productive in the workforce (AAGE 2007; ACER 2002). The idea of professional learning is often conflated with discipline-specific generic skills developed to a professional level and with reference to a particular industry or profession.

DEST's (2002) definitions of employability skills are closely linked to the notion of career readiness (Papadopoulos et al. 2006) and preparation for employment through work-based learning (Boud et al. 2006; Boud & Solomon 2001; Central Missouri State University, 2007). The Business, Industry and Higher Education Collaboration Council (BIHECC 2007) also suggests that 'for some there is a perception that employability skills are under-developed' (BIHECC 2007: 2). It has recommended placing greater emphasis on explicitly identifying employability in all university curriculum, and increasing access to Work Integrated Learning (WIL). Research has shown that the development of 'authentic learning environments in higher education' (Herrington & Herrington 2006: 5) engages students in 'authentic activities of the kind that reflect ways in which knowledge and skills are used in the real world [and which] offer a bridge between theory and practice' (Bennett 2006: 121). It has also been shown that constructing 'knowledge-building communities' is effective in creating graduates who are more 'connected to the real world of their profession' (Kiggins, Cambourne and Ferry 2005: 76).

Professional Learning – Why do it?

Several factors have been identified as the impetus for including professional learning in the business curriculum. These include external factors such as the globalisation of companies and international competition, the emergence of new technologies and communication methods

(Moreland 2005), severe skills shortages, and dissatisfaction with the employability of graduates due to a lack of generic skills, for example, communication, teamwork, problem-solving and self-management skills (Franz 2008). There is also an increased focus on expanding the notion of employability to include personal attributes in acknowledgement of the benefits to job satisfaction; productivity; skills transfer and adaptability; and achieving a good employee–job fit (Franz 2008). Concurrently the cost associated with higher education and the way higher education is funded has resulted in a focus on the importance of graduate employability (Berman 2008; Orrell 2004), with the Graduate Destination Survey serving as a measure of the accountability that now rests with universities (Orrell 2004) in this regard. Embedding some form of work placement in courses has been one response to this by universities.

It is clear that universities have a role in the development of employability skills, generic skills, transferable skills, professional competencies, graduate capabilities, or 'soft skills' (Allen Consulting Group 2006; Australian Industry Group 2006; Bowden et al. 2002; Business Council of Australia 2006, 2006; CPA Australia 2005; DEST 2002, 2005, 2006; Goldsworthy 2003; Hager et al. 2002). Employability skills (DEST 2002) include:

- Communication skills that contribute to productive and harmonious relations between employees and customers
- Teamwork skills that contribute to productive working relationships and outcomes
- Problem-solving skills that contribute to productive outcomes
- Self-management skills that contribute to employee satisfaction and growth
- Planning and organising skills that contribute to long-term and short-term strategic planning
- Technology skills that contribute to effective execution of tasks
- Lifelong learning skills that contribute to ongoing improvement and expansion in employee and company operations and outcomes
- Initiative and enterprise skills that contribute to innovative outcomes.

Academics and employers generally support the idea of developing graduates' generic skills, and regard professionally referenced generic skills to be an aspect of professional learning. Even so, many commentators (e.g. Bowden & Masters 1993, cited in Bowden & Martin 2004) argue that generic skills in the abstract do not constitute professional learning and that for generic skills to be professionally relevant they need to be developed 'through experience of the professional field to which they are meant to relate' (Bowden & Martin 2004). This idea that generic skills need to be contextualised by and embedded in discipline specific content are common (Holmes 2000; Bowden & Martin 2004). Transferable or generic skills, in this view, are 'specific to [a] particular subject-discipline or occupation' (Holmes 2000).

There is general agreement that 'how Australian universities prepare their adult students and graduates for the world-of-work should be critically appraised' (Smith et al. 2009: 14). Certainly the ALTC has supported many different facets of such an appraisal. Researching, documenting and evaluating the best ways to achieve work-ready graduates has been the topic of several ALTC projects and higher education sector reviews, including:

- The WIL Report: a national scoping study (Patrick et al. 2009)
- Designing next generation places of learning: collaboration at the pedagogy–space–technology nexus (Radcliffe et al. 2008)

- Developing agentic professionals through practice-based pedagogies (Billett 2001)
- ePortfolio use by university students in Australia: developing a sustainable community of practice (Hallam et al. 2009)
- Accounting for the future: more than numbers. A collaborative investigation into the changing skill set for professional accounting graduates over the next ten years and strategies for embedding such skills into professional accounting programs (Hancock et al. 2009)
- Career development learning: maximising the contribution of work-integrated learning to the student experience (Smith et al. 2009)
- Research Graduate Skills Project (Kiley & Cumming 2009)
- Review of generic skills: critical thinking, team work, ethical practice and sustainability (Rigby et al. 2009)
- Embedding the development and grading of generic skills across the business curriculum review of Australian higher education. Final report (Bradley et al. 2008)
- A national internship initiative: enhancing the skills and work-readiness of Australian university graduates (Universities Australia 2008).

Professional Learning – Key Concepts

The first question asked in this project concerned the usefulness of the term 'professional learning' for describing the range of teaching and learning activities that contribute to the development of skills, attitudes and knowledge relevant to graduates' professional roles. A scan of Australian university websites using search terms like 'WIL', 'professional learning', 'professionally relevant learning', 'work placement', 'practicum' and 'industry-based learning' revealed not only a range of terms but also different terms for the same activity and the same terms for different activities. The many business academic focus group sessions conducted to explore professional learning practice led to a debate about the usefulness and meaning of the term, and the role and responsibility of employers of business graduates in developing professional skills and attributes.

The value of professional learning comes from learning through experience and making a conceptual change whereby the learner understands or perceives something differently as a result. Gibson et al. (2002) discuss how Biggs has noted that students are often left to integrate discipline knowledge and skills on their own because universities teach each separately. This is counter to the model of experiential learning put forward by Kolb and Fry (1975), which describes a cycle wherein students learn by action, critical reflection and evaluation, which in turn allows them to develop a schema for particular behaviours that can be generalised across a range of situations or contexts. It is in this well- established link between cognition and behaviour that the pedagogical basis for professional learning lies.

Business students come to their university studies with a set of cognitions and behaviours based on their previous experience. Some students have little or no experience of what it is like to work as a professional in their chosen field, while others may have experience of work but not necessarily in the area they have come to study. When students are asked to engage in professional learning activities, they are required to draw on what they know – that is, their cognitions and behaviours relevant to the activity based on previous experience and what they have learnt in the past. The behaviours they exhibit in completing the activity reflect the schema they have developed about

working as a professional in their field. By evaluating the behaviours, that is, through asking whether the desired outcome was achieved, what worked well, what could be improved and so forth, students can update their professional schema and associated cognitions. The next time they are required to complete a professional learning activity, they are able to draw on a more sophisticated and developed understanding of the appropriate behaviours to complete the activity. They can then engage in reflection, evaluation and updating of their views and outlook. Scaffolding of profession learning helps students to build confidence while developing appropriate professional skills. As students acquire and hone these skills, they can be increasingly challenged through exposure to new contexts, unfamiliar problems and ongoing changes. These can include simulated, virtual and physical workplaces.

Importantly, in any discussion of professional learning, the role of industry and the types and levels of industry engagement must be examined as to the authenticity of the student learning experience.

Profession learning commonly includes those 'soft' skills that have variously been called generic skills, employability skills and graduate capabilities, but it is necessary to be mindful of the distinction between 'content-free and context-free generic skills' (Bowden & Martin 2004) and generic skills that are referenced to particular professions. Professional learning, when concerned with generic skills, must not be taught separately from discipline knowledge (Stephenson 1992). Stephenson notes the multi-faceted nature of generic skills for the professional; he discusses the essential integration of personal qualities, skills and specialist knowledge which empower students to be effective practitioners (Stephenson 1992). Developing such personal and professional qualities combined with more specific or 'procedural' (Biggs 2003) skills is professional learning.

Finally, professional learning might include teaching approaches that use case studies, problem-based learning, mentoring programs, simulations, virtual reality, industry projects, practicums or work placements and it might also refer to the development of generic skills that are 'inextricably linked with the learning of disciplinary content, but in an explicit rather than implicit manner' (Bowden et al. 2002). There seems to be no agreed upon approach as to the extent of industry involvement in professional learning, except that it is necessary. Professional learning includes the disciplinary expertise that employers want, and more:

> Employers consistently hold that disciplinary expertise is only one from a much larger set of components that determine whether an individual will operate successfully on entering a profession. Employers know they are more likely to have difficulties with an employee because of poor employment-related skills rather than an inadequate technical expertise. The skills they value typically involve capabilities universities have also determined are desirable in their graduates, e.g. communication ability, problem-solving, capacity to work with others, and managing oneself. (Otter 1997, cited in Bowden et al. 2002)

The activities that develop these skills constitute professional learning.

Engaging Industry

To improve the relevance of university study and to better prepare graduates for the world of work, many Australian universities have sought to engage industry in the development, delivery and evaluation of their curriculum. Enhanced employability of graduates is the primary reason for university industry engagement. Industry encompasses business, government and the professions

(Hanlon et al. 2008) as well as not-for-profit organisations, other community groups and even universities themselves.

The challenges to building successful links with industry include:
- Issues about who owns intellectual property
- The slow pace at which universities often work
- Academics' level of business savvy for engaging with industry
- Finding areas of mutual benefit to both industries and academics
- Managing partnerships, including governance, data collection and reporting
- The robustness of relationships between individuals, universities and industry
- The resourcing required to sustain relationships.

Langworthy (2004) discusses establishing links with key regional stakeholders to form partnerships with the local community and industries. He outlines seven stages, which include: establishing a team to examine current engagement and developing a regional engagement strategic plan; discussion with key stakeholders to gather views and information; alignment of the plan with other university plans; and articulation of goals, strategies and priorities. Through this process several barriers to successful implementation were identified, including the impact of partnerships on academic workload and resource availability. However pilot activities have demonstrated the significant benefits to student learning of engagement with industry and the community and have provided an incentive to continue pursuing this agenda.

The need to engage more effectively with industry using a relationship management approach has also been explored by Solnet et al. (2007). Their study examined engagement with industry through two parts of a professional learning curriculum: industry partnership teams and an executive placement program. Key to the development of industry ties is assigning responsibility for the relationship to a specific staff member. In building these relationships, it is important to purposefully target senior industry members to maximise the benefits and effectiveness of the relationship.

Some broad descriptions of possible models for engaging industry in professional learning can be identified. These include planned partnership from the beginning based on shared goals; secondment or recruitment based on mutual benefits; and ad hoc or opportunistic engagement according to needs and context. However in addition to considering the type of model, consideration also needs to be given to the nature of the engagement. Efforts to enhance professional learning in the business curriculum take many forms and the various ways in which industry engages with curriculum (including with students) are often time consuming, depending on relationships established and maintained by one person. How systematic, formal and embedded such engagements are depends on a range of factors, including institutional policy, senior management support, support roles and the ethos of the institution.

Many universities already have relationships with industry groups and businesses and they seek to further these links to create innovative learning experiences for students and a current, relevant and 'real' curriculum. In addition to direct engagement with universities by private and public sector organisations, industry is also represented by professional bodies. A significant number of university business-related qualifications are explicitly linked to professional bodies through accreditation

processes. 'Professional bodies provide an important link between universities and the professions' (Precision Consultancy 2007: 17) through activities such as professional accreditation of courses, participation on course advisory committees and actively delivering course content.

On the basis of the above analysis, we defined professional learning as *the development of professional capabilities through teaching and learning experiences and activities that integrate academic, discipline-specific and industry-referenced knowledge, skills and attitudes.*

Benefits of Professional Learning

The benefits that can be realised from professional learning have been clearly described in the literature and confirmed in our fieldwork. Benefits for students include:

- The opportunity to enrich or learn generic and discipline-specific skills relevant to their future professions (Gibson et al. 2002)
- Experiencing what it is actually like to work in a real business (Gibson et al. 2002) and gaining insight into what it is like to work in the student's chosen profession
- Access to resources not available through students' studies (Gibson et al. 2002)
- Establishing a work history, with a possible employer reference and the possibility of future work (Gibson et al. 2002)
- Developing a network of professional contacts (Gibson et al. 2002)
- Building personal characteristics such as confidence, maturity and motivation (Gibson et al. 2002; Moreland 2005)
- Applying theory and develop skills in a work context, which gives students employability skills and helps them explore the suitability of their preference for their chosen field of work and build networks (Harvey et al. 1998; Moreland 2005).

Benefits for universities include:

- Degree programs that are more attractive to prospective students (Gibson et al. 2002)
- Straightforward ways to make links with industry (Gibson et al. 2002)
- Consulting and collaborative opportunities with industry (Gibson et al. 2002)
- Improved graduate employability (Harvey et al. 1998).

Benefits for industry include:

- Identification of students who may be suitable future employees (Gibson et al. 2002)
- Links with academics through placements that can build a learning culture (Harvey et al. 1998)
- Student enthusiasm and new ideas leading to projects that businesses might not normally pursue (Harvey et al. 1998)
- Access to resources associated with the university, which can include staff and facilities (Gibson et al. 2002)
- Working relationships that can develop into opportunities for cooperation and collaboration on other projects (Gibson et al. 2002).

Not surprisingly, the motivations for developing professional learning activities identified by academics at a number of professional learning workshops were clearly aligned to student benefits:

- Application of discipline knowledge and skills to practical business problems

- Application of theoretical concepts and models in a real-world context
- Development of graduate capabilities
- An up-to-date business curriculum
- Learner-centred pedagogy that better engages and motivates students
- Effective transition and pathways to a professional career
- Engagement with industry.

Although there are costs associated with establishing a professional learning curriculum these are ultimately outweighed by the benefits (Harvey et al. 1998). Freudenberg, Brimble and Cameron (2009) provide empirical evidence of some of the benefits of partnering with industry to systematically integrate professional skills into an undergraduate degree at Griffith University. These included development of students' generic capabilities, employment readiness and understanding of their future profession. Although their evidence is based on student self-reporting, these students did report greater confidence, skills and professional awareness after exposure to the program than students who did not undertake the program. The authors acknowledge the need for further research using more objective measures, such as behavioural skills tests, observations and interviews, as well as the benefits of including industry in the assessment of the impact of the program on students. All the same, initial evaluation of the program's impact was very positive.

Chapter 4 Key Project Outcomes and Deliverables

Professional Learning Typology

The typology of professional learning and the associated resource manual present an approach to conceptualising and operationalising professional learning for business disciplines in higher education. Eight main types of professional learning were identified:

1. Industry case study
2. Industry simulations
3. Industry practitioner delivery
4. Industry mentoring
5. Industry study tour
6. Industry placement
7. Industry competition
8. Industry project.

In practice these types are not mutually exclusive. There is considerable overlap in teaching approaches, learning activities and intended outcomes.

Table 1 Description and examples of professional learning types

Type	Description	Illustrative Examples
Industry case study	An actual business scenario or challenge faced by business requiring students to apply analytical and problem-solving skills to explore solutions and/or critically evaluate those made by business executives.	Live case study Financial statement analysis
Industry simulation	Reality-based, experiential learning-centred approaches engaging students in real-time analysis and decision making in real-world situations within the safety of an educational environment.	Trading rooms Computer simulations Assessment centres
Industry practitioner delivery	Industry practitioners engage in the teaching program to deliver specialised lectures, present in seminar series, conduct professional development workshops or participate in assessment of student projects and presentations.	Guest speakers Industry adjuncts Seminar series

Industry mentoring	Matching students with a professional role model to enhance skills (instrumental) and attributes (developmental), investigating career options (transition and pathways), increasing understanding of the benefits of coursework (knowing and doing), and exposure to different thinking and learning methods.	Career mentoring Mentoring through internships
Industry study tour	Industry study tours include field trips, site visits and more lengthy tours. Industry study tours might last a day or a month and aim to create opportunities by travelling to industry-related places and situations, allowing students to apply theory, see theory in practice, ask questions of professionals in situ, compare and contrast different sites of work and connect curriculum and learning to professional practice.	Field trips Study tours Site visits
Industry placement	Industry placement immerses students in a workplace related to their discipline or career goals. Ideally, industry placement combines both class-based learning and structured and supported workplace activity with opportunities to reflect on learning and seek timely feedback on performance.	Cooperative education Internships
Industry competition	Industry competitions involve industry running, judging, sponsoring or in some other way supporting or encouraging students, often in teams, to compete against each other to achieve a business-oriented goal in a short time frame. Industry competitions include marketing strategies, business plans, business start-up ideas and online business games. Recognition and rewards are an important incentive in this category.	Business plan competitions Google challenge
Industry project	Industry projects include a broad range of activities and typically involve the sort of work undertaken in the workplace. Industry projects include the production of a workplace artefact (e.g. business plan, business report, market research) and management activities. So as well as providing a forum to apply theory to a real-world work issue, projects develop students' project management skills, team skills, communication skills and problem-solving skills.	Industry challenge Business improvement Student-run enterprise Applied research

An in-depth examination of each type of professional learning is presented in Appendix IV. The material in this appendix refers to the contemporary literature on teaching practice, intended learning outcomes and impact on student learning. They also include a number of brief examples presented as illustrations of the range of approaches drawn from the many case illustrations submitted.

Professional Learning Cases

Over 70 examples of professional learning were generously contributed by academics from universities around the country. These examples both informed the professional learning typology provided in the resource manual and illustrate the curriculum and pedagogical approach characteristic of each category (see Appendix III).

Teaching Approaches Matrix

The teaching approaches matrix (presented in Table 2) enables users of the online resource manual to search for and review professional learning cases for targeted graduate capabilities such as communication skills, working with others, research, technical skills and thinking. It also allows for educators to view examples based on the approach to teaching they wish to pursue, for example:

> *Information transmission*: a teacher-focused strategy with the intention of transmitting information to students, primarily facts and skills. It is assumed that students do not need to be active in the teaching process – they will learn by receiving the transmitted material.
> *Concept acquisition*: a teacher-focused strategy with the intention of students acquiring disciplinary concepts.
> *Concept development*: either a teacher–student interaction strategy with the intention of students acquiring an understanding of disciplinary concepts or a student-focused strategy aimed at students developing their understanding of concepts.
> *Concept change*: a student-focused strategy aimed at students changing their conceptions. As with concept development, students construct their own knowledge while the teacher focuses on what the students are doing in the teaching–learning situation, with students reconstructing their own knowledge to produce a new worldview or conception.
>
> (Trigwell & Prosser 2004)

Educators can use the matrix by selecting the capabilities they wish to develop in their students and then the teaching approach they want to adopt. The coinciding square for the capability and approach lists the types of professional learning most suitable for designing learning experiences. For example, academics interested in further developing the capabilities of communication and teamwork with a focus on concept change can inspect the teaching approaches matrix and find that professional learning types, including projects, competitions and simulation are suitable activities. By selecting one of these types the user is hyperlinked to an overview of the approach and how it builds or enhances a particular graduate capability. It also provides links to illustrative cases, enabling users to explore the range of approaches and good practice principles to support adoption or adaptation of approaches.

Table 2 Teaching Approaches Matrix

Approaches *Focus capabilities*	Information transmission *Teacher*	Concept acquisition *Teacher*	Concept development *Teacher/student*	Concept change *Student*
Communication Written Oral Listening Reading	Practitioner Field study Mentoring	Practitioner Field study Mentoring Case study	Project Placement Competition Simulation Field study Mentoring Case study	Project Placement Competition Simulation Case study
Working with others Teamwork Leadership Negotiating Community engagement	Mentoring	Mentoring	Project Placement Competition Simulation Mentoring Case study	Project Placement Competition Simulation Case study
Knowledge Theory Industry awareness	Practitioner Field study Mentoring	Practitioner Field study Mentoring Case study	Project Placement Competition Simulation Field study Mentoring Case study	Project Placement Competition Simulation Mentoring Case study
Understanding Intercultural Values Ethics Interpersonal	Practitioner Field study Mentoring	Practitioner Field study Mentoring Case study	Project Placement Competition Simulation Field study Mentoring Case study	Project Placement Competition Simulation Mentoring Case study
Technical ICT literacy Numeracy Occupation-specific	Practitioner Field study Mentoring	Practitioner Field study Mentoring	Project Placement Competition Simulation Field study Mentoring Case study	Project Placement Competition Simulation Mentoring Case study
Independent learning Reflection Time management			Project Placement Competition Simulation Mentoring Case study	Project Placement Competition Simulation Mentoring Case study
Research methodology Analysis Literature review Publications	Mentoring	Mentoring	Project Mentoring Competition Simulation Case study	Project Mentoring Competition Simulation Case study
Thinking Critical Analytical Problem solving	Practitioner Field study Mentoring	Practitioner Field study Mentoring Case study	Project Placement Competition Simulation Field study Mentoring Case study	Project Placement Competition Simulation Mentoring Case study

Good Practice Principles

The key professional learning characteristics have been identified as:

- Industry-referenced – explicit links to industry or professional bodies
- Curriculum currency – up-to-date issues and industry practice
- Integrated curriculum – development of professional capability by linking practice with theory
- Self-directed learning – fostering reflective practice and lifelong learning.

The following table presents a number of generalised good practice principles for each of the key characteristics, drawing from those identified for each category in the typology presented in the previous section. A number of illustrative strategies are identified for each category, along with associated benefits for student learning.

A number of good practice guidelines can be drawn from the literature, which Harvey et al. (1998) summarise as follows:

- Students should develop a work experience portfolio as they need to reflect on the process
- Assessment is required as formal recognition of the learning process and the assessment needs to meet academic standards
- Academic and administrative support are important and staff need appropriate training for their role
- In the contract between the student, university and industry-partner, the learning objectives and responsibilities of each party need to be clearly laid out
- Involving students in the negotiation of the details of the work placement or project is important for them taking ownership of the experience and having a stake in the outcomes. This also helps to protect students from exploitation, which can be an issue if the activity is not paid or the student organises the placement themselves
- Having a defined project has specific value and is seen by industry (and the student) as meaningful and with short-term and identifiable benefit.

Table 3 Good practice principles

Characteristics of professional learning	Good practice principles	Strategies	Examples	Student benefits
Industry-referenced	Explicitly linked to industry or professional bodies	• Develop activities in conjunction with industry • Liaise with professional bodies to align activities to their standards	Brandstorm Google AdWords Corporate Entrepreneurship	Making the learning 'authentic' through greater industry involvement makes the learning more relevant and so more valued

	Create and sustain relationships	• Engage with a variety of stakeholders to establish a network • Create a mutually beneficial relationship by ascertaining how each party can support each other, for example, provide benefits to industry practitioners, for example library facilities, professional development • Manage expectations and competing demands • Use small local businesses with a desire to grow their business	International Study Tours Global Consulting Lucy Mentoring Program	The opportunity for students to work with industry contacts who have an ongoing involvement in the program provides continuity for them. Expanding the network of contacts allows a wider range of experiences for students.
	Industry engagement needs to be resourced	• Investigate funding opportunities to develop projects that support professional learning • Take advantage of industry-sponsored events	Brandstorm Google AdWords	Providing fully resourced learning experiences for all students allows for equity.
	Industry understands student learning	• Integrate industry practitioners into the academic program through industry adjuncts as academics • Orchestrate regular meetings with the industry experts to discuss learning outcomes and methods of assessing to ensure mutual understanding		Making professional learning experiences align between academic and industry provides the students with structure, providing learning support from both academics and industry contacts.

Curriculum currency	Review and renew curriculum to embed contemporary and emerging industry issues and practices	• Encourage academics to maintain industry links and practice • Approach practitioners to highlight current industry issues • Renew curriculum each year to allow for contemporary issues • Review the processes through constant feedback to and from all stakeholders	Financial Markets Trading Simulator Global Consulting Brandstorm	Contemporary issues are more relevant to students for their learning and transition to careers.
Integrated curriculum	Purposeful design	• Align the curriculum to include activities that encourage development of professional capabilities and that assess in an authentic manner • Make the learning objectives (professional capabilities) explicit to students, industry and assessors • Design assessments that demonstrate application and understanding rather than knowledge and facts • Outline roles and responsibilities of students and industry • Make sure all parties are provided with full briefings to ensure the maximum benefit of experiences for all involved • Ensure equity and access • Encourage the use of technology to communicate, coordinate groups and track progress • Recognise achievement in a public manner, for example reward ceremonies	Career Mentoring Program Corporate Entrepreneurship	'Transparent' learning prompts student-driven learning.

	Learning approaches that apply theory to practice	• Embed professional learning activities into the curriculum rather than making them extra curricular • Make explicit links to professional practices within a theoretical framework • Prompt reflection between theory and practice	Ethical Decisions in International Business Corporate Entrepreneurship	Making the links explicit to students helps them to understand the application of theory in practice. Prompting reflection of experiences in relation to theory again reinforces the connection.
	Clear link between targeted capability and professional practice	• Present outcomes, for examples reports or presentations to an industry panel for comment • Relate experience to professional body requirements.	Lucy Mentoring Program Brandstorm Google AdWords	Understanding the links between their professional learning experience and capabilities required by professional bodies and industry helps students to value their learning and see how it can be applied after graduation.
	Creates a meaningful and relevant industry context for learning	• Use diverse, multidisciplinary team formation • Develop professional capabilities through practice with feedback		Replicating the real world in professional learning and providing feedback which relates to the workplace gives students the best insight into the lifelong aspect of their learning.

Self-directed learning	Student takes initiative and responsibility for learning, with academic as facilitator	• Prompt teams to detail their goals and individual responsibilities • Encourage self-awareness and self-management through reflective assessments and action planning to help evidence personal growth and self-development • Encourage collaborative learning, for example peer review and support	Lucy Mentoring Program Commerce Internship Career Mentoring Program Ethical Decisions in International Business International Study Tours	Self-awareness helps students appraise their progress and so control their learning. When undertaken this process results in continual development and so lifelong learning.
	Fosters adaptive experts through authentic, experiential educational experiences	• Provide real-life experiences with hands-on tasks • Assess for application/ understanding • Provide 'feedforward' to aid further development	WIL Industry Internships Personal Service and Professional Placement	Authentic experiential learning drives deeper learning, especially when the assessment requires students to demonstrate application, understanding and multiple perspectives. Feedback aids student progress and learning management.
	Learning from experiences in educational and other settings that develop the critical understandings, procedures and dispositions required of professional roles in a particular discipline area	• Involve students in the complete process, for example identifying an issue, proposing solutions to the issue, working through the solutions, reviewing the impact of the implementation	Commerce Internship Capstone simulation Commerce Internship	Providing experiences of complete processes helps students put their learning in context.
	Assurance of professional learning	• Prompt students to both gain an understanding of the standards expected in professional practice	Capstone simulation Google AdWords Brandstorm	Relating learning to the performance levels of professional

		and to self-assess their performance in these capabilities • Develop moderation to include industry experts in the assessments of students' professional capabilities		bodies and industry provides students with real-world standards so they can compare their performance to expectations at graduation.

Enablers and Impediments

Business academics identified several enablers for and impediments to developing and delivering professional learning curriculum in their own professional context. These have been categorised and are shown in Table 4. They present both opportunities and obstacles for successful development and implementation of professional learning.

Institutional context was an important factor for both the implementation and perceived value of professional learning. Many academics cited institutional process and protocols as somewhat cumbersome and impeding rather than enabling their practice.

> *School processes are not designed for such a 'different' unit so it is a constant struggle with the bureaucracy. Of the multiple stakeholders...the school and university have been the most difficult to deal with.* **(Academic)**

Some institutions had developed customised systems and dedicated resources to support the development and implementation of professional learning. Dedicated funding, often in the form of institutional teaching and learning grants, was likewise an important enabler for facilitating the development of professional learning. On the other hand, a lack of adequate resources was identified by many academics as limiting their ability to adopt professional learning approaches.

There was a perception, in some quarters, that professional learning is not rigorous and that the development of practice-based curriculum was inappropriate in higher education. According to this view, professional skills and employability are an appropriate focus in vocational institutions but not for university education providers who should be delivering knowledge and higher-order skills such as critical thinking.

> *Some colleagues show utter contempt and hostility towards practice-based learning, founded on a misplaced sense of protecting the traditions of academe. This is about providing a meaningful context for learning and, if done well, should not represent a diminution of academic rigour.* **(Academic)**

The ambiguity surrounding mutual benefit was ever present in exploring the question of encouraging industry–university collaboration in developing quality curriculum and learning experiences. Without the benefit to the industry partner being made clear, engagement in professional learning will be viewed merely as an exercise in good corporate citizenship rather than a relationship of mutual obligation and reciprocity. This ambiguity undermined the sustainability of

some industry–university relationships. The benefits for industry partners need to be clearly communicated if we are to develop long-term sustainable relationships.

> *Although there are real benefits for the company, the CEO or owner must be convinced of these, and must support this process, which exposes the business to detailed external scrutiny, and also be prepared to contribute their own time and effort.* (Academic)

The growth in professional learning curriculum initiatives has placed increasing demands on industry as the quantum of businesses required to support the increasing number of students has grown. In examples of good practice, effective marketing and relationship management have supported this transition and expansion.

> *More firms became involved as the project moved to the implementation stage, with 22 firms participating in the first professional development program and launch of the degree. By the end of 2008 this had grown to 49 firms and this continues to expand, with firms expressing interest in the project as knowledge of it spreads.* (Academic)

In other instances, using simulations, competitions and other types of professional learning decreases dependence on industry partners. Properly constructed, these quasi-authentic approaches provide rewarding learning experiences for students.

> *Google has strong brand recognition, a good reputation among students and businesses, and has worked with academics to produce a pedagogically sound student experience.* (Academic)

Strong support from alumni and using industry adjuncts were cited as important enablers of industry-engaged professional learning. Personal professional networks were often mentioned by academics as enablers to professional learning. However further requests for provision of professional learning experiences for subsequent student cohorts risked over-use of existing relationships. An over-reliance on the top 100 firms was thought by some to limit the considerable opportunity to collaborate with small and medium size firms.

While collaborative partnerships have expanded opportunities for the integration of professional learning and improved curriculum currency, many academics contributing to this project pointed to increasing demand across the range of academic work – teaching, scholarship, research, service to the university, external engagement and administration – as a major impediment to curriculum renewal, innovation and partnerships. Inadequate time and resources often necessitated considerable personal and professional sacrifice relative to more traditional approaches to curriculum development.

> *The time investment in developing this type or program is so intense that only highly committed (or completely crazy) staff are willing to undertake it. In the first year that I rolled out the full PBL program, I had only one day off (Easter Sunday) in a ten month period.* (Academic)

A significant challenge is managing academic workloads so that innovative high-quality teaching is not seen as a trade-off for other academic work, such as research. It is not sufficient or sustainable to depend on a limited group of dedicated and passionate teachers willing to sacrifice time to improve the student learning experience. Maximising opportunities for contextualised learning and industry engagement requires a commitment from university leadership, backed by real resources.

The role of the learning culture was a common theme in focus groups and workshops. Many participants drew attention to the considerable enthusiasm students demonstrate for experiential learning as both a motivation for and an enabler of professional learning. Drawing on the rich life and work experiences of students was thought to bring valuable insights into professional practice. Conversely student capability can be a barrier to effective learning where students lack the work (and life) experiences needed to maximise the benefits of professional learning opportunities. Many academics pointed to considerable student apathy about their learning and expressed concern that their choices revealed 'satisficing' rather than maximising behaviour. This was thought to be exacerbated by a strong economy and favourable graduate employment prospects. Students exhibiting poor attitudes and behaviour are not good ambassadors for the university and this situation can be an impediment to industry-engaged professional learning. For this reason many placement models were selective, an approach often aligned with industry partners seeing placements as a pathway in their screening and recruitment process.

While academics practising professional learning clearly identified benefits for students, they were less clear about the recognition and reward for their own involvement, especially in terms of career progression. While acknowledging that university promotion policies now recognise and reward innovative evidence-based teaching, the dominant perception was that it is nonetheless valued less than research and that prospects for promotion were enhanced by the latter, not the former.

Other challenges identified included a crowded curriculum, with internationalisation, sustainability, inter-cultural competence and the like all vying for limited space within the curriculum. In some instances, academics lack recent industry experience and this was thought to be a considerable impediment. Academics with recent industry experience believed professional learning occupied a natural and logical place in business higher education. This experience (and the accompanying professional networks this often brought with it) considerably enhanced academics' capacity to design and deliver professional learning curriculum. Most academics noted that designing effective assessment for professional learning was an ongoing challenge. There was agreement too that professional learning required a different pedagogical approach and skill set compared to the more traditional lecture–tutorial model. An absence of such skills and reluctance to change longstanding teaching approaches and work practices were seen as impediments to the expansion of professional learning beyond the enthusiasts.

Table 4 Enablers for and impediments to professional learning

Dimension	Enabler	Impediment
Institutional context	University and faculty mission and strategy that encourage and facilitate industry-engaged professional learning	Policies and protocols for external engagement can be cumbersome Professional learning perceived to be a lower priority relative to theory Perception of professional learning as not being rigorous, preferring theory over practice Academic resistance to change in work practices School and faculty bureaucratic processes can be cumbersome and restrict options Research ethics committee approval required Insurance requirements for off-campus activities
Industry engagement	Enthusiastic support and cooperation of industry partners and sponsors Committed alumni willing to engage in a range of activities that support student learning Industry-developed learning experiences Industry–university collaboration in the development of quality curriculum and learning experiences Leverage off academics' personal networks Strong links between university and local community Industry adjuncts drawing on professional experience and skills to	Industry value perceptions Time and capacity constraint: commitment required of industry partners and sponsors Quantum of businesses required to support professional learning approaches such as internships, projects and case studies Time and effort required to develop, build and manage external relationship(s) Benefit for industry: need to be clear about why, with whom, and for what outcome Person-dependent: engagement often based on personal professional networks

		deliver lectures and seminars	Excessive focus on major companies limits opportunities to engage with many small and medium size enterprises
			Variable quality of student/team work may discourage industry participation
Resources		Customised systems and dedicated resources to support the development and implementation of professional learning	When the initiative requires significant resources, a lack of access to these can limit or stifle implementation
		Dedicated funding to support professional learning pedagogies	Inadequate or limited resources provided to support specific initiatives or subjects adopting these approaches
		Industry sponsors providing cash and in-kind support	License fees required for some programs and databases
			Financial impost on students (e.g. international study tours)
			Large cohorts of students, particularly in large core subjects
Time		Dedicated and passionate teachers willing to sacrifice time to improve the student learning experience and maximise opportunities for contextualised learning and industry engagement	Amount of time required to establish and administer professional learning relative to more traditional curriculum and pedagogy
			Additional time required to develop curriculum and pedagogy and train staff is not always fully recognised in workload allocations
			Academic resistance to change in work practices because of workload implications
			Time and complexity of managing teamwork
			Balancing other work requirements/priorities, particularly research

Learning culture	Student enthusiasm for experiential practice-based learning Students bringing rich knowledge and experiences to class Active student associations organising professional development and industry networking events	Many students display 'satisficing' rather than maximising behaviour
Learning spaces	Investment in and design of dedicated learning spaces for particular types of professional learning	Lack of appropriately designed or equipped learning spaces to support professional learning
Expectations		Industry–student expectations gap Students with unrealistic expectations of roles and responsibilities during industry-based experiential learning Some students are not good ambassadors for their university
Recognition and reward	University promotion policies recognise innovative teaching and evidence-based practice Student prizes and celebration events	Questionable benefit of teaching innovation and industry engagement for academics' career progression Perceived relative value of teaching and research for promotions (i.e. research output more highly valued)
Curriculum	Regular renewal of curriculum to ensure currency and relevance to needs of business	Crowded curriculum, especially regarding disciplinary content
Assessment	Client-based assessment tasks	Designing assessment that is appropriate for professional learning Moderation of assessment when using external parties to assess student work

Offshore equivalence		Need to replicate learning experiences in offshore programs Absence of professional networks in offshore partner location
Evaluation		Evaluation of professional learning approaches and outcomes are anecdotal or absent
Capability	Academic staff with considerable and recent industry experience Professional networks and understanding of industry expectations Academic staff experienced in the development and delivery of professional learning curriculum	Academic staff who lack the professional experience and skills to develop professional learning curriculum Pedagogical approach requires different skill set compared with the lecture/tutorial model Academic staff require training in curriculum development and new approaches to teaching and learning Students lack work experience to maximise benefits from some professional learning activities
ICT	Online sites that support professional learning, including simulations, practice firms and competitions, enabling students to engage with teams overseas Development of information management systems to support professional learning (e.g. intern and mentor database, electronic journals and portfolios, online mentoring) Willingness of industry to provide access to online databases and commercial information	ICT systems can be slow and cumbersome
Accreditation	External accreditation bodies valuing or requiring professional learning	Tick box approach to covering accreditation requirements

Geography	Regional and rural campuses have limited opportunities for industry engagement relative to city-based universities
	Multiple campuses, including offshore

Curriculum Mapping Audit Tool

An evaluation instrument has been developed using a number of semantic deferential rating scales (see Appendix V). The dimensions explored include the student's role, the learning context, integration of professional learning within the curriculum and pedagogy. The evaluation tool can be used for an independent or external evaluation of professional learning curriculum or be modified and used as a student evaluation of professional learning.

The curriculum mapping tool illustrates how professional learning curriculum can be mapped against four domains:

1. Student engagement in learning – transmissive, reciprocal or immersed
2. Embeddedness – required, elected or selected
3. Industry engagement in curriculum – industry-referenced, industry-based or industry-led
4. Principally located – on-campus, off-campus or online

Assessment Guidelines

Recent evidence suggests that assessment in higher education is predominantly focused on certifying learning (Patrick et al. 2009) and that the assessment methodologies adopted do not necessarily concentrate on driving learning (Ramsden 1993; Bransford et al. 2000). Further, the notion that assessment should reach beyond graduation to nurture attitudes, skills and knowledge for life (Boud et al. 2001) means that it should be used for more than measuring learning objectives. Rather, assessment needs to be designed in such a way as to be sustainable, inform judgement, foster reflexive learners and develop students into practitioners. It is proposed that many of the assessment elements of professional learning foster the sustainable assessment features that promote learning after graduation. Professional learning can inform judgement and develop the necessary practitioner skills by emphasising the critical nature of professional capabilities in authentic settings. The often self-directed nature of this style of learning environment also encourages self-assessment and reflection.

The typology and the related examples were used to develop assessment guidelines (see Table 5) based on the following criteria of:

- ➢ Authenticity: industry representation input into professional learning assessment can assist with authenticity
- ➢ Assessment drives learning: through both formative and summative assessment – that is, assessment *for* learning and assessment *of* learning
- ➢ Sustainability: assessment should emulate real-world tasks that demonstrate meaningful application of essential professional capabilities

➢ Judgement: students can test their judgement, are able to see the consequences of their behaviour, and can debrief and discuss decisions

➢ Reflexive learning: reflective assessment components must be rigorous and develop personal and interpersonal awareness and behaviour

➢ Practitioner development: a scaffolded developmental approach to professional learning and assessment that develops students' sense of themselves as professionals in training

➢ Feedback: provide opportunities for timely and constructive feedback around clear criteria

➢ Constructive aligning assessments with learning outcomes and teaching approaches: explicit teaching aligned with assessment of professional learning qualities

➢ Moderation of marking: industry practitioners involved in actual grading need to understand the teaching and learning policy context of the university, the AQF level of the qualification and professional bodies' requirements to ensure consistent marking

➢ Explicit criteria and standards: expectations of academic standards and conventions and business standards need to be articulated. Students need to be able to negotiate both discourses.

Table 5: Assessment guidelines

Tip	Example
Authenticity • Assessment should emulate real-world tasks that demonstrate meaningful application of essential professional capabilities	**Ethical decisions in international business** Assessment supports transfer of learning from the classroom to the workplace by facilitating student interaction with business partners, focusing assessment on applied topics. **Capstone simulation** Students demonstrate the professional skills employers expect from competent business graduates in a problem-based learning experience within a simulated business environment. **Global consulting** Students gain understanding of contemporary business in real-life settings with access to experts, then explore the company in assignments that identify problems and suggest how to solve them. **Assessment centres** Centres design activities that are developed and run in collaboration with HR recruitment experts.
Drives learning/for learning/encourages learning • Assessment of professional learning should include both formative and summative assessment – i.e. assessment *for* learning and assessment *of* learning	**Ethical decisions in international business** Students work through ethical questions in team assignments structured to benefit from team members' diverse experiences and expertise. Questions require team members to work cohesively to reach decisions in situations where there is no one right answer. Other assessment includes individual and team quizzes, team presentations, individual reflective journals and reports.

Sustainability – industry currency	Corporate entrepreneurship
• *Appropriate* industry representation provides *input* on how to embed professional learning in student assessment	A suitable case study business is identified (a medium size business with some background in corporate venturing/entrepreneurship), with the key decision maker prepared to open the business to this process.
	Assessment centres
	Assessment for Leadership mirrors a day of a typical executive training program, where HR experts help design assessment activities to ensure relevance and currency. (Assessment centres are one of the best ways to predict 'successful on-the-job performance as they generate objective, observable data on candidates'.)
	Financial markets trading
	With simulator activities designed around current real-world events, students keep in touch with current affairs (e.g. RBA interest rate announcements) looking at the same data at a given time as counterparts in the real ANZ workplace.
Judgement	**Trading rooms**
	Students see the consequences of their actions without risking loss of real economic worth, testing their judgement and personality for this role and later debriefing and discussing their decisions.
Reflexive learning	**Ethical decisions in international business**
• Reflections are a popular assessment type in professional learning experience but they must be rigorous, academic and structured	A learning journal deepens students' generic ability to learn from experience, an ability valued in any career context.
	Financial markets trading
	Managing their own banking transactions, taking responsibility for correcting their errors and omissions, students create a full audit trail of the process, learning about diverse aspects of financial markets trading.
	International study tours
	Reflective practice techniques are used as part of an ethical management strategy for globally networked organisations.
	Commerce internship
	Learning through the internship program is supported by reflection modules that require students to reflect on their learning at host institutions, which helps the student evidence professional growth and self-development.
	Security dealing room
	Assessment includes a reflection on performance in the simulated role: students are required to provide a 'summary of the Central Treasury performance in Quarters

	1–3, including the mistakes you made and the lessons you learned'.
	Role plays
	Final assessment requires students to reflect on their experience in an individual journal after they have taken part in a group blog with students, an industry representative and the teacher, and after they have participated as both designer and player in a role play.
Practitioner development • If team assessment is included, teaching and learning activities need to cover how to work in teams • *Developmental approach* to professional learning – 'scaffolding'	**Corporate entrepreneurship** Students use a questionnaire, together with information from a tour and briefing session, to prepare an individual set of recommendations and a plan for improving the ability of the business to support corporate entrepreneurship activities. **Financial markets trading** In a supervised environment participants learn communication skills and teamwork, specialised computer skills, application of market theory to practice, rapid decision making under pressure, complex problem-solving skills and conflict resolution. **Capstone simulation** Striving to achieve competent business outcomes in this simulation, students overcome a series of challenges, applying business knowledge and fine-tuning professional skills through teamwork and individual contributions. **International study tours** Assessment tasks may include a group presentation, a business report, a reflective learning journal or an individual assignment. **Modelling workplace artefacts** Assignments emulate normal workplace practices, developing skills directly transferable to the workplace, especially independent learning skills such as information literacy skills.
Feedback • Opportunities for timely and constructive feedback	**Corporate entrepreneurship** A week after lectures/seminars, and after they have assessed the company report, students meet the CEO to ask questions about the business. At a final session students present their individual reports and recommendations in poster format, allowing everyone to see how different students have treated the same topic. Staff, students and the CEO provide feedback and generate discussion. **Assessment centres** Students receive feedback throughout the day from HR

	experts and events conclude with an industry panel discussion.
	Nature-based curriculum Industry experts provide feedback to students on their assessment.
Constructive alignment • Explicit teaching and assessment of professional learning (professional learning qualities are mentioned in the *criteria for assessment*) • Professional learning activities are aligned to assessment • Capstone assessment tasks must align with what students have learnt throughout their degree	**Global consulting** Field trip activities are aligned with some subject assessment items, with students selecting a company, identifying its strategic issues and suggesting appropriate courses of action.
Moderation of marking • Exposure to industry representatives through involvement in summative assessment should be managed by academic staff members and should have gone through formative assessment stages • Assessment of professional learning involving teams should include peer review processes to help academic staff reward the good work of individuals • Industry practitioners involved in actual grading need to understand the Teaching and Learning Policy context of the university, and the AQF level of the qualification and professional bodies' requirements.	**Adjunct professors** Industry adjunct programs embed industry practitioners as faculty members, facilitating undergraduate seminars and assisting with case study development, assessment moderation and curriculum review and renewal.

Industry Engagement

On reviewing the case studies it was evident that there were a series of common factors involved in productively fostering industry engagement. These have been collated to provide guidance to educators using professional learning.

Table 6: Industry engagement guidelines

Factor	Support Guidance
Strong, long-term reciprocal partnerships with industry and relevant professional associations	Emphasise the benefit for industry: need to be clear about why, with whom, and for what outcome Ensure the role of industry partnerships within the university and community is acknowledged Create multiple points of engagement with international industry, government and third sector organisations Use multiple points of contact with individuals (suppliers/creators) and business (producers/service providers) Create a point of contact with the CEO of the business and key functional area managers Include engagement with community organisations, including the not-for-profit sector Use academics' professional networks Source participating businesses through the University's Careers and Employer Relations Office Ensure a sound relationship with professional bodies Engage with alumni willing to participate in a range of activities that support student learning
Student interaction	Student teams and academic work directly with the business client Senior managers/CEOs/leading experts are invited onto panels to engage with students
Real-life, current experiences	Promotion and demonstration of industry capabilities through the use of simulations Access to current data through professional associations

Mentorship	Industry engagement is achieved through the recruitment, selection and retention of appropriate mentors from public and private sector organisations and careful matching with students
	The Careers Centre is used as the contact point for potential industry mentors
	Students engage directly with industry mentors and supervisors
	Industry mentors gain from the experience
Industry-developed learning experiences	Potential for industry-led activities, e.g. Google, L'Oreal
	University-initiated, industry-partnered competitions
	Industry assessment or judging of competitions and project work
	Organisational sponsorship
	Develop resources and activities through in-kind sponsorship from industry
Communication	Student engagement: initial briefing, mid-term consultation and final presentation
	Key to success: input from interested and carefully selected industry partners who are briefed on the purpose of the course overall and the intended learning outcomes from the site visits in particular

Online Manual and Interactive Web Resources

The online manual (www.embeddingprofessionallearning.com) draws on contributions from business academics across Australia, a workshop and survey of all Australian university business Associate Deans T&L, a series of structured interviews, and multiple focus groups and workshops conducted across five states. The purpose of the manual is to illustrate a range of approaches to professional learning in Australian business schools and to assist business academics who wish to adopt approaches that meaningfully engage with industry and the professions.

These have been used to develop a set of interactive web resources. The site provides information to the sector on the project and its findings, as well as incorporating online tools for educators to use to support their practice of using professional learning.

Chapter 5 Evaluation

Most Valuable Outcomes and Deliverables

There have been a number of valuable outcomes from this project. The foundation for all the work stemmed from the formation of the Professional Learning Typology. This framework provided a structure for developing resources and guidance for academics interested in embedding professional learning into the business curriculum. This typology was further enriched through the wide array of illustrative cases contributed to the project from across Australian Universities. These cases provide authentic overviews of how professional learning can be implemented in practice and act as a catalogue of ideas for academics looking for fresh ideas and inspiration for professional learning activities.

The detailed information collected for each of the illustrative cases enabled the development of tools to support embedding professional learning. A set of good practice principles, enablers and impediments, and an auditing tool have been collated to provide guidance to educators at a variety of levels from teaching staff implementing professional learning in their practice to senior institutional managers who are constructing strategies for industry engagement and professional learning.

An interactive teaching approach matrix was developed to identify professional capabilities fostered by the different types of professional learning approaches. This tool is available online and provides guidance on good practice principles and enablers and impediments for each category of the typology. Illustrative cases provide examples of how to develop these capabilities as a prompt for designing professional learning activities.

Factors that Contributed to the Project's Success

Communities of Practice

The cross-disciplinary and cross-university focus groups approach to engaging enthusiasts and mapping practice proved effective in engaging academic colleagues in the project. Focus groups were crucial to gathering examples of professional learning practice in the early stage of the project and disseminating learning and innovative practice in the latter phase of the project. The team believes that the focus group approach provides a foundation for the formation of communities of practice in each state to optimise the potential for broad dissemination and embedding of innovative approaches to professional learning.

Industry Advisory Group

An Industry Advisory Group was established to critically review project methodology; review key findings on professional learning curriculum and pedagogy; examine university–industry engagement approaches; and advise on dissemination beyond the higher education sector. Members of the advisory group have a deep connection and interest in tertiary education. Some are educational representatives for peak professional associations and will continue to play an important role in further disseminating the finding of this project and in ongoing development of professional learning in higher education.

ABDC Teaching and Learning Network

As a nation-wide ABDC auspiced project, the ABDC T&L Network was critical to the success of the project. As leaders of teaching and learning (T&L) in their respective institutions the Assistant Deans T&L were an important means of engaging academic colleagues in the project and disseminating project findings. All project-related communications to business academics were distributed via the Assistant Deans T&L. These included scheduled focus groups and workshops and the case study pro forma used for gathering illustrative cases of professional learning practice. The Assistant Deans T&L who hosted focus groups and workshops provided considerable administrative support in managing events that were critical to the project's success.

As a national community of practice the ABDC T&L Network provided a forum for ongoing review of project findings and for garnering further support for the project. Workshops were conducted at T&L Network forums to explore professional learning within institutional contexts; industry engagement in developing, delivering and evaluating professional learning; illustrations of good practice; and perceived barriers and enablers to embedding professional learning in the business curriculum.

Project Logic Model

Developed as part of the submission, the detailed project logic proved to be an effective project management tool that assisted with planning, implementation and evaluation by identifying and mapping logical links between program activities, outputs and intended outcomes.

It enabled a periodic review of project objectives and intended outcomes for the purpose of checking progress and validating our approach. An action research methodology, with ongoing review and modification of our approach to project implementation, ensured that project outcomes and benefits were maximised. Periodic review of progress against targets identified in the implementation plan ensured that the project was being implemented as planned and that project team members were cognisant of their respective roles and responsibilities to the team.

Factors that Impeded Success

Engaging Academics

While focus groups and workshops were an effective way of promoting the project and bringing together enthusiasts, it was sometimes difficult getting a critical mass of academics to attend. This reflected a scarcity of time rather than a lack of interest in the project or lack of desire to share practice. Many academics were keen to contribute to the project but were restricted by location (outer campuses) and travel time, away on business or had teaching commitments.

In addition to such work and time constraints, it often seemed that there were multiple ALTC projects seeking input from Assistant Deans T&L and academics more generally. Combined with institutional initiatives and individual research agendas, these multiple opportunities to participate in national projects compete for limited time and attention in a relatively small pool of prospective participants.

Case Study Collection

Considerable time was expended developing and promoting the case study pro forma to collect examples of professional learning. However we had a relatively low response rate, and submissions often lacked the detail and depth required to inform the development of the typology or foundation for identifying exemplars and good practice guidelines.

While email reminders via Assistant Deans T&L produced some additional responses, we shifted to a more targeted approach to identifying individual academics engaged in professional learning. This included face-to-face and telephone interviews with academics and provision of support to write up their illustrative cases. This proved to be the single most effective way to get the case studies written.

Staffing

Staff turnover disrupted the momentum of the project. The original project manager left the project after six months, and several project officers employed on short-term contracts left before completing their terms and the associated project work. This included the resignation of the ABDC T&L Network level Dissemination and Embedding Manager who had worked across three related ALTC projects. His departure required the development of a project-specific dissemination and embedding strategy.

Lessons Learnt

Focus groups were an effective forum for communicating the purpose of the project and for engaging with enthusiasts. The project team quickly realised that this was an effective mechanism for ongoing engagement with academic colleagues in the project and a vehicle through which project learning could be disseminated and embedded. Focus groups were periodically reconvened to review project findings and provide input into the development of the typology and identification of good practice principles. The focus groups and workshops were replicated in major cities across Australia to ensure that most colleagues who wished to participate could do so.

The Industry Advisory Group demonstrated a genuine interest in and excitement for the project. Advisory Group members were keen to engage their constituents in the project and offered to conduct forums to facilitate 'meaningful engagement' in the project. It was made clear that their constituents would want to be actively engaged in the project rather than passively receiving project findings. Given the project scope was to take stock of current practice, any meaningful engagement with industry in the project findings could not take place until the typology and illustrative cases had been developed. This is an important next step in the project and it is expected that the ABDC Teaching and Learning Network will build on the momentum created during this project to work with professional associations and industry representatives more generally to review current practice and explore new and creative approaches to industry engagement in the business curriculum. The institutional project members will explore such opportunities via local communities of practice.

Concluding Comments

We conclude with a synthesis of comments made by members of the Industry Advisory Group on key issues and challenges identified during the project.

The role of universities in developing graduate attributes and capabilities is vital. Academic performance does not necessarily translate into effective performance in a business work environment. The transition from education to professional practice is not seamless, and many find it a difficult one. Graduates can be strong on technical skills but often find the 'rough and tumble' of industry difficult to manage. University education that includes professional learning experiences that expose students to a professional environment and business practices, whether through cooperative education or business simulation, is crucial to effective transition from education to employment and career. The opportunity for ongoing practice, critical review and reflection throughout the student learning experience will enhance effective transition from learner to professional practitioner.

The business world typically does not look or operate in the way it is usually portrayed in textbooks and curriculum. The business environment is dynamic, not linear. The prevalence of a linear or modular curriculum was thought to be problematic. Professional learning should be embedded via creative curriculum design that enables students to integrate knowledge across business disciplines and facilitates a better understanding of the relationships and interdependence of the key functional areas of a business. Assessment often focuses on tangible artefacts as outputs of the learning process when there are many intangibles that impact on graduate capabilities, employability and career transitions.

> *Academic transcripts provide no clues as to the process by which business graduates acquired these skills and knowledge, nor the manner in which they reflected on that learning and knowledge. We are interested in attributes and capabilities beyond academic knowledge and technical skills. Organisations are made up of people and teams – interpersonal skills are critical. Do graduates have the capacity to create a conversation? Can they effectively navigate the organisation?* **(Industry Association Representative on the Industry Advisory Group)**

Moreover, business curriculum needs to be more responsive to the changing business environment, notwithstanding the university contribution to the creation of new knowledge and improved business practice.

Providing authentic learning experiences and positive role models is crucial for having an impact on the student learning culture. Highlighting career transitions and pathways was thought to be important in changing student attitudes and behaviour. Students need a better sense of possible careers and how their behaviour and decision making today will impact on future opportunities and life experiences. A business curriculum that is not effectively integrated – with lots of individual and seemingly unconnected subjects and assessments – contributes to student perceptions of university as a 'hurdle' rather than a learning experience with clearly defined and identifiable outcomes. The challenge is to help students understand possible outcomes before they get there, as well as the link between their approach to education and life experiences.

The student learning culture was seen as a particular challenge as many students are only partly engaged in their education. Students spend considerable time in paid employment, not necessarily connected to their coursework, with students often seeing learning and work as distinct and unconnected activities. We need to challenge student perceptions and values about the purpose of university education – and the behaviour that results – so that education is seen as integral to their life and career journey, a journey in which they are immersed as effective learners. Industry is looking to recent graduates to demonstrate a breadth of experiences indicative of broad-ranging capabilities and interests. Students should have an opportunity to engage in challenging problems that are unbounded, contextualised and provide an opportunity to demonstrate creativity. Curricula, co-curricula and extra-curricula activities should provide opportunities for immersion in social and cultural activities, including volunteering. We need to better integrate academic work with the workplace and vice versa. We need to move away from a framework that compartmentalises life experiences – social, study, sport, work – and encourage students to connect the seemingly disparate parts of their lives. Making these connections will better prepare and enable new graduates to straddle their personal and professional lives.

As employers of graduates, the business sector has a vested interest in the professional development of students as prospective employees. These are the next generation professionals and business leaders. Collaborative approaches to curriculum development and student learning should be further explored via more sophisticated and clearly articulated university–industry engagement and partnerships. University–industry collaboration should ideally occur at the conceptual stage of program and curriculum development. At an operational level a detailed implementation plan with clear tasks and responsibilities will assist in articulating the mutual responsibility and obligation involved in developing and sustaining the profession. Fundamental to building and monitoring relationships is the identification of intended outcomes and benefits.

Nevertheless universities and professional associations need to be realistic about what is achievable. The benefits for industry can sometimes be ambiguous and collaboration in whatever form – hosting student placements, assisting with program advisory committees, developing industry-based projects – is time consuming. There are considerable costs for all parties involved in university–industry engagement. The difficulty and cost associated with industry engagement should not be underestimated. A detailed cost-benefit analysis of existing and proposed relationships and strategies is needed.

> *Conceptually this is a very complex and challenging issue for which there is no simple solution – there is no obvious model that presents itself.* **(Member of the Industry Advisory Group)**

Approaches by universities seeking collaboration in curriculum renewal and student learning should communicate both their needs and the mutual benefits of partnership so businesses can understand exactly what is on offer and what is expected. As networks expand and relationships develop additional opportunities for collaboration will present themselves. While recognising the need for flexibility, a structured and strategic approach to building relationships is preferable to a reactive and opportunistic one. Specific and tangible immediate benefits for industry might be difficult to quantify but they are critical to building a commitment to engage. A long-term view needs to be embedded in the conceptualisation and actualisation of any partnership. This will help minimise the

reactive approach and develop sustainable and mutually beneficial partnerships. Effective communication will help build industry, government and community sector awareness of opportunities for collaboration with universities, such as using student teams to provide client service support around project-based tasks.

Innovation and creativity, and the process of change that accompanies them, require guidance, encouragement and support from university leaders. Curriculum innovation that is informed by industry and the professions needs to be embedded in university practice, with explicit recognition and reward for academics involved in this process. The perception that innovative professional learning curriculum and industry engagement is not valued and rewarded undermines sustainability and good practice. Universities should model outstanding work and reward excellence.

There has been evidence of a gathering momentum for university–industry engagement over the life of this ALTC project. There has been greater attention to engagement at the strategic level and the integration of professional learning in the business curriculum is becoming more commonplace, extending beyond traditional experiential learning models.

Chapter 6 Sharing Project Outcomes across the Higher Education Sector

Dissemination and Embedding Strategy

An integrated embedding strategy was developed and implemented, drawing on the ALTC Dissemination Framework, which employs 'engaged' and 'information-sharing' features (see http://www.altc.edu.au/resource-dissemination-framework-altc-2008).   This strategy was to be implemented simultaneously within each of the three ABDC T&L Network follow-on projects.

There were two main components to our strategy. The first part of the embedding strategy focused on ensuring that ongoing dissemination and embedding occur internally within the four universities managing this project. This involved three levels of activity:

1. establishing communities of practice and engaging leaders
2. systematising through curriculum, policies and procedures
3. development of supporting resources.

The second embedding strategy focused on ensuring dissemination and embedding of project outcomes through systemic engagement with the ABDC T&L Network, an existing, well-developed community of practice that meets regularly. Other dissemination and embedding strategies included presentation of findings to the ABDC, ABDC T&L Network and conference presentations. A key element of the dissemination strategy was a series of (five) state-based professional development workshops to showcase and disseminate the framework and paradigmatic case studies. This assisted with discussion and encouragement of a professional development perspective within the business curriculum at institution, faculty and staff levels. In addition, the provision of the case studies on the project website (www.embeddingprofessionallearning.com) will contribute to resources available for broad-based dissemination.

Together these strategies provide the potential to increase capacity in Australian business faculties for the customisation and adoption of professional learning.

The development and implementation of a communication and dissemination strategy with the participants from the institutional partners was an integral part of the project plan. The participating business faculties contributed to their own institutional priorities in this area, promoted informed policy debate and facilitated practice dissemination to other universities' academic leadership teams, staff development units and other faculties.

The project team was in effect a community of practice with a shared commitment to collectively promoting the importance of quality business teaching in higher education and professional learning.

Conference Dissemination

Conference	Date and Place	Title of Paper	Presenter
Australian and New Zealand Academy of Management Conference**,** *Managing for Unknowable Futures*	December 2010, Adelaide	Embedding Professionally Relevant Learning in the Business Curriculum through Industry Engagement	Associate Professor Michael Zanko
ATN Assessment 2010 Conference: *Sustainability, Diversity and Innovation*, sponsored by the Australian Technology Network (ATN).	November 2010, Sydney	Assessing for Futures – Can Professionally Relevant Learning provide an Environment to Support Learning beyond Graduation?	Professor Tracy Taylor & Dr Romy Lawson
Teaching and Learning Symposium, UTS	September 2010, Sydney	Embedding Professional Learning in the Business Curriculum	Associate Professor Theo Papadopoulos and Dr Romy Lawson
Australian Collaborative Education Network 2010 National Conference	September 2010, Perth	Engaging Industry: Embedding Professional Learning in the Business Curriculum	Associate Professor Theo Papadopoulos
Teaching and Learning Seminar Series, The University of Melbourne	March 2010, Melbourne	Engaging Industry: Embedding Professional Learning in the Business Curriculum	Associate Professor Theo Papadopoulos & Dr Carolyn Woodley
Business Education Symposium, ABDC & BIHECC	July 2009, Melbourne	Engaging Industry: Embedding Professional Learning in the Business Curriculum	Associate Professor Eveline Fallshaw

Australian Collaborative Education Network 2010 National Conference	September 2010, Perth	Professionally Relevant Learning: Preparing Students for the Recruitment Process	Dr Carolyn Woodley & Sue Johnston
WACE International Conference on WIL, *University–Industry Collaboration for Real Life Learning*, Hong Kong	February 2010, Hong Kong	Engaging Industry in Assessment	Dr Carolyn Woodley & Sue Johnston
Business & Economics Society International (BESI) Conference	July 2010, Athens	Student-run Enterprises: Rockin' in the Real World	Associate Professor Theo Papadopoulos & Adrian Marchesani
Annual International Conference on Tourism, Academy of Tourism Research & Studies	July 2010, Athens	Engaging Industry in Tourism Curriculum: Nature-based Tourism at Victoria University	Dr Carolyn Woodley & Dr Martin Fluker

Workshops

Academics from over 30 universities have participated in either focus groups or workshops on professional learning. These are summarised in the following table.

Table 9: Workshops

Date	Location	Institution/Host	Number of participants	Number of HE institutions represented	Number of other institutions represented
Oct. 2008	Melbourne	RMIT University	17	8	
Oct. 2008	Melbourne	Victoria University	16	2	
Feb. 2009	Tasmania	University of Tasmania (ABDC T&L Network Symposium)	35	30	
April 2009	Brisbane	Queensland University of Technology	13	2	
May 2009	Adelaide	University of South Australia	7	1	
May 2009	Perth	The University of Western Australia	11	3	
Aug. 2009	Wollongong	University of Wollongong	10	1	
Aug. 2009	Sydney	University of Technology, Sydney	6	1	
Oct. 2009	Melbourne	ABDC & BIHECC sponsored	>100	30	20

		Business Education Symposium			
Dec. 2009	Melbourne	Innovation and Business Skills Australia (IBSA), Presentation of project objectives and progress to *Business Services Sector Advisory Committee*	13	1	9
Feb. 2010	Canberra	University of Canberra (ABDC T&L Network)	30	30	
Mar 2010	Melbourne	The University of Melbourne	15	1	
May 2010	Melbourne	Victoria University	9	2	
May 2010	Wollongong	University of Wollongong	7	1	
May 2010	Sydney	University of Technology, Sydney	8	2	
June 2010	Perth	Edith Cowan University	18	1	
June 2010	Perth	The University of Western Australia	8	1	
June 2010	Perth	Curtin University	7	1	
July 2010		(ABDC T&L Network)	30	30	

Participating Universities

The following universities participated through teaching and support staff attending focus groups, submitting examples of professional learning, responding to email questions and hosting and attending dissemination workshops:

- Australian Catholic University
- Central Queensland University
- Charles Sturt University
- Curtin University
- Deakin University
- Edith Cowan University
- Flinders University
- Griffith University
- James Cook University
- La Trobe University
- Macquarie University
- Monash University
- Queensland University of Technology
- RMIT University
- Swinburne University

- The University of Adelaide
- The University of Melbourne
- The University of Newcastle
- The University of New South Wales
- The University of Queensland
- The University of Sydney
- The University of Western Australia
- University of Ballarat
- University of Canberra
- University of South Australia
- University of Southern Queensland
- University of Sunshine Coast
- University of Tasmania
- University of Technology, Sydney
- University of Western Sydney
- University of Wollongong
- Victoria University

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Appendices

Appendix I: Program Logic Model

Activity	Output	Outcome
Identify Current Policies and Practices	Literature Review	Provide strong theoretical framework and national/international context for the project
	Map institutional/faculty policy and external engagement strategies to support professionally relevant learning	Increase knowledge and understanding of the institutional context within which professionally relevant learning takes place
	Database of professionally relevant learning practices	Increase knowledge and understanding of the range of practices and external engagement strategies
Develop Framework or Typology	A typology of professionally relevant learning in the business curriculum	Framework for categorisation of existing practice to inform policy, curriculum renewal and localisation/customisation
	Map external engagement at the three stages of development, delivery and/or evaluation of professionally relevant learning	Increase knowledge & understanding of the extent, nature and value of external engagement at each of the stages
	A number of brief case studies aligned to each category of the typology	Increase knowledge of the breadth of practice and external engagement strategies for each category identified
Paradigmatic Case Studies and Good Practice Document	Develop paradigmatic case studies as exemplars of good practice prototypes for each category in the typology	Increase knowledge of good practice principles in professionally relevant learning.
	Good practice principles document	Provide guidelines, key enablers and success factors
	Develop FAQS sheets for each paradigmatic case study	Provide deeper knowledge and learning in support of asynchronous dissemination
Dissemination & Embedding	Presentation of Findings: ABDC and ABDC T&L Network	Design and integrate policies and procedures reflecting professionally relevant perspectives in business curriculum, e.g. course approval processes, documentation, etc. Systematising through curriculum, policies and procedures.
	Presentation of Findings to BIHECC	Develop a national approach to effective engagement between faculties and business/professional associations
	Conference Presentations	Increase and sustain engagement and participation with alumni, industry and the professions

	Publications: academic journals, business periodicals	Share knowledge of research and good practice nationally and internationally, including non-business disciplines
	Final Report: Website	
	Support Resources & Databases: Typology & Paradigmatic Case Studies on project website	Resource portal for broad based dissemination
	Professional Development workshops to showcase and disseminate the typology and case studies	Increase recognition at the institutional, faculty and staff levels of the need for a professionally relevant perspective to the business curriculum. Increase capacity in Australian business faculties for staff adoption and customisation of the profession
	Establish Communities of Practice	Build capacity in 'real world learning' strategies and communities of practice through peer partnering, curriculum mapping and analysis
	Formative Assessment	Determine efficacy of processes; both project implementation and those developed as project outcomes; information-driven reflective and improvement focused approach to project implementation and management.
Evaluation	Summative Assessment	Evidence-based determination of the merit and worth of the primary intended outcomes of project. Capturing and assessing the value of significant unintended outcomes
	Learning for the future	Learning and recording learning that will help to enhance future project (or phase) design and implementation
	Progress Report: ABDC	Engage Business Deans as critical friends and change agents to support local adoption of innovative practice
Reporting	Progress Report: ABDC T&L Network CoP (Biannual)	Build on existing collaborative approach (utilised during DBI scoping study) for critical, constructive review and feedback.
	Progress Reports (ALTC)	
	Final Report (ALTC)	Identify and implement processes for national benchmarking of good practice in the business curriculum.

Appendix II: Project Stages

Timeline	Key tasks
Stage 1: Planning and preparation	
	Establishment and refinement of project:
	• Develop detailed project management plan
	• Employ project manager and establish reference group
	• Develop and submit ethics application
	• Project manager develops and implements a project team communication strategy, including records, meetings, repositories, reporting etc.
	• Project manager workshop with Embedding and Dissemination Manager (see 6.1)
	• Confirm external evaluator and develop evaluation framework
	• Project team reflects on and documents learning from Stage 1
Stage 2: Project implementation	
	Phase1: *Collect and synthesise existing information on professional learning through*
	• Extend the initial literature review and outcomes presented in the scoping study to provide a strong theoretical framework and national/international context for the examination of professional learning through industry engagement
	• Identify current Institutional/faculty policies and practices: research to review institutional and faculty mission statements (sample frame of 38 ABDC T&L Network faculties) to gauge institutional and faculty vision for professional learning. This will increase knowledge and understanding of the institutional context and support structures within which professional learning takes place. Document analysis of selected course review policies and procedures to determine extent of external professional/industry input.
	• Undertake survey of academics: produce an inventory of practice to facilitate categorisation and development of a framework, including documenting variation within each category. Collect information on professional learning practice of individual business academics using a case studies methodology to provide a comprehensive database of practices, inviting participation from all 38 ABDC faculties. Identify level of industry/professional association input into the development, delivery and evaluation of professional learning. Use online form to collect information, which is automatically added to a spreadsheet.
	• Use ABDC and T&L Network's national reference group to workshop and explore new and innovative forms of sustainable industry engagement in the business curriculum
	• Undertake formative evaluation by project team and document learning from *Phase 1*
	• Report progress to the ABDC T&L Network Executive and project reference group
	• Disseminate project learning by 'workshopping the findings' at biannual T&L Network meeting
	Phase 2: *Develop framework*
	• Map external engagement at the stages of development, delivery and evaluation of professional learning to increase knowledge and understanding of the extent, nature and value of external engagement at each of these stages
	• Develop a framework of professional learning in the business curriculum for categorisation of existing practice to inform policy, curriculum renewal, customisation and localisation (in the case of off-shore delivery). If practice can be succinctly and definitively categorised, a typology will be developed. Multiple cases within each category of the framework provide for triangulation to validate the construct design and to identify opportunities for replication and adaptation.
	• Brief case studies: use the inventory of practice collected in Stage 1 to compile numerous

case studies aligned to each category in the framework. This will illustrate the breadth of practice and external engagement strategies for each category
• Formative evaluation by project team and document learning from *Phase 2*
• Report progress to the ABDC T&L Network and the project reference group

Phase 3: *Develop paradigmatic case studies*
• Develop detailed paradigmatic case studies as exemplars of good practice prototypes for each category in the framework. These detailed case studies will showcase good practice and provide guidelines for implementation. They are an essential tool in our strategy to disseminate and embed good practice principles in professional learning and external engagement
• Develop FAQ sheets for each paradigmatic case study to provide deeper knowledge and learning in support of asynchronous dissemination
• Industry and professional association review of the framework to explore innovative approaches to academe–professions–industry liaison and curriculum renewal
• Formative evaluation by project team and reflection on learning from *Phase 3*
• Year 1 report submitted to the ALTC and the ABDC
• Dissemination of project learning by 'workshopping the findings' at biannual T&L Network meeting
Phase 4: Dissemination and embedding good practice.
• Work with the Dissemination and Embedding Manager to develop dissemination strategy for the project, aligned to other ABDC T&L projects
• Develop resources and databases: framework and paradigmatic case studies posted on the project website
• Professional development workshops (one in each of the five mainland states) to showcase and disseminate the framework and case study exemplars
• Establish communities of practice at project team institutions
• Presentation of findings: ABDC, ABDC T&L Network and BIHECC
• Business and academic conferences and publications
• Formative evaluation by project team and reflection on learning from *Phase 4*.
Stage 3: Review and reporting
• Evaluation report by external evaluator. The evaluation plan is framed around the underlying project logic and continues throughout each stage of the project.
• Final report submitted to ALTC, ABDC, T&L Network and project reference group

Appendix III: Professional Learning Case Study Contributors

Case Study	Type of PL	Contributor	Institution
Live case study	Industry case study	Patricia Fulcher	Murdoch University
International case study	Industry case study	Henriikka Clarkeburn	The University of Sydney
Corporate entrepreneurship	Industry case study	Peter Balan	University of South Australia
Financial trading Room	Industry simulation	Stuart Thomas Peter Whelen	RMIT University, Queensland University of Technology
Modeling workplace artifacts	Industry simulation	Ian Fargher	University of Wollongong
CAPSIM	Industry simulation	Kyle Bowyer	Curtin University
Guest speakers	Industry practitioner delivery	Shane Barry	Griffith University
Industry adjuncts	Industry practitioner delivery	Theo Papadopoulos	Victoria University
Lucy Mentoring Program	Industry mentoring	Alison Sheridan	University of New England
Career mentoring	Industry mentoring		The University of Melbourne
Mentoring through internships	Industry mentoring	Theo Papadopoulos	Victoria University
Field trips	Industry study tour	Martin Fluker	Victoria University
International field trip	Industry study tour	Amalia Di Iorio	RMIT University
International field trip	Industry study tour	Tracy Taylor Romy Lawson	University of Technology, Sydney
Cooperative education	Industry placement	Graham Low	The University of New South Wales
Commerce Internship	Industry placement	Mike Clements	University of Wollongong
WIL	Industry placement	Eveline Fallshaw	ALTC
Google Adwords	Industry competition	Jamie Murphy Peter Ling Larry Neale	University of Wollongong Edith Cowan University Queensland University of Technology, The University of Western Australia, Deakin University
Brandstorm	Industry competition		RMIT University, Monash University
Student-run enterprise: record label	Industry project	Adrian Marchesani	Victoria University
Situated learning	Industry project	James Hanson	ADFA-University of NSW
Applied research	Industry project	Romana Garma	Victoria University
Live data	Industry project	Bronwyn Higgs	Victoria University
Extra curricular		Mark Brimble Brett Freudenberg Craig Cameron Jo McConnell	Griffith University
Industry portal	Industry mentoring	Carmel Foley Jennie Small Bruce Hayllar	University of Technology, Sydney
Graduate attribute engagement		Harry Tse Romy Lawson	University of Technology, Sydney
Problem based learning	Industry project	Bronwyn Higgs	Victoria University

Networking	Industry mentoring	Vicki Feast	University of South Australia
Case Study	Industry case study	Alan Simon	The University of Western Australia
Financial database	Industry simulation	Andrew Tan	University of Wollongong
Change management plan	Industry project	Chris Sykes	University of Wollongong
Industry-specific software	Industry simulation	Ian Fargher	University of Wollongong
Marketing plan	Industry project	Janette Rowland	University of Wollongong
International field trip	Industry study tour	Gayle Avery	Macquarie University
Business concept	Industry project	Bernadette Smallwood	Victoria University
Research problem	Industry project	Angela Dobele	RMIT University
Negotiation and dispute resolution	Industry simulation	Kathy Douglas	RMIT University
Short Expert Film Clips	Industry practitioner delivery	Heidi Sundin David Brown	University of Technology, Sydney
Business Intelligence practices and applications	Industry simulation	Bernhard Wieder Peter Wells Maria Ossimitz	University of Technology, Sydney
Computer project	Industry project	Peter Francis	Victoria University
Industry project with portfolio	Industry project	Terence Sheehan	RMIT University
Industry internship	Industry mentoring	Nina Mistilis	The University of New South Wales
Live case studies	Industry case study	Nasir Butrous	Australian Catholic University

Appendix IV: Professional Learning Types: Literature and Cases

Industry Case Study

The industry case study has become a common teaching approach in business higher education. Cases typically provide an actual business scenario or challenge faced by business that require students to apply analytical and problem-solving skills to explore solutions or critically evaluate those made by business executives. It creates a story of a scenario or issue relating to a business, which could be multidisciplinary, and which requires students to interpret, research and problem solve to generate solutions and strategies. Scarman (2007: i) cites the definition of case study in business education given by Charles Cragg of the Harvard Business School in 1954:

> *[A case study] is a record of a business issue which actually has been faced by business executives, together with surrounding facts, opinions and prejudices upon which executive decisions have to depend. These real and particularized cases are presented to students for considered analysis, open discussion, and final decisions as to the type of action which should be taken.*

Harvard is credited with introducing 'the case method' into business education in the late 1800s to bring the real world into the classroom. Today Harvard Business School bases its MBA program on case method pedagogy and has developed a large repository of case studies (available to other business schools for a fee). Case method pedagogy commences with individual analysis (as a foundation and prerequisite for teamwork) requiring students to 'assess, analyze and take decisive action in complex situations drawn from real events' (www.hbs.edu.mba).

The pedagogical practice of case studies is underpinned by experiential learning theory (Kolb 1984) and project-based learning (Savin-Baden 2003). A key belief therefore is that when students are engaged in case studies they will learn more effectively as they are actively involved in their own learning. Krebar's (2001) research demonstrated the link between the case study approach and Kolb's (1984) experiential learning. He argued that engagement in a case study provided students with concrete examples of 'real business issues'. Furthermore when students are required to discuss and then define the problem, they begin to engage in active experimentation and reflective observations.

Davis and Wilcock's (2009) research found that case studies

- *Allow the application of theoretical concepts to be demonstrated, thus bridging the gap between theory and practice.*
- *Encourage active learning.*
- *Provide an opportunity for the development of key skills such as communication, group working and problem solving.*
- *Increase the students' enjoyment of the topic and hence their desire to learn.* (Davis and Wilcock: 2)

Others (Scarman 2007, Lund Dean & Fornaciari 2002, Gurd 2001) suggest that cases can range from a simple open-ended question to more complex role play, as well as detailed reports. Some cases may be created by the instructor around certain themes and information while others are drawn from textbooks, newspapers and business scenarios. Harvard MBA uses simulation and video to demonstrate cases. There are several website repositories of case studies for many disciplines. Scarman (2007) proposes that case studies can be categorised as decision-focused cases, research-focused cases and more unstructured open cases.

Decision-focused case studies describe the facts, events, actions and decisions made in a real business situation. Scarman (2007) argues that while these cases provide examples of real-life business practices, their use as a teaching tool is limited, particularly in scaffolding student decision-making skills.

Research-focused cases aim to test a hypothesis. The case presents real-life data and data analysis about a situation, an organisation or various aspects of business practice, as well as links to relevant theoretical perspectives. Students are then expected to analyse the information provided and develop or test the hypothesis. While the research case also provides real-life scenarios that allow for student discussion and problem solving, Scarman (2007) suggests that 'like most descriptive cases [its] use for teaching purposes is limited' (i).

Scarman (2007) holds that the more open, unstructured case, where the problem is not obvious and not all the information is supplied or the facts are clouded with opinions, is a far more valuable type of teaching case.

Lund Dean & Fornaciari (2002) agree that the case method has limitations. They argue that the greatest weakness is that, 'placing students in "managers or consultants deciding outcomes" scenarios may convey overly rational, analytic, and antiseptic views of organisations' (586–587). They go on to argue that the rational decision-making case study approach can hinder students experiencing the messy, turbulent and non-rational aspects of the complex processes of modern organisations (Gurd 2001; Lund Dean & Fornaciari 2002; Swiercz and Ross 2003). While there is anecdotal evidence that use of the case study method leads to greater student engagement and enthusiasm in class, there appears to be little empirical research that demonstrates that case study methods lead to improved educational outcomes (Krebar 2001; Swiercz & Ross 2003).

Examples of the use of the case study method follow.

Case Study: Live Case

At the University of South Australia a medium size business provides a live case study for the postgraduate Corporate Entrepreneurship course. The components are:

- Managers complete a detailed questionnaire about their business
- Students are given a tour of the business, hosted by the CEO
- The company CEO provides a follow-up briefing session after delivery of the course
- Students use the results of the questionnaire, together with the tour and briefing session to prepare an individual set of recommendations and plan for the business to improve support to corporate entrepreneurship activities
- The company CEO attends a final session where students present their plans and recommendations
- Teaching staff conduct a follow-up workshop for managers and the CEO to discuss student plans and recommendations.

The aim of this live case study is to help students understand what a business requires to be successful in supporting corporate entrepreneurship activities, such as new product introductions and diversification activities.

Case Study: Experience-based Environment

Students at The University of Sydney work in teams on ethical questions arising in everyday professional situations in an international business context. Working with a nominated industry

partner through a case study approach, they provide the business with a fresh analysis of its future challenges.

Business decision-making tools yield more coherent and justifiable results when employed with an understanding of the ethical, social and environmental aspects of decision making. Using case studies, this subject looks at these non-financial elements in decision making in an international setting. Its premise is that to be able to succeed in international business, both corporations and individuals need broad decision-making abilities. This applies to various relationships in the international business setting, including those with government, customers, employees and NGOs. This subject considers ethics as expressed by Corporate Social Responsibility (CSR) in international business.

It is important that there are no pre-existing 'right' answers in this exercise. Answers are sought on the basis of a continuous process rather than a discrete event. In this experience-based environment, students work on the personal application of their knowledge, and responsibility for learning rests with them. Self-directed choices are fostered while support for the learning of peers is encouraged through teamwork. Partnerships with international businesses allow students to gain unique access to real-life corporate decision making and thereby improve their employability.

Case Study: Financial Statement Analysis

At the University of Wollongong students use an industry-relevant financial database in a finance subject with a case study focus. The lecturer demonstrates the use of the database in lectures via business case studies, presenting live information and incorporating analysis of issues. The live database simulates the use of a workplace tool, thereby injecting industry relevance into the subject and developing familiarity and proficiency in its use. The combination of databases and case studies means that students develop an appreciation of the dynamics and vibrancy of the study of businesses.

The database is explored further in tutorials. Students work in teams, relying on the database to prepare a comprehensive business case study for their assessment. This is presented to their peers in a formal presentation.

Student response has been, in the main, very positive. Anecdotal evidence from industry connections and feedback from alumni has indicated that graduates are more 'work ready'.

Case Study: Managing Organisational Change

Students at The University of Western Australia are asked to identify a business that has undergone organisational change. Working in groups, students research the organisation to gain a thorough understanding of the change. Students are expected to visit the organisation and conduct at least eight in-depth interviews with appropriate personnel and/or conduct a survey of a wider group. The data gathered must be analysed and presented so that it conveys an understanding of change and fully portrays the specific organisation on which the case study is based. Finally each group must present their case to its peers.

While there are some difficulties in finding appropriate organisations willing to be involved, students' responses indicate that they learn first-hand the impact of change on organisations.

Case Study: Implementing Business Intelligence Practices and Applications
Students in undergraduate Accounting at the University of Technology, Sydney use COGNOS to implement and understand business intelligence practices and applications. The aim is to improve students' work readiness by making them familiar with the use of new system approaches and technologies deployed in many organisations.

Staff who are trained in the necessary technical skills to merge accounting theory with business intelligence applications develop a database to demonstrate theoretical concepts from the subject. Mini cases and exercises are developed.

Students work collaboratively to develop knowledge about and understand real-world issues in accounting information management. The overall aim is to improve the work readiness of accounting graduates by means of incorporating business intelligence applications in the undergraduate accounting curriculum.

Good Practice Principles for Case Studies

- Encourage reflection, discussion and problem solving through an experiential learning framework
- Link specific and relevant professional practices to theoretical frameworks
- Engage students' motivation to learn and work collaboratively

Enablers

- Quality and relevance of chosen written case studies
- Access to authentic information and live databases
- Commitment and knowledge of teaching staff
- Willingness of students to accept responsibility for their learning, to work collaboratively and demonstrate initiative

Impediments

- Difficulties accessing quality case studies
- Inability of teaching staff to move from a transmission mode of teaching to a more flexible facilitation role
- Difficulties in accessing current and authentic industry data

Industry Engagement

- Strong partnerships with industry and relevant professional associations

Industry Simulation

Simulations are reality-based, complex and experiential learning experiences. They represent an active, learning-centred approach to teaching. Simulation provides students with a chance to behave in ways that are consistent with a real workplace or project but in the safety of a simulation 'within an educational framework' (Patrick et al. 2009: 16). Proponents of simulation argue that they empower students not only as actors in a scenario but in terms of students assuming decision-making responsibilities, thus producing a substantive return in student development (Welkener 2003).

In *Using simulations to promote learning in higher education* Hertel and Millis (2002) present a compelling argument for the use of simulations to motivate students, foster deep learning and achieve learning goals. They characterise educational simulation as 'sequential decision-making classroom events in which students fulfill assigned roles to manage discipline-specific tasks within an environment that models reality according to guidelines provided by the instructor' (Hertel & Millis 2002: 15). McKone and Bozewicz (2003) conclude that simulation is 'an effective way to engage students in significant learning outcomes by overcoming the limitations inherent in courses that consist primarily of lectures and cases' (497).

The rationale for using simulation in business education is commonly framed within experiential learning literature, which includes Kolb's (1975) experiential learning model. Educators who use simulation often report the enthusiasm of learners who experience this style of learning, but there is limited evidence of the effectiveness of simulation in educational settings. Burns, Gentry and Wolfe (1990) suggest validity and learning transferability need to be further examined to establish whether experiential learning in a simulated business context translates into success as a business professional. Research into the effectiveness and advantages or drawbacks of simulation in business education is wide-ranging. A brief overview of some key studies and findings follows.

Assessing the use of simulation in teaching business communication Saunders (1997) notes that experiential learning can offer rich and robust student experiences. He suggests that whether a teacher creates experiential exercises or adapts existing materials, educators must have a basic understanding of the learning process to understand how learning styles connect with business and technical communication behaviours. Saunders also stresses that teaching methods should provide the student with the opportunity to develop in all four experiential learning modes (outlined in Kolb's (1975) model) and provide exposure to simulations that require the application of intuition, reflection and experimentation.

Herz and Merz (1998) tested the effectiveness of economic simulation games (MACRO) on students majoring in business administration and economics. They found that they were able to support development of experiential learning styles more effectively by using these games than in a traditional seminar setting. Previous research points out that as well the use of games and their level of complexity, the experience students bring to simulation also have an impact on the effectiveness of the learning process (Ripper et al. 1993). While Herz and Merz note the benefits of simulation they also caution that it is difficult to find flexible economic foundation simulations that can be scaled to the needs of learners and the learning environment.

Li and Bailie (1993) examined the impact on perceived learning of students engaged in a complex simulation game that involved a mixture of computerised games, case studies, lectures, readings and student presentations. They found that students valued the variety of experiences, believing they provided deeper insights into the business environment.

Smalt (2000) evaluated the impact of incorporating a financial literacy simulation into the curriculum of a traditional undergraduate financial accounting course. Students who participated in the simulation received better examination scores, and 89.9% of simulation group participants indicated that exposure to the simulation had a positive impact on their attitude toward accounting in general.

Snow, Gehlen and Green (2002) investigated whether the manner in which the simulation experience is introduced has any influence on students' attitudes, confidence or learning. When the simulation was integrated into the course throughout the term, students' confidence in their ability to play the game, the importance they placed on trying, and the effort they reported making was higher than when the simulation was a stand-alone experience.

Evaluation of learning from simulation can include peer assessment, self-assessment and formative and summative techniques that provide insight into students' progress during the simulation (Hertel & Millis 2002).

In a review of all research presented at Association for Business Simulation and Experiential Learning conferences over the past 25 years, Faria (2001) found that:

- *students have more positive attitudes toward learning from business games than from other teaching approaches,*
- *greater instructor involvement improved student performance,*
- *more cohesive teams performed better than less cohesive teams,*
- *a positive attitude and commitment to the simulation improved performance, and teams in high simulation/game grade-weighted sections outperformed teams in lower grade-weighted sections.* (Snow, Gehlen & Green 2002: 527)

Simulation is frequently used in Australian business teaching. Examples of the use of simulations follow.

Industry Simulation: Assessment Centre

Assessment centres 'commonly include a mix of individual and group activities' (Precision Consultancy 2007: 44). Activities are designed to elicit responses to various scenarios that simulate workplace situations and activities. Victoria University's Professional Development 3: Challenge and Leadership unit runs a professional development day called Assessment for Leadership which mirrors an assessment centre day for an executive training program. Assessment centre activities are developed and run in collaboration with HR recruitment experts to ensure relevance and currency. Assessment centres are one of the best ways to predict 'successful on-the-job performance as they generate objective, observable data on candidates' (Graduate Careers Australia, http://www.graduatecareers.com.au/content/view/full/125).

Students are briefed and provided with typical test questions, a running sheet for the day, a redundancy scenario and task-leadership assessors' instructions, as well as a student marking guide, instructions, and questions for the group interview. Students undertake a variety of assessment tasks and activities which are run by recruitment experts and teaching staff. Feedback is given to students during the day by HR experts. The event concludes with an industry panel discussion, providing students with generalised feedback on their performance through the day.

Industry Simulation: Trading Rooms

Trading rooms are intended to 'mirror work settings and work situations' (Precision Consultancy 2007: 30). Trading room simulation provides practice without putting at risk real economic value and allows students to change their behaviour and try riskier behaviours than might be advisable for a novice in the real world. Students are able to see the consequences of their behaviour without the loss of real economic worth: they can test their judgement, see if their personality is suited to the role, debrief and discuss decisions. These simulations also provide industry with the opportunity to trial and assess prospective candidates. Two such approaches are detailed below.

Industry Simulation: Queensland University of Technology's Securities Dealing Room

The Securities Dealing Room (SDR) is based on having live financial data available from Bloomberg, providers of financial data to many of the world's financial institutions. Queensland University of Technology uses these 'live' data to provide students with a far greater understanding and working knowledge of financial markets. The SDR is presented as 'a hands-on environment about the markets, its products and trading activities' (http://www.qut.edu.au/study/futurestudents/campuses/tour/gp-tour/text.html?keepThis=true&TB_iframe=true&height=580&width=780) which provides access to global financial instruments in both real time and time series.

Assessment for the unit Treasury and Portfolio Management in Queensland University of Technology's School of Economics and Finance includes a reflection on performance in the simulated role: students are required to provide a 'summary of the Central Treasury performance in Quarters 1–3, including the mistakes you made and the lessons you learned'. Students analyse economic and financial market data and then raise funds for clients, while also meeting clients' currency and commodity requirements. This approach gives students a real-world experience of how a central treasury operates within a firm.

Industry Simulation: Financial Markets Trading Simulator

RMIT's Financial Markets Trading Simulator (FMTS) is one of the largest tertiary-based facilities of its type in Australia. The simulator is equipped with a variety of financial analysis packages used by practitioners in the real world, providing information on bonds, bills, foreign exchange and share prices, as well as current local and international market news. FMTS receives live data provided by Thomson/Reuters, a live feed for which the university pays. Live market data has been used since 1991, mainly with bonds, bank bills and FX/cash.

Teaching and learning activities are different for undergraduate and postgraduate students, but both cohorts use the facility to simulate 'over the counter' transactions, and learning activities adopt a scenario approach. Postgraduate students, for example, are given a scenario and need to

incorporate that into the 'real world', combining what is on their screen with the reality of foreign political and economic events. Half the room are 'corporations' (importers and exporters) and the other half 'banks' that assist the corporations, deal with the risk and facilitate the buying and selling as they take positions. The 'players' have a portfolio of assets made up of a mixture of cash, bank bills and bonds and they trade with each other to increase returns and minimise risks. As their portfolio changes, they need to adjust, for example, for interest rate changes (http://rmit.com.au/browse;ID=ercqond3ssawz).

Industry Simulation: Modelling Workplace Artefacts

Modelling workplace artefacts is taught at the undergraduate and postgraduate levels in Accounting and Taxation and Forensic Accounting at the University of Wollongong. It is designed to provide a broad-based overview of investigative audits within a corporate governance and accountability framework.
Students learn about Australia's corporate regulatory framework, including relevant legislation and accounting and audit standards. The subject also provides an introduction to the accounting and audit compliance framework, the nature and purpose of financial reports and financial statement analysis and interpretation. An important part of the subject is the audit risk model. This includes the efficiency and effectiveness of internal controls; corporate governance issues such as corporate culture ('setting the tone at the top' and internal environment); the environment in which an entity operates; and the relevance of these matters in planning and executing an investigative audit.

Students use actual commercial documentation. They also access information through commercial websites and use industry-leading, specific software in actual case studies. In this way students learn about and practise – using actual industry documentation processes – developing real-world information skills. By using industry standard software, students gain first-hand experience with the software and familiarity with common products.

Assignments in the subject emulate practice and develop skills that are directly transferable to the workplace. Students develop independent learning skills, including information literacy skills relevant to their future professions. Access to industry association products (CPA, ICAA, ICFE) are important. Key industry associations formally recognise the course content.

Industry Simulation: Role Plays
Role plays are essentially a type of simulation in which students assume a role in a simulated scenario that intends to mirror a real-work situation.

In Negotiation and Dispute Resolution at RMIT, role play is designed to enable students to apply their academic learning to a simulated contemporary workplace situation. The unit aims to integrate work-based and academic learning so students address authentic business issues. Online role plays are used to teach negotiation and dispute resolution as part of a blended learning design where face-to-face classes are combined with online learning. Students design and enact negotiation role plays in relation to the key concepts involved in negotiation. Role play scenarios are crafted by students using the wiki technology that is part of the Blackboard Management System. Scenarios are then distributed to other students by posting them on the system. Students play out the roles using the discussion board.

At the end of a role play, students reflect on the experience in a group blog. Other students, an industry representative and the teacher make comments. Students are asked to engage in the learning activity twice so that they act as both designers and role players. Students are then asked to reflect on one of these roles as part of their final individual journal assessment.

Industry Simulation: Capstone Simulation

Many educational software design companies sell corporate simulation programs and products for educational use. CAPSIM is one such company. Its products are used by several Australian and overseas universities in their Capstone units, including Curtin Business School. Capstone® is a business simulation designed for advanced students, where students run a $100 million company for five to eight years. The simulation can be played as a team competition (Capstone® Tournament), with four to six teams each running a company and competing head to head; or as an individual competition (Capstone® Foot race), in which students each run a company, competing against five computer-generated companies.

Each Capstone® Business Simulation company operates in five market segments: 'low', 'traditional', 'high', 'size' and 'performance'. Students begin the simulation with five products but can develop a portfolio of up to eight products. Each simulated year they make decisions in relation to research and development, marketing, finance, human resources and production. Labour Negotiation, Advanced Marketing and Total Quality Management modules can be added at the teacher's option. It can be made to facilitate multi-disciplinary teams of students running a virtual business through the use of a complex business simulation and additional tasks (http://www.capsim.com).

Good Practice Principles for Industry Simulation

- Design the simulation as a problem-solving approach to learning that places students in realistic, problem-based scenarios
- Outline where simulations can play a role in achieving alignment of student learning with graduate attributes
- Provide regular forums for engaging with industry and the professions to facilitate dialogue, awareness and progression of key issues related to the use of simulations

Enablers

- Support (time and resources) from all levels of the university and Business School executive
- Commitment of teaching staff to work together for a common goal with collegial support
- Continuing access to industry-standard software data, information and personnel

Impediments

- IT systems' restrictions/limitations and the high level of support needed for some simulations
- Knowledge of teaching staff of IT systems for simulations that require technical expertise
- Lack of dedicated teaching spaces that adequately support simulations

Industry Engagement

- Development of long-term reciprocal arrangements and partnerships
- Access to current data through professional associations
- Promotion and demonstrations of industry capabilities through the use of simulations

Industry Practitioner Delivery

A common approach to integrating contemporary business practice and issues into the business curriculum is direct engagement with industry practitioners. This often takes the form of embedding industry practitioners in the teaching program. Industry practitioners deliver specialised lectures, present in seminar series, conduct professional development workshops and participate in assessment of student projects and presentations. They also participate in cyclical curriculum reviews via program advisory or external review committees.

While guest lecturing by industry practitioners is a frequent enough occurrence, the integration of industry practitioners into curriculum delivery is relatively underdeveloped in Australia. In the United States 'industry adjuncts' have traditionally complemented the theoretical curriculum delivered by academic faculty with practice-based real-world perspectives.

In Australia embedding industry practitioners to supplement and complement academic teaching staff is extending beyond the fields of medicine and law so that we now see the appointment of 'adjuncts' and 'fellows' in business faculties and schools. There appears to be no consistent use of the terms in Australian business faculties. Nomenclature aside, these appointments usually aim to strengthen university connections to industry, government and the community. Industry adjuncts contribute in a range of ways to business faculty activities: delivering specialised lectures and seminars; supervising research students; developing case studies or business problem-solving challenges; undertaking collaborative research; enhancing industry, government and community networks; and providing strategic advice to university management.

The intensity of the industry–university relationship can range from a one-off or ad hoc guest lecture by a business practitioner to the more formal, long-term relationship embodied in fellowships and adjunct appointments. Industry practitioners are sometimes employed as sessional or casual staff, contributing to the educational program for the whole of the designated teaching period. One of the challenges in engaging industry practitioners on a regular basis is balancing the ongoing commitment to their primary position with the demands of teaching and the institutional requirements of another workplace. A more systematic approach to embedding practitioners into business education may require collaboration at an organisational level where universities or faculties enter into collaborative partnerships to design, deliver and evaluate business curriculum.

Geary, Kutcher and Porco (2010) suggest that collaborative partnerships between universities and business might be an effective way of addressing staff shortages in disciplines like accounting. Geary and colleagues document the experience of a pilot Partner Teaches Program in the United States where practising accountants from a public accounting firm deliver specific subjects in a university accounting program. They conclude that 'properly selected partners, matched with the demands of a particular course and properly prepared, supported, and integrated into the curriculum, can make significant positive contributions to accounting education' (199).

Weisberg (2009) suggests universities look to adjuncts as a source of teaching innovation, as they have vast experience in the business world and competence in leading technologies and methodologies. According to Wallin (2008) adjunct and part-time faculty represent up to two-thirds of academic staff at community colleges in the United States. With this growing dependence on adjuncts and part-time teachers (as much as 50 per cent of faculty at some universities), Rogers, McIntyre and Jazzar (2010) note that universities need to develop strategies to better induct and support adjunct faculty. They suggest a mentoring program focusing on four primary needs: professional development, effective communication, fostering

work–life balance and forming relationships (the last being particularly difficult in an online learning environment).

In one of the few evaluations of the impact and benefit of adjuncts in higher education, Bettinger and Long (2010) explore student interest and academic performance relative to using full-time faculty. The research suggests that adjuncts have a small but positive effect on subject selection, particularly in occupation-related fields of study. In an earlier study the authors found that 'adjunct and graduate assistant instructors generally reduce subsequent interest in a subject relative to full-time faculty members, but the effects are small and differ by discipline. Adjuncts and graduate assistants negatively affect students in the humanities while positively affecting students in some of the technical and professional fields' (Bettinger & Long 2004). In contrast, a study by Landrum (2009) using student evaluations across eight departments and 361 subjects found no significant differences in students' evaluation of teaching or in grade distributions when comparing full-time to part-time and adjunct faculty.

Industry Practitioner Delivery: Adjuncts and Fellows

A number of Australian universities use adjunct and honorary academic roles as part of their industry engagement strategies and in the development, delivery and evaluation of business curriculum. Many market those relationships very strongly in their promotional material, which consistently equates industry adjuncts in faculty with promoting industry currency and connection with the real world. The Australian School of Business at The University of New South Wales, for example, has an adjunct faculty with a broad range of members (www.asb.unsw.edu.au/EXECUTIVE/FACULTYRESEARCH/Pages/presenters.aspx). More than 150 adjunct faculty staff bring a broad range of specialist and generalist knowledge and experience to the MBA curriculum, adding considerable value to the student learning experience.

At Victoria University the Industry Adjunct Program embeds industry practitioners as facilitators of undergraduate seminars. Adjuncts participate in all facets of teaching, including case study development, assessment moderation and curriculum review and renewal. These approaches inject a more practice-based approach into curriculum and assessment, and provide alignment between real-world context and the business curriculum for academics and students.

Industry Practitioner Delivery: Business Leader Lecture Series

The Business Leaders Series at the Curtin Graduate School of Business provides a program of seminars by leading business practitioners and academics. It aims to extend learning and highlight emerging issues in business. While voluntary, attendance at these lectures contributes to students' professional portfolios. The Australian School of Business at The University of New South Wales conducts the Meet the CEO series featuring current leaders in business and government. For those unable to attend in Sydney the event is streamed live online. Participants are able to interact via Twitter. While targeting alumni, an event archive provides a valuable video resource for business educators.

Industry Practitioner Delivery: Guest Lectures and Speakers

The Australian School of Business at The University of New South Wales provides several examples of this longstanding and common approach to professional learning. One example is the Auditing Studies Program which has a regular series of guest lectures from practising actuarial professionals. The program is managed in collaboration with the Actuarial Student Society.

The University of Notre Dame's Public Relations units regularly engage professional contacts as guest lecturers. Guest lecturers are seen as informative and inspirational. They are also valued because of the currency of their experience, their ability to tap into trends in industry and their ability to link study with the PR industry through examples from their working lives.

Another example of using guest lecturers from industry is at Griffith Business School where industry professionals provide students with current industry perspectives and an opportunity for networking, although industry networking activities are often reserved for alumni.

The University of Western Australia has a tradition of organising highly regarded guest speakers, many of whom have an international profile. The mix of disciplinary and professional roles is represented in this brief selection of speakers from 2000 to 2010. Their role was to inform and inspire, and importantly, to model business professionals:

- Head of YouTube Marketing for Europe, Middle East and Africa, who discussed the latest trends in video in a Business School Public Lecture in March 2010
- Executive Officer of the Department of Peacekeeping Operations and Department of Field Operations (NY) at the United Nations
- Board member of The Hunger Project and Ugandan ex-Vice President, the first woman in Africa to hold that position, speaking on the topic 'Making a Difference with Finance, Micro Financing to Solve Global Hunger'.

The University of Melbourne student organisation Student Entrepreneurs/Agents of Change organises events as part of their goal to create and cultivate communities of entrepreneurship in Australian universities. For example a recent speaker was the initiator of Red Balloon Days, an online gifting retailer which has made the BRW Fast lists six years in a row.

Industry Practitioner Delivery: Film Clips

The Faculty of Business Teaching and Learning Grant at University of Technology, Sydney funded a series of short documentary-style film clips for use in its Management Decisions and Control (MDC) lectures and tutorials. University of Technology, Sydney Media Services' expertise supported the project to produce a quality product that brings experts from industry into the curriculum. These short films are intended to develop students' ability to apply relevant theories to practical problems and assist understanding of theory in 'real' organisations. The films demonstrate how various management systems operate in practice.

The film clips focus on past University of Technology, Sydney MDC students working in business. They are asked how they apply in their workplaces what they learned in MDC. Interviews are also conducted with senior managers of several large Australian companies who discuss how they apply the management control systems taught in MDC. The films highlight how practice relates to key theories. They vary from one to five minutes in length depending on topic, and are available through the University of Technology, Sydney online learning platform, which also allows students to view films in their own time. This approach to industry speakers is sustainable and flexible, though the need to maintain currency is ongoing.

Good Practice Principles for Industry Practitioner Delivery

- Engage industry practitioners with current industry experience
- Engage industry practitioners who have a sense of how students learn
- Engage industry practitioners who have an appreciation of student demographics (e.g. educational level, English language proficiency, cultural frame of reference)

- Induct industry practitioners appropriately into the faculty (e.g. offer professional development)
- Ensure industry practitioners benefit from engaging with faculty (e.g. are paid, offered library borrowing rights, attend professional development offered by university)
- Manage relationships with industry practitioners so they are not inundated with requests from either staff or students

Ensure industry practitioner events use appropriate technology (e.g. Elluminate for lectures; Lectopia or video to create resources from guest lectures)

Enablers

- Academic staff with current industry networks
- A central faculty or university unit responsible for managing industry engagement
- A database of industry practitioners
- Appropriate professional development opportunities and resources for people without teaching experience

Curriculum design that invites industry participation

Impediments

- Ensure industry practitioner events use appropriate technology (e.g. Elluminate for lectures; Lectopia or video to create resources from guest lectures)
- Lack of time to liaise/network with industry
- Risk of 'burning' the few industry contacts by making too many requests
- Inability to reward industry people for their efforts

Student behaviour that puts the university at risk (e.g. students not attending or talking during guest lectures)

Industry Engagement

- Industry associations
- Academics' professional networks
- Industry partners
- Senior managers/CEOs/leading experts
- Engagement initiated by student associations

Industry Mentoring

Mentoring is a relationship which gives people the opportunity to share their professional and personal skills, knowledge and experiences with others. The outcome of an effective mentoring relationship is growth and development for both mentor and mentee. While mentoring can be informal it is more typically a 'deliberate pairing of a more skilled or experienced person with a lesser skilled or experienced one, with an agreed-upon goal of having the experienced person grow and develop specific competencies (Murray & Owen 1991: xiv).

Mentoring can operate on several levels, with the mentor offering expertise, modelling practice, sharing personal insights, and building trust, guidance and support. The mentee may take on the role of listener, observer, 'do-er', reflector, and in some cases, partner. Mentoring draws on various learning theories: experiential learning (Kolb 1984), reflective practice (Schön 1983), and problem-based learning (Slavin 1990). Smith (2009) suggests that in more recent times mentors have come to be known as coaches because of the many roles played. He suggests a trajectory of mentoring practices depending on the nature of the relationship and goals to be achieved. These include moving from reflection to goal setting to action. An effective coach will guide the learner (mentee) through each level and repeat the steps with more complex tasks as the relationship and skills develop.

The literature overwhelmingly points to the benefits of incorporating mentoring programs into the workplace for both the mentor and the mentee. Mentoring practices, it is argued, provide useful and powerful strategies for understanding and advancing organisational culture, providing access to informal and formal networks of communication and offering professional stimulation and growth for all involved (Kochan & Pascarelli 2003; Rolfe-Flett 2002; Caldwell & Carter 1993).

Thus the rationale for using mentoring strategies and programs in business education is equally as strong. Much can be learned from disciplines such as education and health where a compulsory component of a graduate's degree is a series of successful workplace experiences with an experienced mentor in a master–novice relationship. However it seems there are greater challenges for business disciplines in establishing such programs. This is especially the case when considering industry mentoring between large cohorts of undergraduate business students and the number of industry partners needed for such numbers.

Mentoring practices can be seen in Work Integrated Learning (WIL) practices (Precision Consultancy 2007) such as internships, practice-based projects and workplace or industry-based learning. Whatever the name, Kay et al. (2001) suggest that:

> *industry-based learning requires collaboration between the student, employer and university educator. Although the employer and university educator would not dictate the content of the learning contract, they have a considerable effect upon the resources at the student's disposal for the satisfaction of learning goals.* (Kay et al. 2001: 31)

Kay et al. go on to argue that mentors:

> *must support their students, in order to provide a 'safe' learning environment, yet at the same time not be so supportive as to reduce the challenge their students face. They must challenge their students to explore new ways of knowing and doing, yet at the same time provide the student with the security of knowing that support is there when needed. They must also provide a framework, or more accurately a vision, that the student can work towards.* (50)

The BIHECC report (Precision Consultancy 2007) suggests 'the research and pedagogy surrounding WIL revolves around what is primarily a tripartite system made up of the student, an academic coordinator and a supervisor in the workplace…what is lacking is a wider systemic view' (39). Establishing a wider systemic view within each university is indeed a challenge for business educators.

Other issues identified in the BIHECC report (Precision Consultancy 2007) follow:

- Organising and monitoring effective WIL programs is time consuming for universities and employers
- Insurance issues are complex; conflicting advice may be given about what insurances need to be in place
- Workplace supervisors may not have the skills to engage with and support students, let alone successfully become a mentor to them
- WIL is usually only available to some students in a particular cohort; places are competitive, with students with the strongest academic achievements being selected for participation
- Mentoring programs that are less formal rely heavily on the commitment of the mentor as to how much time can be given to the program (see p. 39).

There are a number of challenges with industry mentoring. However this is a practice that the business education sector has agreed must be pursued.

There are many excellent examples of WIL in Australian higher education business courses. Several follow.

In an article investigating the mentoring and professional development of business students Schlee (2000) found a great diversity of activities in the 154 universities and colleges surveyed, including (in rank order) advice, shadowing, interviews, lunch/dinner, networking, fieldtrips and internships (329). Schlee conducted a more in-depth analysis of 15 university mentoring programs to explore success factors that can improve program effectiveness. The success factors identified are those observed in youth mentoring generally: mentor recruitment, clarifying the student's personal and career goals and evaluating outcomes.

Industry Mentoring: The Lucy Program

The Lucy Program is an extracurricular program for undergraduate women studying business, economics or law. It provides a mentoring relationship between a student and a working professional and typically runs for four to six months. Mentors and students meet on a one-to-one basis and participate in larger group sessions. Students also undertake work-based activities and workplace visits.

Established in 2004 by the NSW Office for Women together with the University of Western Sydney, The University of Sydney and the Women Chiefs of Enterprises International, it now includes: The University of New South Wales, The University of Newcastle, University of New England, University of Wollongong and University of Technology, Sydney. Individual universities manage their respective programs, overseen by the Office for Women's Policy. Universities' key responsibilities are to:

- Recruit mentors and students
- Monitor and support mentor and student relationships
- Organise relevant Lucy functions for students and mentors
- Support the Lucy alumni
- Promote the program
- Provide input into ongoing program development
- Provide insurance for Lucy students.

As well as providing an opportunity to work with senior business and professional managers, the program aims to convey the diversity of opportunities open to women in the private and public sectors and the personal advantages of achieving job satisfaction. In particular it aims to provide women from disadvantaged backgrounds with access to a network of senior managers. Feedback suggests that as a result of the program students are more likely to aspire to senior positions; gain confidence and skills in business planning, strategic decision making and communication; and improve their industry contacts through opportunities for networking.

Industry Mentoring: Griffith Industry Mentoring Program

Griffith University's Griffith Industry Mentoring Program matches some 200 students each year from five of its campuses with 200 mentors. The program assists students' transition from study to graduate work by facilitating in-depth understanding of potential employer organisations, work roles and workplaces relevant to students' degrees. It also aims to expand the employer base for Griffith graduates by providing an avenue for the involvement of both Griffith alumni and those with no previous association with the university.

Conducted during second semester (August to October), the program links undergraduates who have completed 80 credit points and postgraduate students in any year level with experienced professionals from similar career fields. A special feature is the two large networking functions held in the CBD: a breakfast launch and a concluding cocktail function.

At the start of the program participants draw up a mentoring agreement listing the activities they plan to undertake in the following three months. These may include:

- Discussion of workplace/employment-related issues with their mentor
- Attendance at workplaces or professional association meetings
- Professional networking
- Assistance developing an appropriate resume and effective interview skills.

Students observe and monitor the quality of their learning throughout the program by keeping a reflective mentoring logbook of their experiences. Post-program evaluation feedback is used to develop and improve the program. Separate programs currently operate in Brisbane and on the Gold Coast. (http://www.griffith.edu.au/careers-employment/industry-mentoring-program)

Industry Mentoring: Career Mentoring Program

The University of Melbourne's Faculty of Business and Economics Careers Centre (BECC) operates the extracurricular Career Mentoring Program. BECC is the country's first faculty-based professional career centre.

The Career Mentoring Program matches graduate students from the Graduate School of Business and Economics with business professionals on the basis of shared interests, course of study and area of specialty. It is designed to help students move into employment, as well providing industry partners with mutual benefits.

Industry mentors include partners of accounting firms, directors of management consultancies, bankers and senior public servants. They are drawn from accounting, banking, consulting, economics, finance, IT, human resources and organisational development, management and marketing. The career mentor is tasked with providing the mentee with information on industries, professions and general work skills, as well as advice on and support with career direction, networking, skills assessment, job hunting and job applications. Mentors assist their mentees in identifying career goals and professional development plans. Entry into the annual program is by formal application and is competitive.

Industry Mentoring: Cooperative Education

The University of New South Wales Co-op Program is a scholarship program set up by industry and the university to provide financial reward and industrial training for selected undergraduate students in the disciplines of commerce, science and engineering.

Programs of study are all based on existing undergraduate programs but with the following features:

- The University of New South Wales academics and senior managers from industry and government jointly plan them all
- The University of New South Wales Co-op Program scholars receive structured industrial training (between 9 and 18 months) and gain valuable work experience with up to four different sponsors
- The University of New South Wales Co-op Program scholars receive a tax-free scholarship of $15,000 per annum, paid in fortnightly installments to be used at the student's discretion.
- On graduation sponsors look to recruit The University of New South Wales Co-op Program scholars first.

A mentor in the sponsor organisation is appointed, and the scholar meets them regularly (at least fortnightly). At these meetings project matters are discussed and regular performance feedback is provided for developmental purposes.

The University of New South Wales Co-op scholars gain experience in multiple industrial placements with leading companies, providing them with invaluable insights into the real workforce and also putting them ahead of other students when it comes to graduate recruitment. (http://www.coop.unsw.edu.au/)

Industry Mentoring: Industry Mentoring Program

The University of New South Wales Business Society has developed the Industry Mentoring Program (IMP), a personal development scheme with a primary focus on students gaining an in-depth perspective on the finance industry. Students study diverse disciplines, such as finance, accounting, economics, marketing and law, but their academic teachers are not in a position to teach them about the realities of work in an industry setting. IMP is a chance for students to be mentored by a professional working in an area that interests the student, providing students with valuable insights that will assist them making more informed career choices.

The mentoring experience is largely informal, with the specific arrangements left to the discretion of the individual student and mentor. It is generally expected that students and their mentors will meet at least once a week. (http://www.unswbsoc.com/industrymentoring)

Industry Mentoring: Internship Program

The University of Wollongong has an internship program for selected students in their final year, operating through an elective undergraduate subject. Students work for 16 days over eight weeks on a two day a week basis in a pre-selected organisation (although work times may change if the student or organisation requires it). Students cannot choose their organisation independently. Students are selected on the basis of their grades and a resume. Short-listed students are interviewed by academic staff and the industry partner that ultimately becomes the industry mentor during the internship period. Students keep a reflective e-log throughout the internship, which forms a key part of their assessment.
(http://www.uow.edu.au/commerce/UOW047505.html)

Industry Mentoring: Mentoring through Internship

This mentoring program builds on and expands an industry internship program at Victoria University. Its main objective is to provide final year music industry students with supervised, practical work experience and enhance their learning through the application of principles and techniques in a professional industry setting. Students are placed with selected industry organisations appropriate to their area of interest.

This program evolved from a more traditional internship program to one in which the industry supervisor takes on the role of mentor. This shift was designed to address the diversity of student experiences, some of which did not provide the richness and challenge experienced by other students. The program offers both students and organisations a rewarding experience, and participation can lead to long-term professional relationships.

The program's Mentee Handbook lists the benefits of internships for students as: developing a network of industry contacts; making contact with a prospective employer; investigating career options; increased understanding of the benefits of coursework; and exposure to different thinking and learning methods. Importantly, internship programs also foster relationships between education providers and organisations, enabling valuable feedback on the relevance and practical value of coursework.

Organisations participating in internship programs benefit from gaining enthusiastic workers – particularly advantageous where additional staff are needed for special projects. Mentors are provided with leadership experience and fresh ideas and perspectives. Customised student evaluations collected over several semesters have informed program improvement.

Good Practice Principles for Industry Mentoring

- Select and match to align interests and goals
- Provide pre-match briefing to ensure realistic expectations
- Meet mid-term to check progress toward goals and alignment of activities with intended outcomes
- Incorporate work-based activities or observation into the mentor's workplace
- Connect curriculum via project-based assessment
- Build strong, trusting relationships between mentor and mentee
- Clearly outline mentor–mentee roles and responsibilities
- Mutually agree to and document goals and intended outcomes
- Meet regularly with structured activities
- Identify and reflect on personal interests and skills
- Assist in making more informed career choices
- Establish a network of professional industry contacts

Enablers

- Ability of mentors to commit time and create opportunities for the student
- Mentors' experience and skills in providing support and advice when needed
- Students' willingness to listen, observe and be flexible with their time
- Regular meetings between mentors and mentees
- Mentor and mentee understanding of their respective roles and responsibilities

Impediments

- Lack of understanding of the roles in a mentor–mentee relationship
- Difficulties finding the time needed by teaching staff to organise and monitor the program
- Student inflexibility with time or commitment
- Difficulties finding a sufficient number of industry mentors
- Heavy reliance on institution-based supervision

Industry Engagement

- Students engage directly with industry mentor and supervisor
- Long-term relationships are developed with industry
- Industry mentors gain from the experience
- The role of industry partnerships within the university and community is acknowledged

Industry Study Tour

The category of field study incorporates diverse activities, from site visits to a local workplace to international study tours. Many examples of professional learning involve visiting a work site or going to see an example of an industry product. Trips might be a two hour tour of a nearby facility, or a study tour to a different hemisphere. Importantly, fieldwork can often be an intense industry engagement experience for students.

There are examples of learning experiences that involve industry experts travelling with students and interacting with them during activities; examples where industry visits involve multiple sites over a few weeks; as well as visits providing an overview of a business through a tour of a building. Bradley et al.'s (2008) comment that 'Knowledge of other cultures and their languages is an essential life skill for future graduates if they are to engage effectively in global professional practice' (104) is a consideration in many study tours.

Hutchins (1996) investigates the impact of study tours on students' international, global and intercultural perspectives. Her findings indicate that participants experience changes in professional growth and personal development. Participants described becoming more credible sources of information and reported feeling an increased sense of purpose.

Porth (1997) reports on the increasing need for interaction between universities and businesses around the internationalisation of business school curriculum, including cooperation on the design of experiential learning opportunities. He suggests that international study tours are one way to combine academic and organisational experiences to develop international management knowledge and skills. However he also acknowledges that there is some scepticism about study tours – that they may be more tour than study. His article suggests that a robust study tour model should comprise three phases: pre-departure preparation; presentations and question and answer sessions during the tour itself; and reflection on the lessons learned when students return to campus and submit assignments.

Nelson and Ornstein (2002) note the challenges of running international study tours, especially unexpected international events. They emphasise the need for crisis management planning so that in the event of a tragic, albeit low probability event such as the death of a student, an effective management response will come into play, minimising emotional, educational and financial damage to students, staff and the institution.

Kams (2005) explores changes in marketing education, including the use of field trips, which students perceived as providing the kinds of activities that most contributed to their learning. He concludes that marketing educators should continue efforts to imbue all learning activities with an applied, real-world orientation. Students did not respond well to some of the activities involved in group work or guest speaker appearances because active learners prefer discussion, problem solving, group work and online resources.

However he points out that directly measuring the contribution of a pedagogical tool (like field trips) to student learning requires capturing samples of performance associated with that learning activity and evaluating them against clearly defined learning objectives, often in the form of an assessment rubric. The effects of a field trip on student learning would require specifying the expected learning outcomes (e.g. knowledge about the company and industry) and obtaining a sample of learning performance. He suggests using a criterion-based scoring rubric to evaluate student responses about the expected learning outcomes (e.g. knowledge about the company and the industry).

Industry Study Tour: Nature-Based Tourism

Victoria University students enrolled in Nature-Based Tourism and Field Research Project in the School of Hospitality, Tourism and Marketing travel to destinations like Tasmania and Cape Otway for the first unit and subsequently visit Vietnam, Malaysia, Fiji and Cambodia for between three and ten days. These trips are seen as an integral part of their study. Students visit several places of interest, for example historical and natural sites, and have multiple opportunities to engage with a range of tourism products, services and industry personnel.

Through the intense experience of a field trip, students identify various career options, network with industry experts and gain hands-on experience of the tourism industry. Through a range of activities they develop communication skills, strong bonds with their peers and experience an industry where travel is anything but theoretical.

The usual elements of this kind of fieldwork are clear enough: travel in a group to gain new insights and experiences. Good practice involves the number and range of industry personnel and events students interact with in a situational learning experience, and alignment of assessment tasks for the subject. Field trips are memorable social experiences, preparing students for what is an intensely social industry that requires excellent communication and social skills.

Fieldwork also embodies a crucial teaching methodology. From preparation to learning in situ to interacting with a range of industry professionals over several days, the experience teaches students about industry diversity and how to create an inclusive and fun social experience, and helps to build their professional networks.

> *I could just set an essay and exam but I know students get a lot out of field trips. I am committed to running them each semester.* (Academic)

Industry practitioners are usually involved in the development of the itinerary, and the itinerary effectively becomes part of the curriculum. Industry is also involved in the delivery of the curriculum, with a range of tourism professionals speaking to students and joining excursions, and with at least one industry expert travelling with students for the whole trip. Industry experts provide feedback to students on assessment and help evaluate the worth of the program in collaboration with academics, drawing on student evaluations.

Industry Study Tour: Sustainable Leadership

Macquarie Graduate School of Management (MGSM) runs a European Study Tour: Sustainable Leadership, a two unit elective that takes groups of students from Macquarie's Australian and Hong Kong campuses to interact with senior executives from world-class companies in Germany, Switzerland, Austria and France. Before a visit students prepare themselves thoroughly by collating publically available information about their hosts into a briefing report and creating a list of questions that cannot be answered from publically available information. The briefing reports and questions are sent to the hosts who select appropriate staff members to meet for a day with the study group. Host representatives range from owners, CEOs and senior executives to functional specialists and department heads, depending on the nature of the questions students have compiled. Students thus drive the learning agenda for this integrative unit.

Industry Study Tour: Study Tour using Live Case Study

Murdoch University's Special Topics in Commerce: International Study Tour is a short-stay (15 to 20 days) international study tour open to all Murdoch Business School students. It provides

an in-country cross-cultural experience of the civilisation, art, music, politics, history, language, life and business of the destination country. It is designed to increase students' international exposure and develop global-mindedness. Coursework consists of lectures and assessment pre, post and during the tour.

Industry Study Tour: World Financial Markets Study Tour

Edith Cowan University offers a study tour to finance and economics students. Elements of good course design include appropriate assessment methods, such as student journals. The study tour for students majoring in finance or economics as part of a business degree is equivalent to a third year unit in international economics and finance. The main benefit for students is the opportunity to see the practical relevance of theory. Students are exposed to a range of international environments relevant to their course, including various companies, central banks, exchanges, investment banks and brokers.

Industry Study Tour: Global Passport

RMIT University coordinates European study tours for undergraduate and postgraduate students in the School of Economics, Finance and Marketing. Academic staff believe the experience provides a good balance of cross-cultural and business study, with 'students see[ing] the value of the experience from a cross-cultural and academic perspective'.

Global Passport has been offered for the past twelve years. Undergraduates visit Milan (stock exchange and local companies), Brest (Carrefour) and Cologne or Frankfurt (stock exchange, Bayer and Westpac). Activities involve a combination of academic seminars, lectures and site visits over a two week period. During site visits students discuss contemporary business issues with high-level corporate executives. Students value the opportunity to enrich their learning and add value to their professional resumes.

Feedback from students indicates increased appreciation of professional standards. While similar research projects can be conducted in Melbourne, travelling to Europe provides a tangible first-hand experience of an international business environment and allows students to question leading international industry contacts.

Good Practice Principles for Industry Study Tours

- Provide pre-departure briefings and readings
- Structure the itinerary and activities carefully
- Reflect, report and present in the post fieldwork phase
- Engage a variety of offshore businesses, government and third sector organisations
- Incorporate social, cultural, economic and political dimensions into the curriculum
- Integrate activities with students at offshore partner universities where possible

Enablers

- International networks of business, government and third sector organisations
- Leverage off international partner universities tapping into established offshore networks

Impediments

- Cost of international and interstate travel, especially for students from low socio-economic circumstances
- Value perceptions of some colleagues and students that international travel curriculum is not rigorous

Industry Engagement

- Multiple points of engagement with international industry, government and third sector organisations

Industry Placement

Industry placements usually have two objectives: to offer students an understanding of organisational structures within a professional working environment and an opportunity for professional development (Katula & Threnhauser 1999). A useful definition of industry placement can be taken from The National Commission for Cooperative Education (Groenewald 2004: 17): 'A structured strategy integrating classroom studies with learning through productive work experiences in a field related to a student's academic or career goals'.

Industry placements allow students to integrate theory and practice through a partnership between students, universities and employers, with each party having specified responsibilities. According to Fallows and Steven (2000) the most important benefit of such programs is how they build employability skills into the curriculum. But they need to be carefully monitored so that students understand they have intentional learning goals and reflect on what is being learned. Industry placements differ from other types of program in that the student brings an intentional learning agenda to a workplace.

Orrell (2004) and Abeysekera (2006) alert readers to the challenge of maintaining quality in placements. The trend to increased use of placements in degree programs is potentially problematic because of the significant resources required. To maintain high standards placements need to provide access to appropriate learning resources, professional development for academic staff taking on supervisory roles, and establishment of appropriate risk management and minimisation processes (Orrell, Cooper & Jones 1999). Abeysekera (2006) describes the need for curriculum alignment, the overall logistics of managing the process, how best to assess the placement as an educational experience and the need to work closely with employers.

Learning in industry placements needs to be deliberate and intentional, supported by induction of students and supervisors and the imaginative development of appropriate assessment to ensure high standards and adequate duty of care (Washbourn 1996). Jancauskas et al. (1997: 30) also suggest that a key element in industry placements is students having both academic and industry supervisors. They stress the critical role of supervisors in integrating the university and workplace experiences and facilitating student learning. In their view the effectiveness of learning through industry placement depends to a major extent on the roles of both the academic and the industry supervisor.

In a discussion paper focused on industry placements published by Universities Australia (2007), it was suggested that Australia cannot afford to ignore opportunities to add value to education if we are to remain a prosperous and competitive country. In this context it was suggested that there may be areas where industry is not supplying the full range of employability skills that students need. There is also an equity and access issue here in relation to field work experiences for students who do not have well-established family or informational networks. This will have to be addressed if universities are to achieve the targets for higher participation of students from low socio-economic backgrounds foreshadowed in the recent Bradley Review.

The challenges of offering high-quality industry placements are well recognised across the sector and this is reflected in the volume of resources devoted to this topic on many university websites (e.g. RMIT, University of the Sunshine Coast, Griffith University). It is apparent that considerable time and energy has gone into defining 'work integrated learning' in general and the role of industry placements in particular. The general consensus among institutions about the issues involved in industry placements is summed up in the *Griffith University Good Practice Guide for Work Integrated Learning* (www.griffith.edu.au/__data/assets/pdf_file/0020/.../GPG-

wil.pdf), which sets out a series of strategies for success in the design and implementation of effective placements. Care needs to be taken to ensure integration of theoretical knowledge and practice; provide adequate support; align learning activities and workplace activities; and monitor student progress.

The *WIL [Work Integrated Learning] Report: A National Scoping Study* (Patrick et al. 2009) is an ALTC-funded project which aims to identify issues with and map the broad and growing picture of WIL across Australia. It also seeks ways of improving the WIL student learning experience. The project considered placements in many disciplines, including Business. Section 4.3.1 of the report looks specifically at placements. It stresses the need for good preparation while also recognising how difficult it is to find enough high-quality placements. Adequate resources, clearly defined and realistic expectations, and effective supervision were all found to be key factors that need to be addressed.

The very positive learning outcomes that can be achieved through industry placements are well documented. However success clearly demands considerable resourcing and ongoing commitment to sustain both the internal and the external systems needed to meet student, academic staff and employer needs.

The less well-researched area of access and equity also needs to be considered. Some universities only offer placements to high-achieving students; others specify that participants must be Australian citizens or permanent residents. In some universities, students need to find their own placements, and this too can create equity and access problems. RMIT is one university that offers an alternative to industry placements for students unable to obtain them: the Professional Skills Program. It offers three units with different components: a learning portfolio, an industry-based project and a business strategy.

Industry Placement: Internship

The Commerce Internship Program at the University of Wollongong aims to expose commerce students to real-life business challenges and operations through participation in organised, independent learning activities in a business, including not-for-profit organisations. Students apply what they learn at university in a professional environment.

The coordinator initiates, maintains and oversees all aspects of the program, from industry placement development through to nurturing student learning. In this role he is a key institutional enabler of professional learning, emphasising the importance of creating new relationships and maintaining existing partnerships with organisations throughout the program. Learning through the internship program is supported by modules that require students to reflect on their learning at host institutions, which helps students recognise their own professional growth and self-development.

Industry Placement: Cooperative Education

The University of New South Wales Co-op Program is a scholarship program set up by industry and University of NSW to provide financial reward and industrial training for selected undergraduate students, including those in Commerce (http://www.coop.unsw.edu.au/). It is described as a 'career development scholarship that develops our Scholars into professionals, not just graduates at the end of their university degree'. Programs of study are all based on existing undergraduate programs at The University of New South Wales, planned jointly by The University of New South Wales academics and senior managers from industry and government. Co-op Program students receive structured industrial training (between 9 and 18 months) and gain valuable work experience with up to four different sponsors. On graduation sponsors look to recruit The University of New South Wales Co-op Program students first.

All Co-op students at The University of New South Wales have the opportunity to gain experience on a number of industrial placements with leading companies. The program gives students insight into the real workforce and puts Co-op graduates ahead of the competition when it comes to graduate recruitment. The objective of the concurrent Professional Development and Leadership Program is to introduce students to the concepts and essential skills of leadership, teamwork, communication and professional networking.

Industry Placement: Internship Program

This internship program, at the University of Wollongong, provides students with an opportunity to gain work experience in a range of firms and industries. While internships are usually unpaid (one or two days per week for six months) they aim to provide experience 'at a more managerial level with additional responsibilities' as compared to the typical paid work experience of undergraduates.

Industry Placement: Personal Service and Professional Placement

Australian Catholic University in Melbourne requires all students to complete 105 hours of personal service in a not-for-profit organisation. As well as contributing to the community, this activity gives students a chance to develop ethical, spiritual, professional and personal attributes. The placement is accredited and assessed through the unit Professional Experience A, which includes workshops and Blackboard resources and activities. Students are responsible for finding placements and they are not paid for their work. They must deal directly with the clients of the organisation rather than perform administrative duties. Reflective activities are essential to learning in this unit.

Unlike Professional Experience A, placement in Professional Experience B is specifically in a business setting and is expected to be in a job relevant to the student's major course of study. Assessment for this unit includes developing a resume, a daily journal and a thank you letter to their workplace supervisor. The major assessment task is a structured, reflective report on: the organisation and the student's role in it; how the student was able to apply the theory of their disciplinary area; the Australian Catholic University's graduate attributes and how these were applied in the workplace; and students' experience generally.

Good Practice Principles for Industry Placement

- Ensure equity and access
- Manage expectations and competing demands
- Improve communication and coordination
- Ensure worthwhile placement experiences
- Provide adequate resources

Enablers

- Dedicated university and faculty resources
- Experience with industrial placements
- Good preparation and realistic expectations
- Enthusiasm from students for industry placements
- Guidance for industry supervisors
- Clear lines of communication between employer, student and university coordinator

Impediments

- Resource intensiveness
- Students having to find suitable placements
- Economic downturn, limiting the number of organisations willing to offer paid placements
- Financial cost to host organisation

Industry Competition

There is longstanding interest among educators in how competition and challenges function as a medium for learning. While some research and teaching approaches have stressed the importance of cooperative learning environments, this does not negate the benefits of competitive learning activities as well.

There are two primary views of competition. One sees it as ego-oriented, where competitors compete against each other and success means beating the opposition so that there is only one winner. The second is of competition as mastery oriented, where the focus is on individual or team development through engagement with the task (such as a business problem) and success lies in completing the task. This latter view is more conducive to teamwork.

DeVane, Durga and Squire (2009) argue that well-structured direct competition that focuses on the task is engaging and encourages learners to further their understanding, build their knowledge and become more active participants in the learning community. Burguillo (2010) states that competition is an effective way of motivating students, with team-based competition creating a memorable experience for students, as well as providing them with feedback. He therefore proposes that competition be integrated into degree programs, and that competition be used as a method to assess students.

A study examining the use of business competition in Australian higher education was conducted on behalf of the Department of Industry, Tourism and Resources. It found that competition has the potential to enhance the educational experience by developing entrepreneurial skills, self-confidence and a propensity for risk-taking in participants (Russell, Atchinson & Brooks 2008). As well as skill development, competition provided the money to start new ventures and the contacts needed for these ventures to succeed. It was also found that competitions that offer mentoring, team-building activities and entrepreneurial skill-based tasks equip students with transferable knowledge and skills that are valuable to them and make them highly sought after employees. The study concluded that competition-based learning provides enormous benefits to both participants and host institutions.

There is little consensus between educators who use competition in their practice as to what constitutes the most effective way to do so. Competition may be incorporated into units of study or be extracurricular activities. The tasks involved can vary from problem solving to presentations, and can use case studies or real-life issues. There are a number of elements common to business competitions. They include significant corporate sponsorship, substantial prize money and significant prizes in kind (such as business incubation and free professional services awards).

Commonly competitions are described as 'university wide', meaning that they are designed to attract students from across the disciplines and sectors within the institution; others are designed to raise the profile of a certain industry sector or particular education segment, such as the MBA market (Russell, Atkinson & Brooks 2008; Streeter, Jaquette & Hovis 2002). The majority of business plan competitions appear to be multi- and cross-disciplinary in their conception and do not necessarily fit the traditional discipline-based curriculum.

Boud and Solomon (2001) say that good competition-based learning should challenge students to perform at their best, encouraging them to extend themselves. If this kind of challenge is not evident in the normal curriculum, students should be given the opportunity and encouraged to take part in extracurricular competitions. Educational institutions do not necessarily have the flexibility to build business competitions into the curriculum.

Whether a business competition is credit bearing or not, implementation requires significant thought be given to educational design and delivery. Any learning that occurs outside the traditional realm will present challenges; but it will also lead to greater rewards for students, 'equipping them to be continuing learners and productive workers through engagement with tasks that extend and challenge them, taking them beyond their existing knowledge and expertise' (Boud 2001: 38).

Industry Competitions: Brandstorm

Several teams of RMIT University marketing students have travelled to Paris to represent Australia at the international final of Brandstorm, a commercially sponsored competition run by L'Oreal. L'Oréal Brandstorm has been running for nearly twenty years internationally. In Australia, it has run for six years and many Australian universities participate, including RMIT University, The University of New South Wales and Monash University. The processes are highly competitive and only winning teams in Australia get the chance to compete in Paris.

Industry Competitions: Google Challenge

The Google Online Marketing Challenge is the largest marketing student competition in the world. Participants run a three week search advertising campaign for a real business using the techniques and tools of real advertisers. Originating in Australia, the Challenge is a collaborative effort with Google and universities around the world. Almost 400 universities across 58 countries participate on the Google AdWords competition.

The Google Online Marketing Challenge is open to undergraduate and postgraduate students from disciplines like advertising, ecommerce, marketing communication, management information systems and media technologies. It is a hands-on exercise that requires competitors to engage in an authentic task, which is an advertising campaign for a real business. As the challenge is not a simulation it places students squarely in the marketplace. Competitors compete not only with other members of their class but also students from around the world in an attempt to impress online advertisers, spending *real* money.

Industry Competitions: Student Entrepreneurs | Agents of Change

The student organisation Student Entrepreneurs | Agents of Change is committed to promoting entrepreneurship and innovation on university campuses in Australia. The group is based at The University of Melbourne but also has a chapter at Monash University. Among a range of activities (guest speakers, entrepreneur week), Student Entrepreneurs | Agents of Change runs two competitions each year, both supported by workshops.

 The Napkin Challenge is run in partnership with other organisations and has a number of sponsors. It plays with the idea that many entrepreneurial ideas are initially developed in a

social setting and are written on napkins, scraps of paper or placemats. The Napkin Competition invites students to present their own business ideas on the back of a virtual napkin.

The Elevator Pitch invites you to pitch your business ideas for a chance to win $1000 cash! Students have three minutes to make their business case to a panel of judges. If successful, students then have the chance to present their ideas to an audience of investors in the final round. Prizes include $1000 cash and consulting time with innovative firms.

Industry Competitions: RMIT Business Plan Competition

Seen as a learning experience, the RMIT Business Plan Competition aims to foster entrepreneurial activities within RMIT and the wider community. Students get support to develop a business plan through business skills workshops run by industry professionals. They also benefit from the opportunity to have a business mentor advise them on their business idea and business plan.

Good Practice Principles for Industry Competitions

- Develop team contracts that detail individual responsibilities and commitment to team goals
- Encourage the formation of diverse and multidisciplinary teams
- Develop industry/business clients to focus challenges and projects on creating real services or solutions
- Encourage use of online tools, such as GoogleDocs, Microsoft Office Live, Wiki to better coordinate teams and track individual contributions
- Create a meaningful and relevant industry context for learning
- Learn from experiences in educational and other settings that develop the critical understandings, procedures and dispositions required in professional roles in particular disciplinary areas
- Encourage a focus on the task or challenge rather than beating the opposition
- Ensure professional learning
- Build in recognition and reward ceremonies

Enablers

- Industry sponsorship or initiation of competitions
- Faculty support, including financial support, of participation in organised business competitions and challenges
- Commitment of other staff in support of such initiatives
- Students motivated by the challenge
- Students motivated by recognition and reward

Impediments

- Lack of staff experience in designing and facilitating competition-based learning
- Time commitment required of academic staff
- Coordination issues associated with management of teams, particularly around team meetings and timely completion of tasks
- Financial and time constraints on participation in national and international business education competitions
- Engaging industry sponsors, clients and partners

Industry Engagement

- Potential for industry-led activities, for example Google, L'Oreal
- University-initiated, industry-partnered competitions
- Industry assessment or judging of competitions

Industry Project

Project-based learning is a method that structures learning around projects to foster deep learning (Jones, Rasmussen & Moffitt, 1997). These projects are usually complex tasks based on real-life challenges or problems; involve students in design, problem solving and decision making (Thomas, Mergendoller & Michaelson 1999); and use authentic assessment (Moursund 1999).

In project-based learning students have to think in original ways to come up with solutions to real-world problems. As there are many ways to solve a problem, students' creative thinking skills are drawn into play and improved. Project-based learning differs from problem-based learning in that it requires students to formulate a solution to a task set by tutors. Problem-based learning focuses on the process behind solving the problem rather than the solution.

Project-based learning as a form of practice-based education is well established in the disciplines of medicine, engineering and law. In business education project-based learning is often located within capstone subjects or more advanced specialisation subjects. Typically project-based learning aims to connect theory and analytical skills to business practice via application in a hands-on industry project. This is 'learning-by-doing'.

The challenge for educators is to design meaningful and authentic learning experiences where students can test their knowledge and skills through their practical application to real-world problems. This can be assisted by partnering with business to source current business improvement and other problem-solving challenges. Often industry projects replicate the workplace by incorporating students from a variety of disciplines into team activities, with the industry client acting as an advisor.

Asked why they were motivated to use project-based learning, academics attending professsional learning workshops around Australia said it was because of its real-world focus. The opportunity to work in collaboration with an industry practitioner or business client engages and motivates students. In turn, engagement with real business challenges provokes deep learning and enhances personal and professional development. Typical projects involve students not only in project design, problem solving and decision making, but also business planning, project implementation, evaluation, reflection and communication of project outcomes.

Individuals or teams are required to develop creative solutions to business problems or business improvement challenges. They then present them for critical review by academics and the industry practitioner or business client. With this external scrutiny of learning outcomes, students receive external validation of professional competencies and an opportunity for reflection and revision of the preferred solution or product.

Consulting projects are a form of problem-based learning that enable students to apply knowledge and analytical skills to a project for a client organisation.

Support for project-based learning can be found in the business education literature. Phillips (2010) finds that consulting projects demand the application of research skills and thereby develop the self-management needed for lifelong learning. Robinson et al. (2010) describe a service-learning consulting project approach where students work with not-for-profit and small enterprises to develop strategic management and business decision-making skills. Maleki (2009) describes the development of these professional competencies in an industry project-based capstone subject in which students are exposed to realistic constraints, business standards and competitive challenges.

In a literature review Navarro (2008) yields six features of the 'ideal MBA':

multidisciplinary integration coupled with experiential learning methods...to better reflect the real-world business environment where teams and integrated processes are typically used to solve problems, develop new products and processes, and strategically manage the firm and thereby better prepare MBA students for the future. (114)

Camarero, Rodriquez and San Jose (2010) present a comparative analysis of live cases and classroom projects as two distinctive forms of professional learning. Here live cases involve student engagement with real businesses while classroom projects involve developing marketing plans for new businesses. Students perceived both approaches positively in developing core concepts but Camarero and colleagues observed that students undertaking the live cases scored higher grades than those working only on classroom projects. The authors 'conjecture that it is easier for students to learn the key aspects of strategic marketing analysis by analysing the current market for an ongoing business than by analysing the potential market for a new business' (91).

Troper and Lopez (2009) have a preference for consulting projects over internships as the latter often involve delegation of relatively simple routine tasks performed in isolation. The 'novice consultant' is often exposed to several phases of a consulting project and has the support of a team. The authors report significant improvement in personal and professional development where learners are engaged in carefully structuring projects.

Many of our insights come from our own experiences at a practitioner-oriented university where we have supervised a wide range of consulting engagements in which graduate students played junior consultant, team leader, and client manager roles either as part of a class project or a university center-based consulting endeavor. (336)

Critical success factors for effective learning include project and client selection and management, team selection and preparation, project planning, process and template development, kick-off meetings, situational management of project execution and improvement-oriented evaluation (336).

In an evaluation of problem-based learning and conventional curricula Schlett et al. (2010) found that problem-based learning was rated as more effective in developing several competencies highly regarded and required by practitioners. While conventional curriculum was rated more highly for developing disciplinary knowledge and research competence, problem-based learning was more effective in developing teamwork; problem-solving skills; independent learning and working; psycho-social skills; and interdisciplinary thinking.

The following examples of industry projects in Australian business curricula illustrate the range of learning approaches and activities identified.

Industry Project: Student-run Enterprise

Potential Unlimited is a record label created for and managed by music industry students to gain practical experience in operating a publishing and recording business as part of the Bachelor of Business (Music Industry) at Victoria University. Students manage key elements of publishing and recording, including licensing (both recording masters and publishing rights); artist and repertoire development; and marketing and promotion. The major deliverable for student teams is a compilation CD equivalent to a commercial product produced by an independent record company. Potential Unlimited gives students an opportunity to apply a broad range of business knowledge and skills to an operating enterprise and gain real-world

experience. All curriculum elements, including assessment, are centred on record label operations.

Industry Project: Business Challenge

One example is the Bendigo Bank Charity Challenge which provides financial support ($500) to student teams, on a competitive basis, to find creative ways to raise funds for local charities. The teams must pitch their proposed business idea or event to a funding panel. Selected teams then work with a mentor provided by Bendigo Bank. The mentor assists student teams in each phase of the project, from conceptual design and planning to implementation. Bendigo Bank branch managers provide information on banking requirements and financial procedures, as well as practical accounting processes for running fund-raising activities. All profits go to the team's selected charity.

Industry Project: Students in Free Enterprise

Over 30 Australian universities are engaged in Students in Free Enterprise (SIFE), where students participate in 'service learning'. Teams or chapters of students together with an academic member of the university staff and an advisory group of business people use their skills and knowledge in an outreach project to teach others something that will benefit them.

> *Students...develop ways to fund their projects, manage themselves, publicise their activities, network with local, national and international business executives and have fun. Each chapter prepares a written annual report and an oral presentation describing the projects that have been undertaken and the results achieved. The report and presentation are made to a.* (www *panel of business judges who determine which chapter has conducted the most effective program*.sifeaustralia.org.au/index.php)

Examples of projects in business faculties include:
- Carbon Futures, which challenges individuals to reduce their carbon footprint (The University of Western Australia)
- Peace-fest Market Research Project, a consultative research project conducted for the Southern Downs Research Council (University of Southern Queensland)
- Financial Literacy Project, where 20 students from the Small Business and Entrepreneurship course developed projects aimed at assisting local African business people (Victoria University)

Industry Project: Business Practicum

The Global Business Practicum (The University of Melbourne) provides an in-country study experience for students working on a range of projects, including feasibility studies, marketing projects, customer analysis and market research. Collaborating companies such as multinational banks, accounting firms, insurance companies and not-for-profit organisations provide real business projects and problems currently experienced by their companies. These take the form of a project brief to multidisciplinary teams who are required to present their project findings and recommendations to senior company representatives. Project briefs are diverse. They include examining new business opportunities; undertaking business and financial analysis; modelling current operations, products or services; developing a marketing plan or business planning; and recommending operational efficiencies.

Industry Project: Research Project

This unit integrates project-based learning into all aspects of its teaching and learning. A site license with market research company Roy Morgan Research provides access to a single-source survey database, widely accepted as the industry standard for syndicated market research. The workshop program was designed to develop students' skills in market segmentation, targeting, positioning and media planning. Using the ASTEROID program, students work through carefully sequenced simulated problems so that they are introduced to basic operational skills before more sophisticated analysis.

Good Practice Principles for Industry Projects

- Engage students in real enterprises
- Use industry adjuncts as academics
- Create multiple points of engagement with a variety of organisations and enterprises
- Encourage mentors to in developing business practices, ethics and business protocols
- Engage with industry and community to access professional networks
- Engage international community of practice
- Model student enterprises on longstanding practice overseas
- Model degree programs through research and customise for the Australian context
- Use challenges to raise money for charities

Enablers

- International community of practice
- Industry adjunct as academic
- Operational student enterprise adds credibility and legitimacy for both industry and students

Impediments

- Academic selection criteria that impede employment of industry adjuncts
- Dependence on individual professional networks that undermine sustainability

Industry Engagement

- Organisational sponsorship
- Multiple points of contact with individuals (suppliers/creators) and business (producers/service providers)
- Engagement with community organisations, including the not-for-profit sector

Appendix V: Curriculum Mapping Audit Tool

Type	Student engagement in learning			Embedded						Industry engagement in curriculum			Principally located		
				Curricula			Extra-curricula								
	Transmissive	Interactive	Immersed	Required	Elected	Selected	Required	Elected	Selected	Industry referenced	Industry based	Industry led	On-campus	Off-campus	Online
Industry case study															
Industry simulations															
Industry practitioner delivery															
Industry mentoring															
Industry field trip															
Industry placement															
Industry competition															
Industry project															

Domain		Dimension	Description
Student engagement in learning		Transmissive	Unidirectional learning in which knowledge is received and absorbed by learners
		Interactive	Active learning/constructivist/practice application of knowledge
		Immersed	Engaged learning/students responsible for learning/apply and adapt knowledge and skills to new situations/challenging and authentic/practice-oriented
Embeddedness	Curricula	Required	Relates to core curriculum deemed central to student learning outcomes. Curriculum is specified at the institutional, programmatic or subject level and involves summative assessment.
		Elected	Non-mandated curriculum that builds on learning developed in required curriculum. Includes subjects within programs which require a distribution of subjects selected from one or more categories.
		Selected	Curriculum available to a selected cohort of students by invitation or application, typically based on academic performance. Curriculum is designed to enhance learning beyond the required and elective curriculum.
	Extra-curricula	Required	Relates to core curriculum deemed central to student learning outcomes. Curriculum is specified at the institutional, programmatic or subject level but does not include summative assessment.
		Elected	Non-mandated curriculum that builds on learning developed in required and elective curriculum
		Selected	Curriculum available to a selected cohort of students. Curriculum is designed to enhance learning beyond the required and elective curriculum.
Industry engagement in curriculum		Industry referenced	Curriculum relates to business practice or context but industry is not directly involved.
		Industry based	Industry interacts as a provider of resources (information, data, workplace etc.), and is responsive and supports learning.
		Industry led	Industry provides impetus and direction to curriculum in partnership with university.
Principally located		On-campus	Includes curricula and extra-curricula learning and work-related activities, such as students as employees
		Off-campus	Includes workplace or a place where work-related activities are undertaken, including field work
		Online	Technology-enhanced learning where curriculum is delivered entirely or partly online